FCON COVID-19 Deployment
Oral History Interview
Commander Harold Sano

FCON History Committee
FDA History Office
Collaborative Oral History Project
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Oral History Abstract

In this interview, CDR Harold Sano discusses his deployments as a Public Health Service officer in the USPHS Commissioned Corps in response to the COVID-19 public health emergency. CDR Sano currently works as a Regulatory Project Manager at FDA in the Division of Neurology 2 in CDER. During his first deployment as a member of the CCHQ Deployment Administrative team, CDR Sano served as the liaison between the team and CCHQ leadership. He identified potential officers for deployment based on specific needs of the COVID mission and submitted status reports to the CCHQ leadership. CDR Sano also participated in a mass vaccination program at Dover International Speedway. He worked with the Delaware Division of Public Heath, FEMA, and other agencies to prepare the Pfizer vaccine unit doses for nurses and pharmacists to administer. Approximately 16,000 people were vaccinated in the drive through vaccination site over a 6-day period.

Keywords

Administration for Strategic Preparedness and Response (ASPR); Commissioned Corps Headquarters (CCHQ); COVID-19; FEMA; hospital; hurricane; mass vaccinations; Moderna vaccine; Pfizer vaccine; pharmacist; US Public Health Service; White River, AZ

Citation Instructions

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Glossary

510(k)	Section of the Federal Food, Drug, and Cosmetic Act establishing a premarket notification requirement for medical devices that can demonstrate substantial equivalence to approved products
ACA	Affordable Care Act
ACF	Administration for Children and Families
ACS	Alternative Care Site
AEG	Agency Executive Group
AMSUS	Association of Military Surgeons of the United States
ASPR	Assistant Secretary for Preparedness and Response
ASPR TRACIE	Assistant Secretary for Preparedness and Response Technical Resources, Assistance Center, and Information Exchange
BARDA	Biomedical Advanced Research and Development Authority
BOP	Bureau of Prisons
BSL Lab	Biological Safety Levels Laboratory
CAP Team	Capital Area Team, U.S. Public Health Service
CAPT	Captain, U.S. Public Health Service (O-6)
CBER	Center for Biologics Evaluation and Research, FDA
CBP	Customs and Border Protection Agency
CBTS	Community-Based Testing Site
CCHQ	Commissioned Corps Headquarters
CDC	Centers for Disease Control and Prevention
CDER	Center for Drug Evaluation and Research, FDA
CDR	Commander, U.S. Public Health Service (O-5)
CDRH	Center for Devices and Radiological Health, FDA
CFSAN	Center for Food Safety and Applied Nutrition, FDA
CMO	Chief Medical Officer
CMS	Centers for Medicare and Medicaid Services
CONOPS	Concept of Operations
CPR	Cardiopulmonary Resuscitation
CRAFT	COVID-19 Response Assistance Field Team
CTP	Center for Tobacco Products, FDA
CVM	Center for Veterinary Medicine, FDA
DART	Disaster Assistance Response Team
DHS	Department of Homeland Security
DMAT	Disaster Medical Assistance Team
DOD	Department of Defense
ECMO	Extracorporeal Membrane Oxygenation cardiovascular life support device
EHO	Environmental Health Officer
EMS	Emergency Medical Services
ER	Emergency Room
ESF	Emergency Support Function, FEMA
EUA	Emergency Use Authorization
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FMS	Federal Medical Shelter, FEMA

FOIA	Freedom of Information Act
HHS	Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability Act
HIS	Indian Health Services Agency
HRSA	Health Resources and Services Administration
HSIN	Homeland Security Information Network
HSO	Health and Safety Officer
HVAC	Heating, Ventilation and Air Conditioning
ICS	Incident Command System
ICU	Intensive Care Unit
IMG	Incident Management Group
IMT	Incident Management Team
JIC	Joint Information Center
LCDR	Lieutenant Commander, U.S. Public Health Service (O-4)
LT	Lieutenant, U.S. Public Health Service (O-3)
MCAS	Marine Corps Air Station
MD	Medical Doctor
MMU	Monrovia Medical Unit (Liberia Ebola Response)
N95	Particulate filtering facepiece respirator, NIOSH rated "not-resistant to oil" filtering 95% of airborne particles
NCTR	National Center for Toxicological Research, FDA
NDMS	National Disaster Management System
NIH	National Institutes of Health
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NP	Nurse Practitioner
NPI	National Provider Number
OASH	Office of the Assistant Secretary for Health
OC	Office of the Commissioner, FDA
OFDA	Office of U.S. Foreign Disaster Assistance
OLS	Office of Laboratory Safety, FDA
OMB	Office of Management and Budget
OPDIV	Operating Division
OPM	Office of Personnel Management
ORA	Office of Regulatory Affairs, FDA
OSHA	Occupational Safety and Health Administration
PA	Physician Assistant
PAPR	Powered Air Purifying Respirator
PCR	Polymerase Chain Reaction (test)
PHS	Public Health Service
PPE	Personal Protective Equipment
PTSD	Post-Traumatic Stress Disorder
RDF	Rapid Deployment Force
RedDOG	Readiness and Deployment Operations Group
RIST	Rapid Incident Support Team, U.S. Public Health Service
RN	Registered Nurse

RT-PCR	Reverse Transcription Polymerase Chain Reaction
SAMSHA	Substance Abuse and Mental Health Services Administration
SAT	Service Access Team/s, U.S. Public Health Service
Sitrep	Situation Reports
SME	Subject Matter Expert
SNS	Strategic National Stockpile
SOC	Security Operations Center
SOFR	Safety Officer
SOP	Standard Operating Procedure
TAT	Technical Assistance Team
TDY	Temporary Duty Assignment
TPN	Total Parenteral Nutrition
USACE	Army Corps of Engineers
VA	Veterans Administration

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Interview Transcript

VB: This interview is a contribution to the FDA Commissioned Officers Network and the FDA History Offices Collaborative COVID-19 deployment Oral History Project. It is April 23rd, 2021, and I'm Vanessa Burrows from the FDA History Office.

JS: I'm John Swann from the FDA History Office.

VB: Today we are speaking with Commander Harold Sano, Commander Sano would you please introduce yourself?

HS: Hi everyone. Yes, my name is Commander Harold Sano. My position at FDA is that I'm with the CDER Division of Neurology 2, and I'm a Regulatory Project Manager. I've been with the agency for about five years now, and it's been a pleasure to work with the agency. I'm also a US Public Health Commissioned Officer. And I've been with the PHS for five years as well. Prior to joining PHS, I was a Lieutenant Colonel in the Army for about 12 years. And I'm a pharmacist by training. My last Army assignment was at Walter Reed Military Medical Center and it's been a pleasure working with the Army as well. That's a quick summary of my career.

VB: Excellent. Thank you so much. Would you mind briefly right now, and then of course we're going to get into greater detail, but could you just give us an overview of each of your deployments? What your responsibilities were, what your role was and the time period and where you went?

HS: Okay, do we want to focus on the most recent deployments in the last year or go further back in time?

VB: For now, I'd like to know the just the COVID ones, but I would love to hear about past experiences as well in the course of our conversation.

HS: Sure. Okay, since the pandemic started back in the early 2020, that was when the Surgeon General mentioned that it's all hands on deck for all PHS officers to be ready to deploy at a moment's notice, and my turn came up. I was notified in late May of 2020, that I would be deployed to what we call CCHQ (Commissioned Corps Headquarters). Within the headquarters they had a deployment cell set up, and basically the function of this cell is really a command center where different PHS officers, based upon their discipline skills, would work [be assigned to] different groups within the cell to actually [work with the requesting State/Federal Agency in identifying the needs (mission) and determine the required assets PHS officers with specific skills or experience to support that specific mission].

My deployment started with the CCHQ cell on June 1st. It was a 30-day deployment and the primary purpose was to identify officers for various different COVID missions. But at the same time, during the summer months, especially June, July, August, September and October, it was also hurricane season, so we had competing missions, of hurricanes and the COVID pandemic. When I reported to CCHQ back on June 1st, they assigned me to the administrative group. There are various groups within the cell that were in charge of deploying PHS officers.

The administrative cell was the one who had to initially identify different officers based by skill sets. Do we need a pharmacist? Do we need a nurse? Do we need a Safety Officer or a Physician? And then we would create rosters of officers that would be needed by various skill sets [to fit the requirements of the deployment mission].

The needs of the mission would determine what skill sets are needed, how many people we need, and how soon we need them. So, within the cell, we had an admin group, logistics group, and there were some various other groups [operations group, safety group, and planning group that worked together to support the missions]. I can't remember off the top of my head right in the moment, but it's probably about eight different groups that would work together. The workday began with morning meeting, followed by midday meetings, and afternoon meetings, because during this time, everything was so fluid especially for the COVID missions. At a moment's notice we could get an urgent state request, “Hey, we need 40 PHS officers as soon as possible to do contact tracing.” [Because of the many hotspots within the US, the command cell was constantly juggling which mission had to go out the door first. Sometimes it felt like we were working in a three-ring circus].

Once we would get that alert, [my admin team] would start searching through the databases and figuring out what PHS officers have these potential skills we need, and then are they available? And that started the ball rolling. That was our primary mission with the administrative group [is to identify officers with a specific skill set], contact these officers, and find out if they are available and what skill sets, they do have, and does it match what our database says and then start rostering them. What we mean by rostering, is we put them on the list and then they’re notified that they will potentially be deploying within the next 48 to 72 hours. But like I said, this whole process was very fluid because a State [or other government

agency] can request so many officers for help for a particular type of mission [and then by the end of the day, that mission could morph into a completely different mission or the state requester could change their minds and decide we are no longer needed. The main missions I encountered were setting up a hospital, provide additional staffing for a hospital needing specific healthcare providers or establishing contact tracing teams].

During the time we had activity going on, and Arizona was [one of our main] hotspots, but we also had activities in Florida, Virginia, Pennsylvania, [North Carolina] and Texas going on at the same time. So, we had a lot of competing priorities occurring, some had higher priorities than others. And then unfortunately during the same period of time in June, we had a hurricane that was coming toward the Gulf of Mexico. So we had to set up a separate roster for in case we had to send a team down to New Orleans, which was a target area and whether we need to set up a hospital. So, then we had to identify physicians, nurses, pharmacists and other healthcare professionals to potentially staff a staged hospital. We were very busy during my time with the cell in the month of June, because of all these computing priorities between COVID and a hurricane at the same time.

JS: Commander, if I may just a quick clarifying question, when you said you were contacted the by states what entity within the states would be the point of contact with the PHS when a need came up for COVID?

SH: I don't have all the details of the exact point of contact, but FEMA was part of it and the state's Emergency Response Command was in communications with the PHS headquarters,

which is CCHQ, Commissioned Corps Headquarters, and the leadership of that, at that level, which is pretty much the Surgeon General's level would get the information.

[The new information and request] would feed down to the cell, which is us. [Within the cell, the five groups would be briefed of the new request and each group would begin their piece in executing the requirements of the mission.] The cell were the ones who would actually take charge of implementing deployments. Our information would come down our Chain of Command basically, and PHS Commissioned Corps Headquarters would get communications from FEMA and from the State Emergency Response Agencies. Again, it was very fluid. One example: Friday afternoon at 5:00 PM we would get a notification that North Carolina would need assistance as soon as Monday morning. And then we would go through the motions of getting people established and ready to go [with orders], but then Sunday afternoon or Sunday night the state would say "mission has changed, we don't need you now." So, there were a lot of things happening at the same time – moving pieces and parts between the various states and then their needs may change in a split moment's notice.

That kind of complicated our mission somewhat because as we're queuing up, and people are ready to go to a particular location, then 48 hours later, or less than that, the mission may evaporate, or the mission may evolve into something totally different. In my position, in the admin office, I was constantly identifying people and then cherry picking them and then moving them from one mission to another mission because the missions changed very quickly. [As you can imagine, these quick changes in mission can be very frustrating for the planners as well as the officers awaiting to be deployed].

So, we might need them, based upon information we were getting from the state, we might even need that particular officer to deploy within 24 hours to that mission, but then 12

hours later, we find out something else has taken priority and that person needs to go somewhere else [because of a specific skill set this person has and the new mission has higher optics from top government officials. A good example is a medical doctor who also is an epidemiologist.] So, it was a very challenging during that time, because as I mentioned earlier, we had various competing states requesting, and then at the same time, we had a hurricane brewing off the coast of New Orleans.

VB: Before we move on too far, can I ask you also to briefly describe your deployment from February, this year.

HS: Okay. That deployment, just like the others, you usually get short notice. The first one with CCHQ I had more advanced notice. I knew that was coming up and I had a couple weeks of prep before I actually went.

The deployment I participated at Dover, Delaware occurred in mid-February 2021. And that one I did not have much notice at all. As you recall, during this time period we had the two vaccines developed [under an EUA], the Pfizer vaccine and the Moderna vaccine, and various states were now receiving vaccines, so they could start doing mass vaccinations to their general population.

In mid-February 2021, out of the blue, I got an email from CCHQ stating "You've been rostered, and you will receive further notification within the next 12 to 24 hours of deployment", and that's all I knew. And then throughout the day more emails developed and started coming through [from CCHQ]. The very next day they scheduled [a teleconference for the] individuals that had already been rostered included myself, it was probably about 25 of us, and I think

maybe a third were pharmacists, a third were nurses and then a third were a hodgepodge of other healthcare professionals including physicians and some others.

We were in a cadre, and so we had a teleconference the next morning with the leadership who were coordinating this deployment and they gave us more information of where it was going to be, in this particular case it was Dover, Delaware. And then primarily the phone discussion was really about logistics. How are we going to get there? Where are we going to assemble at? We didn't know too much about the mission except that we were going to be assisting the Delaware Public Health Agency and FEMA. So, over the next 48 hours, more information trickled through either via email or follow up tele-cons.

Again, just like the previous deployment, it was very fluid because the information that we received 12 hours earlier had now changed. At first, we thought we were going to be assembling at a certain position in Dover, but then we found out this moved somewhere else within in Dover. We thought we were all going to bus together to get there, but then it all evolved, and we were allowed to drive our own POVs, or privately owned vehicles, to get to Dover. So, all these little pieces of information about logistics of how we're going to get there, where we were going to meet was fluid, it kept evolving.

The first email notice occurred, on a Monday afternoon and then by the middle of February, I think we actually deployed on the 18th of February, and that same week the east coast was expected to receive a snowstorm so we were trying to coordinate the date that we leave to go to Dover between the lulls of the snowstorm, because we just had snow the past weekend, and then there was going to be more snow coming – at first, we thought the middle of the week, but then it shifted, by the weather forecast, to the near the end of the week, like Friday.

So, for our deployment the date that we actually left our homes to get to Dover moved from Tuesday to Wednesday. And then we tried to make sure we got there before Thursday, because Thursday afternoon, I think was when Dover was expecting snow. So, we had a flexible target of when we're actually going to leave. It was actually a Wednesday that we left our residences to drive to Dover. For me, it was about a two and a half hour drive to get to Dover, and logistics wise, it was okay initially, but then it got a little bit more complicated because our final destination in Dover was still a moving target.

So even though we'd arrived in Dover, we were told to meet at a certain destination, but then we found out that had changed and then we were waiting to find out where we were going meet for our final destination, so we were in limbo for maybe three hours, and then we [were informed] we had to get COVID tested just to make sure that we were all negative. [We were given directions to go to this community center in Dover for testing, but we had to do it within 45 minutes before the center closed].

I think CCHQ cherry picked each one of us because all of us in mid-February had already received our two vaccinations. I received my Pfizer vaccination back in January, so I had already met the two-week post vaccination period to be fully inoculated. I think the majority of us were all cherry picked for this mission because we already had our vaccinations. When we finally got settled in, that's when we got a full briefing of what's going on. So, we knew it was going to be a mass vaccination set up, and it was staged at the Dover International Speedway. FEMA was the lead agency running this mass vaccination. It was a six-day mass vaccination, basically at first it was only invited people who were senior citizens or – Category 1-A, but they already received their first shot and they were coming in for their second shot. [School teachers and other medical professionals were eligible for vaccination].

There were eight lanes set up with tents in a triage area. FEMA did an excellent job in setting this up. And we were administering both Moderna and Pfizer vaccinations. And we strategically divided the Moderna folks from the Pfizer folks. So, there wouldn't be any mix ups. We had two tents set up for pharmacy, we had a Moderna tent, and we had a Pfizer tent and basically, we were averaging probably about 3000 patient drive-throughs per day. And we actually extended it to seven days because the weather and snow delayed the operations by a day, so we extended another day. Over the six or seven days that we were doing mass vaccinations in Dover, we had a total over 16,000 patients, which was an incredible number I thought, and it was very streamlined thanks to FEMA.

So again, the PHS was there to assist, half of us did drive-through vaccinations and another portion of us were just constantly [mixing and drawing up] the individual doses. That was my role, I was [reconstituting the vials] and drawing the doses. The Pfizer vaccine [is frozen, and you have to project how many vials to thaw for the day. After thawing in the refrigerator, the Pfizer vaccine] required two steps to prepare it. You first you had to add a dilutant to the vaccine vial, and then carefully draw it up with these small 1ml syringes but draw 0.3mls and try to avoid any air bubbles in it, because it's such a small little dose for IM injection. And so typically you could get six doses from one vial and Moderna was an easier draw, basically it was already reconstituted, all you had to do is just draw 10 doses from each vial.

But doing that for 3000 patients a day was quite a busy time – to prepare the doses and have them then delivered out to the lanes where the cars were driving up and then the vaccinators would actually vaccinate the patient while still there in their car. And again, during this time back in mid-February it was age 65 and older were getting their vaccinations.

VB: Commanders Sano at some point around that time, the Pfizer EUA was revised so that it didn't require super cold storage anymore. When you were preparing the doses, did they still have this more stringent coldness requirement?

HS: Yes, we did. So that's a good point, because with the Pfizer product it had what we call cold chain management. And what that is that when the vials are in storage – they're kept in super ultra-cold freezers of negative 80 degrees Celsius. And so, when you get it ready for preparation and then administration there's two ways for you to thaw it and get it ready. You can set it out at room temperature for a couple hours and for it to thaw, or you can thaw it gradually in a refrigerated environment. It's better to do it in a refrigerated environment, because it gives it a longer shelf life once you thaw it, versus taking the vial from the ultra-frozen condition and let it sit out a room temperature to thaw.

Basically, that's what we did in Dover. The Delaware Public Health Authorities, had an area where it was frozen, and then the night before they would transfer it to a refrigerator for it to thaw. In a refrigerated environment it takes about three to four hours for it to thaw, but it gives you – the advantage of thawing it in a refrigerator versus letting it sit out at room temperature to thaw, is it gives it a five-day shelf life once it's thawed to be used for drawing up doses.

[00:19:34]

And this is prior to reconstituting it for the Pfizer product. And so that's what we did in Delaware. It was unfrozen in the refrigerator overnight. And then it was brought by a refrigerated cooler to the mixing tents. And again, this is in the parking lot of the speedway that this is all set

up. And these coolers, they also have temperature monitors, so we know it's kept between a refrigerated temperature of 2-8 degrees Celsius. Then we had to plan how many vials you want to use. Because as I said earlier, you get six doses out of one vial. Sometimes you can get seven, but roughly 80% of the time you get six doses per vial. And early on we didn't want to waste doses or waste vials. That's one thing we don't want to do. So based upon the schedule of the day one of the Delaware Health Officials would provide us a tally sheet saying, "Okay, we're expecting 80 patients to show up between 8:00 and 9:00, and then we're expecting 110 patients show up between 9:00 and 10:00." So, what we would do in the mixing tent is that we would pre-plan how many vials we were going to take out of the refrigerated cooler and start reconstituting these vials, and then start drawing the doses in advance. Because the lanes would open up for patients to arrive and start getting their doses at 8:00 AM.

We would typically get there around 6:30 in the morning so we could get things all prepped up because we wanted to have a large number of syringes ready to go for injection once the first patients started arriving because, as I said before, when the frozen vial of Pfizer is allowed to thaw in a refrigerated environment the vial's good for five days, this is un-reconstituted.

Once we reconstitute the vial and draw up the doses in a syringe, then it has a six-hour expiration. So, knowing how many patients were expecting in the first half of the morning and then projecting say about 20% no-show, which is typical. That's how we would calculate how many doses we want to prepare and have ready to go by 8:00 AM in the morning. So, we would spend our first hour and a half in the morning from 6:30 AM to 8:00 AM when the first patient arrives to go ahead and get about 200 – 300 doses of the Pfizer syringes ready to go. And then we would have runners that would come to the mixing tent where we prepared the Pfizer dose.

That's true also of Moderna, because we had two separate tents, one for Moderna, and one for Pfizer. So the runner would come from the from the lanes designated for Pfizer or designated for Moderna patients and pick up, usually a plastic container of syringes already drawn up for Pfizer, and then they would hand carry that back to the lanes for Pfizer so those would be ready to go and staged when the Pfizer patient would drive up to the vaccinator.

We kept that flow of syringes being delivered to the lanes so there wouldn't be any pauses. We wanted the patient to come in, get their injection and move out and then once they moved out, then they were directed by other personnel – because we had a staged area for them to be monitored for observation, which is probably about, I don't know, maybe a few thousand feet away from the drive-in lanes where the vaccinations occurred. There was a designated parking area where they would be observed for 15 minutes unless they had some sort of precaution like some reaction in the past to a vaccine, then they would be observed for 30 minutes. Once they were okay, they signaled then they could go and then they could drive off.

So back to your question about cold chain management, that was very important, especially near the end of the day. We operated roughly a 12-hour day. Our last patients were scheduled to come in at 6:30 in the evening. And that light (indiscernible) usually in the late afternoon, early evening near the end of the day patient volume has decreased dramatically. At that point it was very critical that we would time the dosing of making and taking these vials out our portable refrigerator, reminding you that we get six doses out of it. So, we had to calculate how many doses we wanted to prepare near the end of the day, because we don't want to waste any doses. So, by six o'clock in the evening, we're almost just making them as needed.

There was another guy from Delaware Public Health, he kept monitoring the lanes cause the first part of the lanes coming in were triage lanes and that's where there would be people

there doing a survey of each patient to make sure that they're eligible to get their injection, making sure that one, they're okay, they're not too early for the second shot, and two, they're not sick, they're feeling well. Three, they don't have any reasons, contraindications for not getting that second shot.

So, they are triaged first, at another drive through tent area, and one of the Delaware Public Health Officials would actually keep eye on the flow of traffic going through the triage area near the end of the day. He gave us an idea of how many doses they were expecting to come up so we can stay ahead of the game, but at the same time, not make more doses than necessary. So, we had to pace ourselves based on the current volume to see how many doses we needed to make.

So, there's been times where we had a straggler come in at seven o'clock at night when we're about finished. And it would cause us to make mix a new vial just for one or two extra doses, just to remind you, we got six doses out of a vial. In that particular case we were lucky because the Delaware Public Health would call their the local EMS folks and say, “Hey we have three extra Pfizer vaccine doses that we need for someone to use.” So, we were able to deliver those doses to the local EMS or to a local hospital for them to use without having to waste any. So that was very important to try not to waste any doses.

VB: That's excellent that you had that ability to quickly find recipients that needed a dose so that the precious doses didn't go to waste. And thank you so much for that detailed explanation of both the preparation and the workflow at the mass vaccination site.

I was wondering if you could give us a little bit of insight into how roles were determined. I know that there's obviously CDC guidance for developing a mass vaccination site

and FEMA had a protocol for how to set these up, but how is it determined who would perform which function at the site? Who would be in charge of observations and who would be in charge of actually administering the doses to patients and who would be doing the triage and so on and so forth? Did the ICS come into play with that? Were roles negotiated in person? Any insight you care to share on that would be illuminating?

HS: Sure, when everyone or the team for the Dover mission was mobilized, activated or notified that they're being rostered – again, this goes back to my previous position for my previous deployment I did back in June, which is working in the cell that's identifying what skill sets we need for this particular mission. Obviously in this Dover mission, we needed at least one or two physicians, and the physicians would be the ones that would monitor for any bad [adverse drug] reactions that might occur. If someone had an anaphylactic reaction, and luckily that did not happen during our time, but if there was an anaphylactic reaction or something like that, that's when/where the physician would be available to assess the situation at that moment.

We had one, maybe two physicians on the team and they were floaters. So, they floated around the whole operational area making sure that there were no bad outcomes of any patient that was getting a vaccination. They floated around at the site where the patients drove up and got their injections, and then they floated around the observation area, where people were observed for any bad drug reactions after they received their vaccination, or if someone did have a code or something that physician would be readily available. So that was a role, basically of the physician, and then we had some nurses and we had some pharmacists and PAs and I think those were the main other roles.

How do you define who does what after the physician? That was up to the skill set of each individual which you either ask each individual. “Okay. What skills do you have?” For the pharmacist there's a hodgepodge of us who had mixing skills. I’m not trained or licensed to give a vaccination directly to a patient, but there's some pharmacists that are, so that kind of helped to determine who does what.

We have four or five pharmacists who are trained to give vaccinations to patients. So obviously they would be selected to be at the drive through lanes to administer the vaccination to the patient and same way with the nurses. You have nurses on that role too. So, like the pharmacists who did not have that training, such as myself, [we prepped the doses].

I had [some prior experience with prepping and drawing Pfizer doses]. I went to the Indian Health Service in White River Arizona, which was a hotspot back in the summer of 2020 to help with their COVID vaccinations. And I was there back in January of 2021. And that's where I got a lot of skills and preparation for the Pfizer vaccinations and also screening the patients. So, I had that skill, which I gained from that two weeks spent in White River, helping them out, and I brought that to the Dover site. I was very familiar with the Pfizer product. But I didn't have any experience with the Moderna product, but Moderna is straightforward. There's really no prep to it, it’s refrigerated, you just take the vial out, you draw it up – you draw the dose up by volume and you get 10 doses out.

[Moderna dose is] basically a straight draw [up from the vial] , whereas the Pfizer product had more steps involved. As I said earlier, you had to make sure it's thawed and then refrigerated at temperature [and then allow to come to room temperature just prior to mixing the vials.] Then after that, you have to add 3ml of normal saline to the vial to reconstitute it. And then you let that sit for maybe 30 seconds to make sure that it's completely mixed and there's no

particulate matter within it. And then you have to use a small tuberculin needle to draw up 0.3 mls, and then you have to tap the bubbles out of it, which is notorious to get the dose ready. So that was a little bit more complicated – more steps involved.

I brought that experience from White River, so that was definitely the reason I was assigned to the Pfizer tent to draw up and prep those doses. And then for the other pharmacists it was the same way. If they weren't licensed and trained to do the vaccinations, they would help prep the doses as well.

And then in terms of who's in charge, that was by chance, because [the most senior officer would be selected. The Administration for Strategic Preparedness and Response (ASPR), part of Health and Human Services (HHS) is the organization that decides when PHS participates in emergency response deployments] and serves as the actual nerve cell that works with other agencies like FEMA and the state emergency agencies. They're the ones that also fund these deployments. ASPR's one representative said, "okay Captain Adams, you're going to be the Commander in Charge for the whole team." So, it's by chance who's anointed in the leadership role. And that's how it happened in this deployment. So, we had a leadership person appointed to be in charge of the Moderna tent, one in charge of the Pfizer tent, and then another person in charge of all the nurses. And another person in charge of all the pharmacists. So, we had this echelon of leadership you might say, and it is all by chance who was asked to play that role. So based upon skill and also really by chance in terms of leadership is how people were put in these positions, if that makes any sense.

VB: Absolutely. And it sounds like it was mostly prescribed at the Federal level, is that fair to say? And did that create any complexities in coordinating with local and state officials that participated in this particular mission?

HS: Like I said earlier, this was a FEMA run operation. PHS was invited to assist, and the other agencies that were involved – we had Delaware Public Health assisting, we had PHS assisting, which is probably about 25 of us [PHS officers]. And then there were a lot of volunteers assisting that were working through FEMA.

For instance, our runner that was picking up the doses from our tent and delivering them to the lanes, he was with the National Forestry Service. So, we had people from all different agencies participating as well as some contractors. FEMA was actually running the whole show. Our PHS leadership as well as ASPR would meet, at a leadership level, with FEMA each morning and actually before the operation started because we had two days of prepping and setting up the whole operation before we actually started seeing patients.

So the FEMA leadership, ASPR and PHS leadership were all involved in setting up and sending information down to the workers. It was very coordinated. The answer to your question is that FEMA was a lead agency and then FEMA would tell us "Okay PHS, we need your help in doing this." And whoever else was involved – Department of Public Health from Delaware, "Okay. We need your help doing this." So, we all worked together as one team, but FEMA was the lead agency and they guided the rest of us in regard to what roles we needed to do to help the overall mission.

VB: It sounds like that created a really clear Chain of Command, and it probably helped a lot with executing, such a complex task of vaccinating so many thousands of people every day.

I wanted to ask something that's a bit detailed, one of the necessary elements of the mass vaccinations programs are the issuance of some sort of proof that you've been vaccinated, like through these cards. I was just wondering what the flow was for, and I know you didn't directly interact with patients per se, but did you have visibility on how information about vaccine lot numbers were recorded? Did you scan the syringes? Did people have to fill it out manually or was it stamped?

HS: That's a good question. What we did, in this mission, is we preprinted labels for all the syringes (doses). So, each label would identify what the syringe is, in this case the Pfizer vaccine. And then we would have the lot number of the vial that was used to prepare the syringe, and then we would hand write in the expiration date.

This was a little label that was put on the small tuberculin syringe. And so, when the vaccinator would actually receive the syringe on their end, they would use the lot number that was printed on the label for the Pfizer dose. They would annotate that on that little (vaccine) card and then they – I'm not sure how they would – if they needed to annotate the expiration date of the dose. Like I said, once we reconstituted the vial with 3mls of normal saline and started drawing the doses, that started the clock for the six-hour expiration. We would write the expiration time on the label. So that will let the vaccinator know that this syringe is still good because it's still within a six-hour time period. If for some reason they got a dose beyond the six hours, then they would know that, and they would request a replacement dose.

That was one of the key things we needed to do [in managing the preparation of doses], make sure that we – it's like first in, first out inventory rule, we wanted to make sure that the doses that were made early in the morning are used up by early afternoon. We did not want them to be sitting around [for a long time] to be drawn and get administered at three o'clock in the afternoon if it was prepared at eight o'clock in the morning. So that's why we planned preparation times of these doses [based on projected demand coming from the FEMA official] throughout the day. We'd make a batch of maybe 200 syringes at 6:30 or 7:00 in the morning we used immediately at 8, 9 or 10 o'clock and then we'd pause for about an hour. Once the inventory got down, we would make another batch of syringes maybe around 11 o'clock that day, that would carry us through the next six hours into late afternoon, and then probably have another round of drawing up doses around early midafternoon to carry us through to the end of the day. So, you didn't make everything all at one time, you spread it throughout the day to make sure that doses did not exceed the six-hour expiration dating.

So back to your label question, yeah, the label had the six-hour timing for when that dose would expire so the vaccinator would know that, and the label identified it as a Pfizer vaccine and would also have the lot number it came from. Luckily, we didn't have too many changes in lot numbers throughout the day. Delaware Public Health was very cognizant of this. When they ordered the vaccine, they would get a large shipment from the same lot, which was great. So, we could have the same lot used for maybe one or two days without having to annotate a change in the lot number.

[00:39:47]

But there had been times where we had to use up a residual lot that morning and then change the label. We would print the new lot number after we used up the old lot number. So, there was a way of tracking the patient dose to the lot number that was used and of course the date that it was administered. The vaccinator would know when the dose expired.

VB: I got vaccinated at a mass vaccination site in Maryland and I was really struck by how incredibly smoothly the whole process went. It just flowed, there wasn't a lot of confusion. I did not witness any people that seemed to have any sort of opposition or any conflict. It seems like when you're processing thousands of people to do anything, let alone something that's emotionally charged, and after a year of a pandemic, there's a lot of opportunity for that.

Did you witness any conflicts or, maybe on the other side of that, any instances where patients did have adverse reactions to the vaccine or any stories along those lines?

HS: Any types of conflicts? I'm not aware of any. Let me break your question down a little bit further, in terms of conflicts among staffing. I didn't see any of that. [Everyone was very professional and caring]. Everybody was there for a purpose. They knew what their specific role and job was, and they did an outstanding job, in each aspect of each person's role – they're happy to be there. Even though there're very long days, 12 plus hour days, we all worked together, and I think, with the help of Delaware Public Health team, they were very transparent. They kept us [briefed on the flow of cars (patients)], at least from my perspective, they kept us briefed multiple times throughout the day on how the operation was going and letting us know "Hey, we're expecting this number of patients coming in this afternoon."

They gave us these metrics that we could keep track of so that we knew how many vials to prepare or take out the portable refrigerator to get ready. I think everyone just worked really extremely well together. And, obviously during the first day or two we were just learning our roles and figuring out what's going on. By the middle of the week, everybody worked really well together. So, I don't think there were any internal conflicts, at least from my perspective with the teams and working with the different agencies. Now in terms of patients having any type of conflicts I'm not aware of that since, in my position, I didn't have a direct patient role. I don't have firsthand observation of that, so I can't really comment on that.

VB: That's fair enough. I feel like it's really subtle, but that's such a victory because it's a huge volume of people.

HS: I do want to add something though. I just remembered this. One of the physicians that was vaccinating patients she brought up a moving story. There was an elderly man who was getting a second vaccination, and he actually wrote a prayer, and the prayer is basically thanking the vaccination team for the tremendous job that they're doing and helping mankind basically in this pandemic. And he prayed with this physician, who's a vaccinator, and then read this prayer to her, and she then shared it to us after the fact. So that a warming thought that we, as a team, we all did something good for the patient. And this patient was very thankful for that. And then there was another occasion where another patient wrote a thank you note to everyone. That's two examples I can think on a positive end, but I don't know anything on a negative end.

VB: That's so moving. I'm glad that the patients shared their gratitude like that. It's just so meaningful and, certainly the least you guys deserve for the work you did.

You mentioned a few minutes ago about how the team worked together, can you share a little bit about your colleagues, in particular, during these really long days. What did you do during breaks or what did you do to de-stress a little bit and what comradery, or group activities did you guys have the opportunity to take part in together?

HS: I guess it was very simple things, someone in our tent brought a radio and we had some music playing to help us have something in the background to keep your mind off of things, so we had music in there and it was in the middle winter, and it was cold outside, and we're in a tent. So, the music was competing with these heaters, which had loud fans blowing, that were in there. So, it was a lot of background noise that occurred, but it was simple things like just being able to talk and chat with each other, on a personal level. In our tent, this is unique too, there were four of us – because the Pfizer vaccine has multiple steps and it takes longer to get one dose ready compared to Moderna. Moderna is a straight draw, then it's out the door. Pfizer, we need to have more people to help prepare the doses because it's more time consuming, so on a typical day there are four of us assigned, preparing the doses. So, we're always able to chat amongst ourselves to help the day go by.

We also had guests, volunteers coming in and helping us out. The Delaware Public Health had good relationships with an independent pharmacy owner, and this independent pharmacy owner has several pharmacies in the state of Delaware. He volunteers quite a bit helping out the state of Delaware in emergency situations like this by providing his pharmacy services, as well as allowing his pharmacy staff to volunteer. Every state has a volunteer

pharmacy network that will ask pharmacists to help out in a crisis, and so this independent pharmacist owner, he was the lead person in charge for the volunteer pharmacist network in the state of Delaware.

He had pharmacists from his store, from CVS, from other chain pharmacy stores who volunteered to come in and help us out. So almost every day we had a pharmacist from the state of Delaware, a civilian pharmacist, come in and volunteer their time to help. It was nice to get to talk to these folks and get to know them a little bit and what their interests are and why they're happy to help out.

So that was a way that we kept each other's morale up just by just learning about each other. And a coat-tail effect of this is, I'm actually recruiting one of the pharmacists from Delaware who works for the Delaware Public Health Authority there, to join PHS. He's in the process and got his paperwork all submitted, and he's moving pretty rapidly through the whole process of joining the Commissioned Corps. He's already been scheduled for an orientation program in June. I think that's out outstanding to know that he was impressed with the PHS deployment that he actually wanted to become a PHS officer.

VB: What a fantastic story that is so great. Well done. That’s awesome.

HS: Yes. He and I still keep in touch, and he’s already more than halfway through the whole application process of becoming a PHS officer. He still texts me periodically to give me updates of where he's at and his whole process of joining. He's all excited about it too. So anyway, that's something impressive to know that came out as a side effect from this deployment.

VB: That's really wonderful, and what a great symbol of what you were describing about the human relationships were the key to the success of your mission and also the ability to, let go of the stress and so forth, that's awesome.

I did want to pivot back to talking about your first deployment because we skipped over it a little bit. I would love to learn more about the work you did on the logistics side in June. Before I ask you specifically about that, I was wondering what got you involved in the planning and the strategy side of deployments. Did you have previous deployment experience where you were involved in helping to identify and assign officers for deployments or what prepared you for that role?

HS: I'm not sure if you're familiar with the RDFs or Rapid Deployment Force teams that –

VB: Yes, thanks to this project, yes.

HS: Oh, okay. Anyway, that's on the wayside now because you know, just like any organization, everything keeps evolving, but Rapid Deployment Force, there's several teams. I was with RDF-3. And I think there are eight teams throughout the United States. I volunteered joined RDF-3. The RDF teams are teams that rotate to be on call for deployment purposes. Pre COVID the deployments were primarily hurricanes or other natural disaster, but usually hurricanes was the primary reason for these RDF teams to be deployed.

Usually there's one or two of these RDF teams that rotate on call, so you'll be on call every five months for a whole month. And then you serve as a backup on call before your previous month, before you go on call, and then in the post month your off call then, you’re on

backup on call. So, you're on call quite a bit throughout the year but on a rotating basis. I was interested in joining one of these Rapid Deployment Force teams because coming from Army I deployed to Iraq, back in 2006/2007 during the height of the Iraqi war and was there for 14 months and I missed that excitement of deployment when I joined PHS from the Army.

I learned about these RDF teams and I applied to one, actually two or three, but they're so competitive. They're hard to get a position because everybody likes to be on one and they don't leave, and you can only have so many slots. Eventually I was introduced to RDF-3, unfortunately they didn't have any pharmacy positions available, which was the role I was wanting to play, but they had a position in administration. Within each RDF team, you have these different sections, so administration has roles and responsibilities. Pharmacy has roles and responsibilities. You have nursing and physicians and safety, there are all kinds of different sections within an RDF.

I would have been a perfect match to be a pharmacist, because that's what I am, but unfortunately there wasn't a position available. But then administration approached me and said, “Hey, I hear you want to join RDF-3, we have an opening in admin, if you want to explore that?” So, then I said, “Sure.” Basically, you go through an interview process to join these teams. Administration really involves, just like the title is administration, keeping track of all the admin for all of RDF-3, which is the primary role for the admin really is to get people rostered, and identified to go on deployment, and then keep track of accountability. We want a hundred percent accountability. By accountability, it’s you're getting orders to deploy. You're going to the airport, then you're going to fly to destination A, and then destination B, and then finally you get to destination C. Accountability is keeping track of them and being accountable throughout the whole travel process, and then accountable where they're at for the mission and then accountable

for returning back and making sure we don't lose somebody. And to keep track of all SOPs and stuff like that.

It's more of a paper job in a way. So, I played that role for two years and then right at the height – when the pandemic started in early spring, that's when PHS decided to dissolve these RDFs and then create something different, which is still in the works right now. The guy in charge of the admin section who recruited me to join RDF-3, was deployed and mobilize to CCHQ (Commissioned Corps Headquarters) for the admin position. His role was coming to an end, he had been there for 45 days, I believe. And as one of the processes of continuing the mission when you leave is to identify somebody to replace you, and that's what this person did.

He was already at, CCHQ in May, and he needed to find a replacement for himself for the month of June, so he contacted me and said, "Hey, Harold, will you be interested in this deployment role?" And so, he gave me the heads up that, yeah, we need you here, but we would like to see if you want to come here first, before we actually try to pull you involuntarily.

So basically, I said, "Sure." And so that's how I got involved with the admin portion, is I first got introduced when I joined RDF-3 back in 2017 and learned the ropes a little bit about the admin functions.

JS: Commander can I just jump in for a second, you made a reference to something, and I wondered if you could share a little bit more about that. You mentioned that the PHS decided to go a different way from the RDFs. I think it was the spring of 2020, and I was just curious what led the service to do that and what did they move to as a different way of organizing for these sorts of circumstances. Thank you.

HS: John, I can't answer that question because PHS, like any organization, always does some type of reorganization and I'm not sure why the RDFs were dissolved. From my perspective, I think they worked really well, because you had these designated teams already committed for deployments and they were trained in those positions. And we were on a rotating schedule to cover, a certain month and we knew that hurricanes were going to be the primary reason to deploy, and so each RDF had the staff to actually set up a hospital and run a hospital. I don't know why PHS decided to dissolve those. They're in the process of developing another way of deploying people which supposedly are these small little lean mean deployment teams.

JS: Would these be the Strike Teams or something else?

HS: Yeah. Like the Strike Teams, and this is still in evolving, so right now they're actually developing these Strike Teams and recruiting people for them, but there's still not a lot of details about these Strike Teams. So, I don't know why they are converting that, maybe it's cause of funding for it or something, I don't know. But that's been evolving now and is still developing, so I don't know a lot more than that.

JS: Are the strike teams also on call, much like the RDFs were, or is it a different way that they're called to action?

HS: I don't know. Like I said, this is still all evolving, but it sounds like – I don't know if there's going to be a call calendar or not, or if they are in teams based upon their skillset,

meaning that, this Strike Team is training for contact tracing for instance, then if there's a need for contact tracing, they'll be deployed.

It sounds like possibly – I don't know, there might not be a schedule that you're going to deploy, if your rotation starts in August, be prepared to deploy in August. It sounds like these strike teams can happen at any time. So, whenever there's a need for that skill set. I don't know for sure, but it sounds like the team is supposed to be ready to deploy within 12 to 24 hours at any time, so I'm not sure.

JS: Okay. Thanks for clarifying that, I appreciate it.

VB: I hate to press you any further about it, but I wanted to verify it. It sounds like you're saying this is a permanent transition. It's not just an ad hoc development, in response to COVID?

HS: No, this was actually in the planning phases before COVID, just like any operation, a lot of times you don't know all the details until it happens, and this is true of my deployment at CCHQ with that admin position. It's like building a plane while it's flying. It is so fluid, and I think that was how this transition from RDFs to these Strike Teams is, you're given bits and pieces of information, and over time you get more information and get a clearer picture of what this new role would be, or our new operation would be.

It's not like it's written in a book on day one, at least that wasn't how it was disseminated to us as PHS officers. It was given at a very high level – 50,000-foot level, and then it gets a little bit more granular as time progresses. And that's where we're at now. So, it's still not crystal clear yet, but it's more granular than it was a year ago.

VB: That makes a lot of sense. And I'm sure that after the experience of the past year, there'll be takeaways and lessons that might benefit the development of this new model too.

Regarding your deployment in June, could you explain what the workflow or what the procedure was for helping to identify officers to assign to different deployments? I'm imagining it depended a lot on input from FEMA and from the states, but were there any particular frameworks or models for – you're always going to need these particular roles for a certain deployment or was it really situation specific? And what resources or databases did you draw on to try and source the information about the right people to assign to these roles?

[01:00:21]

HS: It's all of the above. It all depends on the number of simultaneous missions that we're working on. So, for the COVID deployments what skill sets or what the mission is, it all depends on what the state requested and what FEMA is asking help for. For instance, in North Carolina, we knew the mission was contact tracing, and we knew that it was going to be small teams scattered throughout the state. So, we knew we had to create these teams of five and I don't remember exact specific roles that we were recruiting for, but we had to have at least two contact tracers, an epidemiologist, and I think maybe one nurse on the team. Contact tracers could be a hodgepodge of healthcare professionals, they could be a nurse, or a pharmacist maybe a dietician. But we needed at least one or two EPIs (epidemiologists), I think, for the whole team itself in that particular mission.

So, for instance, we had some based upon the skill set that we already knew was required for this mission for contact tracing. Then we had to look at the roster spreadsheets of all the PHS (officers) and the spreadsheets would identify the particular PHS officer, what category they're in. Are they a physician, are they a nurse, a pharmacist, et cetera. And then then the spreadsheet also identified additional skill sets that each individual may have. So, for instance, if we needed an epidemiologist typically we would first target, in the spreadsheet, just looking and searching [for an officer who works as an epidemiologist]. We would want a physician with epidemiology training. And so, when you do a search like that – obviously finding a physician who's an epidemiologist you would know there's not going to be a whole pool of them. There's going to be maybe a few at best, and then once you identify that small little group of physicians/epidemiologists, then you have to see when they last deployed, or are they considered as critical mission and if so, they probably couldn't deploy.

Obviously the areas that you would think you would find a physician who's an epidemiologist would be like CDC or NIH or possibly maybe FDA or CMS. So once you narrowed it down most likely NIH or CDC would be the best location to try to get one of these physicians to deploy. Then you have to look at when was the last time they deployed. During that time, while I was there at CCHQ, officers [returning form deployment] were given a 60-day period of time where they could not be deployable again. So, in other words after they returned from deployment we would give them 60 days. I think this might have been an internal policy. We would try not to bother them again. So, if you have a very unique position that you're looking for, which means that there's only a handful that could possibly meet that criteria, and then you have to see whether or not they're deployable, and that may narrow it down to a choice of one or two people at best.

Then if you identify one or two people you have to notify them or contact that person and see if they can be available and if they're not mission critical. So one thing that's so much different from deploying in PHS versus deploying in DOD is in DOD, you don't have to get supervisory approval. You don't ask the officer “can you deploy”?. In DOD, at least for the Army if you're identified to deploy, you pack your bags and you go, no ifs, buts or questions asked, you go. PHS is a little bit different, though they state that you don't have to have a supervisor approval now, in some instances you still have to get supervisory approval.

And then whether or not they deployed within the last 60 days or not, there's a little bit more flexibility in terms of determining whether a person can deploy or not. And PHS, when I compare it to DOD, if you deployed yesterday, came out yesterday and you get asked to go again, you go. So, it's a different culture there versus in PHS.

Identifying somebody who's needed for this mission, there's still moving pieces involved. One is basically getting their agreement that yes, they can deploy, because they may have medical issues or something and that may be a reason why they can't deploy, or their boss tells them or us that they are mission critical so they can't deploy.

That's another hurdle, you have to – in my position of identifying people to roster, part of the screening is making sure that yes, they are available to deploy. They're not determined mission critical by their agency (i.e. CDC needs to keep them there), or they don't have a medical issue keeping them from deploying. So, we have to clear that and make sure they're ready and that they could be rostered to deploy. Basically, you have to identify a skill set based on that mission.

Now, if it's a hurricane mission, which is much broader than a COVID operation, that's where you need to set up a hospital. So, you need to have X number of nurses, and we have a

template for this. Basically, you need 15 nurses, you need maybe three physicians, at least one of them as emergency medical physician. You'll need four pharmacists you'll need a safety officer. So, there's a set template for what you need to set up a hospital in terms of staffing for a hurricane mission.

Then again, the states will vary on what they need for a COVID mission. Like in Pennsylvania, during my time, we had to set up these little mini hospitals in hotspots where the hotspots were in Pennsylvania. And we still needed to have physicians, nurses, pharmacists, and some other healthcare professionals actually run a small clinic. Then they had to have the flexibility to move to the next hotspot within that state. So, it had to be, very flexible to move around. The COVID missions can vary by each different state and by what needs they have.

One of the challenges I mentioned earlier about this deployment was that it was very fluid. We would get these briefings in the morning. Virginia's asking for help, we'll get more details this afternoon, and we'll let you know at the five o'clock brief. So, between the morning brief and the five o'clock brief, my office, admin, is already working hard to figure out, who do we need to set up for this Virginia mission based upon the information we have at that present moment. Then we start identifying potential people and put them on a spreadsheet to keep track. As I said before, we had a hurricane looming out in the ocean, but we're weeks away from it actually hitting land, and we already started creating a skeleton roster for a potential hurricane mission. So, there may be a situation where priorities take charge.

This Virginia mission, which may go live tomorrow, I might need to pull that doctor I had on the hurricane mission, that may not go out for another week and a half, and put him on this mission, and cherry pick, Peter or Paul, which made it challenging when you have multiple different missions based upon timelines.

You need to start getting things ready to go. So yeah, we had limited inventory on what physicians we could pull, and then based upon the timelines that we're projecting and what information we're told by the higher-ups, and then during the five o'clock briefing that Virginia mission may dissipate, or it may evolve into something a little bit different. It was constantly changing the rostering and figuring out who needs to be on this team based upon the information we had at that particular moment in time.

So basically, as I said earlier, it's like building a plane and flying at the same time, because you don't have a lot of time to sit there and wait to get all the information before you have something ready to go, you need to start working on the mission as soon as you get the early information, and start developing the team so that you're ready to go out the door in 24 hours. It's very fluid and it changes quite a bit.

That was a little bit of frustration because it was very common that the states and FEMA would change their priorities and change what they're asking for, which would affect how we select people for what mission.

JS: So many things that needed to be taken into account when trying to respond to these emergencies on a dime. As you mentioned, and you had a spreadsheet of all the officers that would be taken into account and making these deployment decisions.

You mentioned there were a number of circumstances that might complicate their ability to deploy, for example, if they were mission critical to the agency's crucial work going on. You also mentioned circumstances that might complicate that. I was wondering if that might be extended to the medical issues connected to those officers that were responsible for someone in

their family, for example, or if there were other personal circumstances that would be taken into account when making decisions to deploy these PHS officers.

HS: Yeah, that's a really good question, and that's true. I'm not sure if you heard of Corps Care?

VB: Yes, but maybe you could share just a little bit about that though.

HS: Okay. I'm not an expert in Corps Care, but basically Corps Care is an independent group of people – and again let me remind you that Corps Care is also staffed by deploying individuals. So, on a month-to-month basis Corps Care responses can vary based upon who staffing Corps Care at that particular month, because [it's staffed by deployed officers]. Corps Care is a group of healthcare professionals like social workers or nurses or something like that who are available to assist PHS officers if they have some sort of medical issue, whether it be personal medical issue or a family care medical issue.

Corps Care has the authority to delay a person from deploying because of this medical issue or this family care issue. So that is a kind of a way out, or a way for an individual or PHS officer who is slated to be rostered to deploy, but come to find out based upon being reviewed by Corps Care that, at this moment in time, they will be considered ineligible to be rostered or deployed. Again, the Corps Care is operated by deployed personnel themselves, who are in that position because they've been deployed to serve Corps Care and they help make a decision whether or not these pending officers are deployable or not.

VB: So, on the other side of rostering positions and teams, what criteria come into play in prioritizing different local needs. I'm sure epidemiological concerns and case rates are a critical factor and of course, whatever states are requesting. But what other considerations are there? The number of officers needed or any, anything at all?

HS: Again, it is really dictated by the state's needs, really the state's needs and what PHS inventory can provide. States will sometimes ask for ridiculous numbers of officers to help. I think one time, during my tenure there, California was asking for about 80 individuals. They were wanting 60 nurses and other healthcare professionals. Under the circumstances, we could not offer the state that many individuals, because one, our inventory couldn't support it. We had multiple nurses being deployed at that moment. We had nurses that had just gotten back from deployment and so there's no way we could justify providing that amount of officers to help.

It's a give and take. Our leadership, up at the headquarters level, would make that decision of what we could really support and the mission needs. Because a lot of times states can get help through hiring contractors. And I think, from a resource point of view, it may be cheaper to ask other agencies like FEMA and HHS and PHS to provide support versus, going out into the private sector and hiring contractors. But another way the states could augment their support is through contractors and not rely on the different Federal Agencies.

So, the CCHQ leadership would decide, based upon the mission needs of that particular state, how much resources we could provide. In that particular example, instead of providing 80 people, I think we were proposing half of that, around 40 individuals and that the state could make the difference up by hiring contractors or looking for other means.

Really it's some sort of negotiation, I believe it's higher than my level, but it is obviously some type of negotiation that occurs between PHS leadership ASPR and the state agencies, or FEMA for what we can provide – what's the realistic number of inventory we can provide in terms of help.

Once the CCHQ leadership decides the target number, and then that's fed down to us at the admin level, and then also the description of what these roles are, which are provided during the multiple briefs we would have throughout the day. This state's asking for this help and they're asking that we provide three physicians, eight nurses and two pharmacists. Once admin gets that information from the brief, then that's when we go back to our spreadsheets and start looking for available officers who could fill those positions. And then once we identify those officers amongst our team, we have contactors that will call them on the phone and email them and say, "Hey we need to screen you to see if you're available for this upcoming mission."

And then we have screening questions obviously, and we ask them are you available for this mission? Ask that particular individual that's been identified, and if they say I have this family care issue, or I have this medical issue, that's when we refer them to Corps Care. If they don't identify any issues holding them up, then we will go ahead and tentatively put them on the roster and wait to find out from future briefs, whether or not this is going to go live or not.

In the admin section, we're always trying to be a step ahead in terms of identifying individuals and getting them on this draft roster, you might say. Once it's been confirmed that this mission is going live then we'll start executing and say, "You're being rostered right now, be prepared to deploy within, X number of hours or by this date, and more information will follow." It is a collaboration between PHS leadership and the states and the other agencies and figuring out what is really practical that we can provide for these missions.

VB: The information chain provided you with the knowledge you needed to determine what positions needed to be filled. Were the leadership members that you were reporting to, were they permanent members of the leadership team, or were there people who were also on deployment?

HS: Both. Basically, we had a person in charge of the whole what we call the cell. The cell is made up of – this deployment cell is made up of the different sections. I was in the admin section, there's a logistic section. There are various other sections within the cell and then there's a commander or person in charge of the whole cell. And that person is also in a deployment position. So the cell is really made up of all these deployed people to assist CCHQ in identifying people for other deployments. So, the command person in charge of the cell would then report up to full-time leadership in CCHQ.

So, in other words, these are people not deployed, but they're in their actual [assigned] roles. And my admin position was actually to communicate as a liaison directly to one of the full-time staff at CCHQ in terms of getting updates on these spreadsheets and rosters of people available as a full-time person [for deployment]. I would communicate directly to that person as a liaison for my office within the cell.

Basically, the whole cell was composed of people that were deployed to be in these positions for at least 30 to 45 days. And we, as a group, were reporting directly up to CCHQ to full time staff and the CCHQ folks were the ones that were briefing down to us multiple times throughout the day on these pending missions or changing missions or missions that are ongoing, because sometimes we had to extend missions out and get replacements for the extension or inform them that they were extending for another 30 or 40 days. So, there's a lot of different

things, a lot of moving parts going on, but the communication had to be one voice and it had to go up the chain and down the chain.

VB: That's really interesting. What sort of circumstances would determine if a mission needed to be extended?

HS: The states, Either the states or FEMA would request those extensions.

[01:19:48]

VB: Would you request the same officers to continue in the role or would you have to find someone to replace them?

HS: Both. We would ask them first if they could extend and believe it or not, I would say at least half were willing to extend. And then ones that didn't want to extend, we would try to find a replacement or in some instances the mission may – I guess the cadre who are there, may shrink based upon the ones who are still staying.

VB: So, when you originally were able to identify people to roster for these positions by and large, were they familiar with the role they were going to play, or did they need to receive training or any sort of overview of what position they were being asked to fill?

HS: Again, it is all the above. Basically, individuals that are identified as replacements they usually have some idea of the role that they'll be working in, but that doesn't mean that they know the exact job, or what they're doing. So just like we did in military – what we do is we have what we call left seat/right seat. And what that means is when you're deployed and you're doing your job and it's time to transition to let another team take over, once that other team has been identified, they usually report – there's overlap, we try to have at least a week overlap, and while I was down range in Iraq, we did a two week overlap.

How it works, and why we call it left seat/right seat, is that the first week the team that's replacing you observe what you're doing. They are the student [and you are the teacher]. They learn what your job requires and the processes you're doing. Then the next week, you let the team replacing you do the job, and you supervise or critique or whatever.

In the military, we did that on a two-week basis, but here at CCHQ, we did it all in one week. The first couple days, I would train the person, that's replacing my role and let him or her observe what I'm doing and how I'm doing it. And then by the end of the week, I would have them carry on my functions and I would just be there to give advice or step in, if necessary, but try to let them be as independent as possible.

That's how the skills are passed from one team to another team that's replacing them, and just like anything that evolves, as your team takes over and carries on the mission for another month, things keep evolving. You develop new processes and new procedures as you go forward, that's the nature of the job. What you may have learned from the previous team at the beginning of your deployment may become invalid as you train the new team that's replacing you at this point in time. So, things keep evolving, but there's always that left seat/right seat that kind of trains the people that are coming in to replace you.

VB: That makes a lot of sense, but I imagine it's also a little bit tricky, and it adds another complication in coordinating and filling these positions. It occurs to me that in rare instances, there may be circumstances where an officer can't complete their predetermined deployment period for like a family emergency. What is the procedure in a situation like that? If an officer has to be recalled early.

HS: In my position at admin, that happened in White River, Arizona, when it was a hotspot back in June of 2020. There were some individuals who actually came down with COVID and they had to be quarantined, and I think one had to be medevacked out. In that situation we do try to find a replacement if needed or necessary, and that means, going back through the spreadsheet, and the list of individuals and identifying which nurse can we replace now, and so again we are going down to the list of names, and skill sets, and what their category is, and when was their last deployment was, and whether or not that person would be a candidate to fill in the remaining deployment time.

That rarely happens, but it does happen. And you just try to identify a replacement. In a worst-case scenario, maybe you can't replace that person, and that means that the residual team will have to absorb that vacancy [the workload handled by the departing officer].

VB: Sounds like a very upsetting circumstances to have to find a replacement for an officer.

HS: Yeah, and that kind of comes down to you keeping the morale up too. Which could be a challenge, also is keeping the morale down range intact. That's why PHS, just like the military, always has resiliency training to help people's morale – help them cope with challenging times.

VB: Commander, could you tell me a little bit more about the White River deployment? When did you say it was again?

HS: I don't know exact dates, but it was it occurred sometime around June or July of 2020.

VB: Were you deployed to Arizona or were you – that's when you were still at…

HS: I went to White River independently. That was wasn't part of a deployment. That was what we call a TDY (Temporary Duty Assignment). White River was a hotspot, like I said before. It's on an Indian reservation and my TDY was to assist with their vaccination clinic. They're trying to vaccinate the Indian reservation population. They set up this clinic to do vaccinations from eight in the morning until six at night, Monday through Friday. They needed extra help to manage that, and so the White River pharmacy actually requested pharmacists to come out there to assist.

It was not part of the deployment or anything, it wasn't part of CCHQ's mission, but it was in parallel with what they were doing, and so that's what I did. I went there for two weeks and helped them out with the with their vaccination program, and then every two weeks another pharmacy officer would come in and help out. So, they had several people on a staggered schedule every two weeks to come in and assist with their program.

VB: To clarify, since this was last summer, we're talking about the influenza vaccinations or –

HS: My TDY was in January of this year, it was the last couple weeks of January and first week of February of this year. They've been having this rotational basis of volunteer pharmacists come in and help them out or under TDY status, not deployment, but temporary duty status which they funded. They funded this TDY, it wasn't coming from a deployment pocket of money. It wasn't under CCHQ's control, this is totally independent. And as far as I know, it's still ongoing right now, they have this rolling pharmacist coming in to help out with their program.

VB: It's at the request of the Nation, the Indian Health Service isn't involved in organizing it or anything?

HS: They're organizing it, it's on a clinic level. White River Hospital is running it themselves. They got the vaccines early on. They got it much sooner than a lot of the civilian hospitals did, so they've been self-injecting their whole Tribal population, instead of drive throughs, they would have these little clinics they would set up in the perimeter of the Indian reservation.

They would just do mass public announcements in their general population and let them know they could come in and get their vaccination. So, they were vaccinating everyone and not doing it in stages like states were. A healthy 17-year-old could come in and get the Pfizer, they were using Pfizer vaccine,– just walk in and do it without having to wait until their age population group was announced. They were independent from the other federal programs that were doing mass vaccinations.

VB: So, what was it like? Were they encountering – were they getting people to turn out for vaccinations?

HS: Absolutely, because remember when I was there in June at the CCHQ cell, we were deploying people to White River as a deployment site, and they were a hotspot for a long time during the summer of 2020. A lot of the tribal members – White River had been exposed to COVID and a lot of them successfully overcame COVID. They had seen family members – whole families were infected with COVID. So, during my two weeks there, they were willing to come in and get their vaccinations no questions asked. They had appointments scheduled, but like I said, it wasn't just limited to high-risk elderly patients. It was opened for everyone who was eligible as a Tribal member. They would come in by appointment and get their vaccinations and a lot of them were happy to do that because they had overcome COVID in the past year, when it was a hotspot, some had been hospitalized too.

And that was part of the screening process too, [checking to see] if they received monoclonal antibodies within the last 90 days, it had to be greater than 90 days to get the COVID vaccine if they received any monoclonal antibody treatment. So, you had to check their medical record to make sure that they were clear of that, or if they had a temperature or anything like that. This was a unique population to treat and screen versus what I did in Dover.

VB: I'm struck – it's so remarkable that you, on one, one point in this pandemic were helping to assign officers to respond to this particular area of extreme need and then ended up serving there yourself at, I don't want to say at the other end, much later along in the pandemic and got to

have the benefit of seeing firsthand how they were pulling through. I think that's remarkable. Do you have any particular stories from visiting White River that you'd care to share?

HS: The people there are so humble, and they live a very simple life compared to mainstream America. They live a very simple, humble life and a lot of them were victims of COVID, fortunately most of them did recover from it. So, they knew how bad the disease was when they had it. A lot of the hospital staff are tribal members, and some of them were infected as well. The people of White River are very nice, humble people. They were happy for us to be there to help them out, staff and patients, and it was, it was a remarkable time to be there to help them get through this.

Then when we set up these [remote] mass vaccination clinics [twice while I was in White River. The remote vaccination sites allowed greater access within the tribal reservation for receiving their COVID shots. Many tribal members were happy to have the opportunity to come in and get their injection because they experienced firsthand how bad COVID infection was for them and their families].

VB: And do you think, from what you observed did there was there plenty of supply? They weren't wanting for doses?

HS: Oh yeah, fortunately for White River they had ample supply, so there wasn't a supply issue when I was there. They were able to have supply in, just like we did at Dover, we had to time making those last vials of the day because we didn't want to waste them. And what was amazing too, is that when I had spare doses near the end of the day or because someone didn't

show up for the appointment, we were able to go to the front desk and ask them, “Hey, can you call any of your staff in the hospital who's due for a second dose today or tomorrow? Or “Can you call that patient who said they would be here at five o'clock and make sure they're still coming in?” And we were able to either get a staff member at the hospital, voluntarily come in to take that shot so that dose wouldn't go to waste. Or the patient that might have been scheduled for an appointment the next day, we could contact them at a moment's notice, and ask them to come in now because we didn’t want to waste a dose. And that patient would actually come in at the moment's notice of that phone call and be there in 15 minutes, instead of waiting for their appointment for the following day, and that's how we avoided wasting doses. That's how reliable the patient population is in terms of willingness to get their vaccination.

VB: That's wonderful that it worked seamlessly, that's really fantastic to hear. Commander Sano, I feel like we're coming to the close of the interview and I wanted to ask if you had any remarks you wanted to make or any final thoughts you wanted to share, I wanted to give you the opportunity, but no pressure.

HS: I just wanted to say that this interview, my comments during this interview are based upon me and I'm not speaking for CCHQ or ASPR or Public Health Service in general. These are my comments from myself. These comments are strictly from my experience and what knowledge I have and what information I know of at the time of my deployment.

VB: We certainly respect that and really do appreciate your earnestness and your willingness to share your memories with us. It's been a really valuable to hear about from my perspective and

I'm sure researchers will be appreciative as well. So, on that note, I'm gonna go ahead and stop the recording.

[END OF INTERVIEW]

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