Dr. Richard DeCederfelt

Behind the Mask

March 18, 2022

Barr: Good afternoon. Today is March 18, 2022. My name is Gabrielle Barr, and I'm the archivist at the Office of NIH History and Stetten Museum. Today, I have the pleasure of speaking with Dr. Richard DeCederfelt. Dr. DeCederfelt is the acting department chief of the Pharmacy Department at the NIH Clinical Center, and he's also the chief of the Pharmaceutical Procurement Section. Today, he will be speaking about NIH's pharmacy's contributions to the pandemic. Thank you very much for being with me. To begin, can you please introduce your responsibilities at NIH?

DeCederfelt: Certainly. It's very nice to meet you today, and I'm happy to be with you. I am currently serving as the acting chief of the Pharmacy Department for the Clinical Center. In this role, I'm responsible for all oversight for pharmacy activities for the pharmacy department. The department actually includes services for both traditional pharmacy – we have an inpatient pharmacy that has both unit dose and investigational drugs. It has an outpatient pharmacy that also provides investigational drugs to our outpatient patients. We have an Intravenous Admixture Unit where we provide aseptic processing for IV drugs for our patients, and we also have a Pharmacokinetics Research Lab that we support that provides pharmacokinetic studies for investigators at the NIH. So overall as the acting chief, I am responsible for all of the operations for the department and ensuring training of all personnel, qualifying of all personnel, and credentialing of all pharmacy personnel within the Clinical Center so that they have adequate training and skill sets to be actively participating in protocol management for the Clinical Center. That is my current acting role. In my role as the section chief for the Pharmaceutical Procurement Section, that section is essentially responsible for the pharmaceutical supply chain within the Clinical Center, so all medications intended to be administered to patients are required to be obtained and secured by the Pharmacy Department, so we take that responsibility very seriously. We participate in the Pharmaceutical Prime Vendor Program through the Department of Defense. We act as another government agency, and we have access to basically all FDA approved pharmaceuticals throughout the country and with extremely deep discounts through the Pharmaceutical Prime Vendor Program, because it's a nationwide competed contract that we participate in. So that's my overall responsibilities for the department, and we are currently operating with approximately 150 personnel in the Pharmacy Department including a mixture of pharmacists, pharmacy technicians, chemists, fellows, IRTAs [Intramural Research Training Award fellows], and support personnel.

Barr: How do you handle experimental medications that especially come up a lot with NIH?

DeCederfelt: Experimental and investigational are basically synonyms, so in our world in pharmacy, we term everything as an investigational drug. By definition, an investigational drug is not FDA approved for distribution throughout the United States and dispensing by non-clinical investigators. Once it becomes

FDA approved, then it's commercially available and it can be dispensed by traditional pharmacies. An investigational drug is characterized as a limited distribution and only authorized to clinical investigators and their delegated authority. The pharmacy becomes a dedicated authority to our clinical investigators, and we act on behalf of the investigator to support the protocols. We obtain their investigational drugs. We have specific systems in place, SOPs (Standard Operating Procedures) and policies, along with systems developed. We have an investigational drug management system software that was developed here that provides a hundred percent end-to-end accountability for all investigational drugs, from the recipient all the way to the patient. We have 100% traceable accountability, and we provide those reports to the FDA in support of filing the investigational new drug applications, or INDs, to the FDA. So that's kind of our role and our method to account for and handle investigational drugs.

Barr: Do you all round at the Clinical Center, and how did you all handle that during the pandemic?

DeCederfelt: Yes, we do. The Pharmacy Department actually has a team of clinical pharmacy specialists. They have advanced clinical training experience with board certification and managing specific disease states and patient populations. These specific pharmacists are actually embedded in the clinical teams as a member and participate in clinical rounds on all the services within the Clinical Center. As you mentioned, during the pandemic this all became very challenging as our footprint of personnel within the Clinical Center was required to be reduced to comply with the separation of personnel, the social distancing, etcetera. We actually, for the first time, embraced telework. The Pharmacy Department had never really utilized telework, because it really never had a role prior to the pandemic. The pandemic really forced the issue and forced us to very think about creative options and alternatives for pharmacists to work remotely. What we actually did is, for the rounding, we were involved in virtual rounds. Clinicians would actually be, through Zoom, through other social media, be conducting rounds virtually with all the team members similar to what we're doing here in this interview where we would present the patient virtually. Clinicians would each basically take their role, their expertise, and provide their advice and input to the patient care, and then the actual physical patients that were here in the Clinical Center being seen by the nurses and physicians on site were then treated accordingly. It was a unique model of this virtual rounding that we had never participated in and has now become a standard and likely to go on beyond the pandemic, not necessarily a hundred percent the way it had been done at certain points, but to a limited degree. It also provides the opportunity for some of the team members, who may not necessarily be on site in a given day, to continue to participate in the clinical rounds. It's something new for the Clinical Center; I think it's something new for pharmacy for sure, and it's been an exciting opportunity to see that we've had the ability to put pharmacists in remote locations where they actually do medication verification. One of the roles for pharmacists is every medication order entered by a physician is then reviewed and verified by a pharmacist before it's released for actually going to the dispensing pharmacy for processing, so that was a role that we found very quickly was able to be performed remotely. That was one of the things that we did specifically – was remote order verification. That allowed, again, our personnel to be off-site, do remote order verification, which then our on-site pharmacist, which we always had presence and still do, were able to do the actual physical processing of the prescriptions and the dispensing to the patients.

Barr: We'll get more to that later, but in February and March of 2020, when very little was known about COVID-19, how did you all go about researching and purchasing therapeutics to treat the COVID-19 patients that came to the Clinical Center?

DeCederfelt: This was an extremely challenging time for all of us in the country, specifically all of us healthcare workers working within a hospital setting. The pharmacy was actually an active participant in all the NIH and the Clinical Center COVID-19 strategic planning sessions that were ongoing. Fortunately, we were able to communicate and collaborate with our partners at the FDA and the CDC. Fortunately, the CDC in conjunction with the FDA provided guidance, and the FDA actually authorized emergency use authorization for what would traditionally be seen as only investigational drugs. The emergency use authorization basically allowed an exemption and allowed investigational drugs to be distributed out for use within certain parameters that were established within the defined use of the emergency authorization. We were able to reach out and partner with, at first, the Maryland Department of Health. There was a bit of confusion whether the response for the government would be on the state level or the federal level, and the NIH kind of falls in between – we're located in Maryland, so we're in the state of Maryland, but we're a federal government entity. At first, Maryland Department of Health responded, and we actually obtained some therapeutics through the Maryland Department of Health. I think as the federal response evolved, we then became a partner with the Assistant Secretary of Preparedness and Response which is the federal side of the response, and we actually were able to obtain therapeutics through both lines – initially through the Maryland State Department and then eventually we went through the federal side. Now we're obtaining all of our supplies through the ASPR, which is the Assistant Secretary for Preparedness and Response. At this time, all of the therapeutics distributed by those two are no costs. Fortunately, we did not have to come up with funding mechanisms to obtain these therapeutics, and they were really just about logistics and distribution. We did develop specific procedures and accountability for how we were going to handle these investigational items, but fortunately again, we have a lot of experience with investigational drugs so for us it was – I'm not going to say just another investigational drug, but essentially, we were very accustomed to handling investigational drugs, so it was kind of normal practice for us here.

Barr: Yeah, I'm sure easier than some other kinds of hospitals that had to deal with it.

DeCederfelt: Correct. Right, just based on the experience that we have here at the NIH in our normal business practice of dealing with investigational agents and realistically commercial agents that are being used outside of their normal indications, we're quite familiar with handling a lot of different types of agents here.

Barr: Can you speak about some of the medications that have been distributed through the pharmacy to COVID-19 patients and then what was done initially? And then as more medications have come on the market and the disease has changed over time, can you speak a little bit about that?

DeCederfelt: Sure, I can. Initially, when the pandemic was very first announced essentially, pharmacy clinical specialists who were embedded with the Clinical Center's Critical Care Medicine Department were in consultation with what are the requirements of this disease state and what are the patient population we're likely to see. A lot of this was theoretical planning, because we weren't really sure what patient population was going to be exposed or what patient population might show up here at the NIH. In general, we have a lot of immune compromised patients that we see, so that's the big population we're focused on is how are we going to support immune compromised patients that get exposed to COVID-19. The initial response included ensuring adequate supplies or standard of care medications, so these include like antibiotics, sedatives, pain medications, blood modifiers, etcetera, that would just be symptomatic response to this disease state. This was prior to any vaccines being released or any other therapeutics that were specifically geared towards COVID-19. We were just looking at shoring up supplies of emergency medication response. That was our initial response. As I said, fortunately, we have a very robust pharmaceutical supply chain and the ability to ramp up very quickly and respond to emergencies. We were able to secure a large supply of emergency response medications and standard of care supplies. Then, as you said, as the virus mutated and we started seeing variants in the virus, new treatment modalities were introduced. Initially, we had seen some monoclonal antibodies that were released for use in specific disease states and parameters of COVID-19 response. As the disease evolved and the virus mutated, we realized that the initial monoclonal antibodies that were released for treatment were no longer effective against specifically the omicron variant. We realized that those therapeutics were no longer being effective against that particular variant, so really this was an FDA response. They essentially withdrew the emergency use authorization on those particular antibodies and came out with new treatment modalities that we could use that would be effective against different variants.

Barr: What are some of those new treatments?

DeCederfelt: The initial ones that you were seeing were combination therapies where we're having multiple monoclonal antibodies combined, and as time went on, new therapies including antiretrovirals were developed. This was all pre-vaccine. Prior to the vaccine being released for mass distribution, we were looking at really treating and symptomatically treating patients. Initially, as I said, it was monoclonal antibodies and antivirals. We still have new antivirals and new monoclonal antibiotics – antibodies that have been developed in response to the mutations which are now still effective against all classes. That was our kind of the treatment end of obtaining therapies for symptomatic treatment. In conjunction with that became the release of the vaccine through emergency use authorization, and in reality, as the pharmacy, that was our primary response and our focus was the vaccinations and obtaining the vaccines, storing the vaccines, developing policies and procedures, mixing instructions, and actually staffing the clinics with pharmacists to administer the vaccine. That became our real bread and butter of what we were doing day to day – managing the vaccines supply and maintaining and manning the staffing of the clinic. In the background, our normal stuff was going on to treatments, and we were doing that in the IV room – mixing up supplies and sending them up to the patients that were on in-house. We had kind of had a dual effort there. We were in the background treating patients

through emergency use authorization supplies, and then on the front end, we were actually administering vaccines to all of the employees. We actually obtained I want to say over 30 000 doses of vaccines for the NIH.

Barr: Quite a lot!

DeCederfelt: Yeah. It was a huge endeavor and a large clinic that we were supporting. That was our initial response and then subsequent responses.

Barr: I hear the Pfizer vaccine was very complex to administer due to temperature requirements and things of that nature. Can you talk a little bit about that and how you guys prepared? Moderna as well had to be kept very cold.

DeCederfelt: Right, right. All of the vaccines required initially deep freezer – so we're talking about minus 70 degrees freezer, which is very difficult in terms of handling. That means your transportation is on dry ice. You're not touching this with your hands, or you're gloved at all times. We actually established specific cold storage units, as they're called freezers for lack of better term, that were exclusive for the vaccines.

Barr: You ordered those?

DeCederfelt: No. We actually have many cold storage units in the pharmacy. We have minus 80, minus 20, and refrigerators - many units throughout the pharmacy. What we did was we emptied several units, moved supplies, and made them exclusive for vaccine use. Then, they were actually under lock and key. They were quarantined in the specific rooms, and only certain personnel were allowed to handle the vaccines. Part of this was the security – there were concerns about diversion of the supplies. As you recall, vaccines were extremely limited initially when they were being distributed, so we had to account for every single dose, every vial, every drop essentially. A lot of the focus was on making sure that no dose went wasted. We didn't want to have the potential where we drew up a dose, and the patient didn't show up. There was a lot of coordination on scheduling of employees to come get vaccinated, only pulling out certain doses at a time, and only diluting them when we had confirmed people waiting in line to actually be dosed. It was a lot of time constraints, and as you said with the initial Pfizer vaccines, there was a lot of procedures where there was a timed event from taking it out of the freezer. It had to go in the refrigerator for a certain amount of time, and then it had to go into room temperature for a certain amount of time. Then it had to be diluted and then mixed with a certain amount of time. There was a very time constraint on the Pfizer vaccine. Fortunately, the Moderna did not require the dilution component, so even though the storage was similar initially, subsequently the storage actually became less and was reduced to refrigeration. We actually wound up having much

more Moderna vaccine than we did Pfizer. Again, this wasn't something we necessarily had a say in. It was availability, which again federal distribution sites had whatever vaccine was available, and it was kind of first come first served. We would get whatever was available at the time. We actually developed multiple procedures for all the different vaccine types, and we were staged and ready to handle all of them at one point in time. We have administered all of them here.

Barr: What was it like scheduling your staff, because so much of your staff was involved you said in either preparing or giving the vaccine, but you still had patients to care for and other responsibilities. How did you ensure that everything could be taken care of correctly?

DeCederfelt: Yeah, that was quite the challenge. We wound up having a limited number of our own staff that would actually go down as pharmacists and staff for the vaccine clinic, and then we actually tapped into the Public Health Service officers from other agencies. Specifically in this area, the FDA was able to provide additional pharmacists that we trained and credentialed here and then walked them through the process. Then they actually staffed the clinic. Between the Clinical Center pharmacy staff and the FDA and other Public Health Service officers from other agencies including – I believe CMS [Centers for Medicare and Medicaid Services] came into the NIH and provided pharmacy support.

Barr: With the different medications that have been given for COVID, can you talk a little bit about y'all's role in advising about dosages or potential side effects that you have seen in patients?

DeCederfelt: As I mentioned, our clinical pharmacy specialists are the team members that round in the clinics and provide the actual specific dosing guidelines and medication selections for each specific patient depending on their disease state and other factors. In reality, the large majority of the adverse reactions seen are characterized at the FDA and distributed out through communication. Here at the NIH, we really were not seeing a tremendous number of patients for treatment. The large majority, as I said, that we were doing is vaccinating employees and patients, but we haven't had a tremendous number of COVID positive patients that we've been treating. The numbers have been fairly steady over time, but there have not been tremendous numbers. We haven't had a large number of pulled subjects where we can actually create much of an adverse drug profile.

Barr: With some of the COVID positive patients that you have seen at the Clinical Center, have many of them had secondary bacterial infections that you have had to help treat?

DeCederfelt: I really couldn't respond to that one unfortunately. I don't really have much information on that.

Barr: Has your team been a part of any COVID-19 studies that deal with therapeutics? Some of the active studies and some of the others?

DeCederfelt: Again, our clinical pharmacy specialists are embedded in those teams, so we would be participating in Dr. Child's ACT trials. We actually had clinical pharmacy specialists supporting that, and there are also specific pharmacists that are embedded in our intensive care unit that are actually actively working with the physicians and the investigators.

Barr: I know that this is question doesn't directly relate, but what excites you most about all the COVID-19 antivirals right now just as a pharmacist in the field?

DeCederfelt: I think as a pharmacist the most impressive thing was the speed at which these therapies were developed. If you think about going from the bench to a patient and the amount of time that that happened, to me that indicates that the pharmaceutical industry manufacturing is very robust and actually has the ability to come up with very novel treatment therapies in a very short time based on science and experience. I think to me, if we are able to produce therapeutics in response to a pandemic at this degree in that time of response, it's a pretty exciting time and I look forward to additional therapies being developed in short order.

Barr: Definitely. Can you speak a little bit about how disrupted supply lines have affected obtaining medications for all types of patients at the Clinical Center?

DeCederfelt: Sure, and I guess just to give you a background, in general the pharmaceutical supply chain is always dealing with shortages. It's just part of the game plan – quality shortages across the board on all pharmacy supplies. The pandemic produced an extraordinary challenge, because as I said, our initial response was to essentially stock up on emergency medication supplies, which was the same as every other pharmacy in the country. We were all competing for supplies, which became yet a different challenge. In our case, because we participate in this pharmaceutical prime vendor program with the Department of Defense – that is a very, very deep supply chain – we were able to actually acquire supplies without having much impact on shortages. The pandemic in itself had and produced shortages across the board. Again fortunately, we are very familiar with this and quite familiar with the ability to shift gears and redirect our supplies and suppliers so that we are able to continue to supply pharmaceuticals. In this case, we actually have, in addition to the prime vendor program that we participate in, direct accounts with the large majority of manufacturers of pharmaceuticals as well as primary and secondary distributors. We contain a large portfolio of suppliers to maintain a pharmaceutical supply chain here, and we have a team dedicated just to that – that’s the pharmaceutical procurement section here. That's what they're charged with. I have to say that team, in my absence as the acting chief of the department, did a phenomenal job and did not miss a beat, and on a very rare occasion, we would actually be able to actually find an alternative therapy if something was

completely out on manufacturer complete back order – that does happen. We fortunately do have the ability to find alternative therapies, discuss with our clinicians here, and then bring in alternative therapies.

Barr: That's great! Did you have to contend with shortages and sort of basic supplies like syringes? I heard it was challenging to get them or other kinds of things to help administer the medications.

DeCederfelt: Across the board, there was a supply shortage, and fortunately at the Clinical Center we have another department that handles the supply part – that's the Materials Management and Environmental Services Department. They are the ones responsible for obtaining all the ancillary supplies: the tube sets, the syringes, the needles, the gloves, the masks, all of the supplies. In fact, I would say one of the predominant shortages was masks. As you can imagine, when the pandemic first came about, the US was not ready for that kind of level of mask usage, and specifically in the Clinical Center with us giving out a specific mask for every person walking in the building every single day, we went through the supplies very quickly and suddenly had to have masks as an accountable unit. We secured all the masks in all of the various places, so that they didn't start walking out the door. We didn't want people taking tens and twenties of them home to their families, and so we actually secured the masks. With our partners in Materials Management and Environmental Services, they have responded and have been able to keep us in supplies since then.

Barr: I didn't ask this earlier, but at what point does your team get involved in a patient's care?

DeCederfelt: Pharmacists are not working directly at administering drugs. For instance, our outpatient pharmacy directly dispenses drugs to patients, so they're front line directly talking to patients. It's generally involved with counseling about the medications they're going to be taking at home. In terms of patient care, our primary role here is to advise and guide on dosing, specific drug selections, and the dosage forms. In other words, how it's going to be administered, whether something is appropriate to be administered orally, through IV, subcutaneously, etcetera. That's our primary role in patient care – supportive guidance and advice. Generally, pharmacy is not a hands-on service for patients.

Barr: You spoke initially about this, but I'm sure there's a lot more to say. How did COVID-19 affect the way your department operated, and what are some of the solutions you devised, and how some of these solutions implemented for the future?

DeCederfelt: The biggest thing, and the challenge that the pandemic had for us, was the requirement to reduce the staffing within the Clinical Center due to social distancing rules and regulations and the square footage of requirements per person. Within a very small pharmacy, that becomes very challenging. We introduced PPE, so personal protection equipment, for each employee including masks

and shields. Then, we also had barriers installed as you would see at many retail pharmacies at the counters, so that our patient and pharmacist interaction had a barrier between it so that we were able to be protected. We introduced teleworking, so we had remote work being done. With some of the challenges, what we've done is because we're a 24/7 service, we actually came up with different staffing models that we previously didn't have. We shifted work to different hours of the day so that we could do things in the evening that we typically would do in the day. We would have a smaller staff in the evening compared to the day, but we actually reduced our evening shift during that time, because we found that we could do things in the evening that we couldn't do in the morning because of the staffing levels. There were adjustments of duties, time of duties, things like that. Just flexibility in the way we responded.

Barr: Did you encounter any other challenges with the pandemic?

DeCederfelt: One of the challenges that, I guess, was not something we would have expected normally was actually vendor access to campus, which we're very reliant on to bring the pharmaceuticals into campus. There was a hesitation on the private sector to come into the Clinical Center because of everyone wearing masks, and there was a fear factor. At one point, we actually had to reach out to our suppliers and ensure them of the safety protocols that we had in place. In addition, we actually utilize contract staff support, so these are not federal employees but contracted staff. We actually had to modify the contracts to incorporate the safety protocols that the pandemic was requiring, we had to modify the statements of work for contractors as to what they could and couldn't do, and we had to authorize extended hours, overtime, and different duty assignments for the contractors to respond to the pandemic. In addition to our staffing requirements, we had to change our contracts on our staffing requirements to accommodate, and that's been an ongoing challenge as we've moved on throughout the pandemic is the staffing in reality. The turnover, the lack of turnover because of the pandemic, and the lack of retirements in some cases. I think what we were challenged with is the normal turnover rate was based on people retiring at a certain time. Within our department, we had probably at least half a dozen individuals that were retirement eligible but had nowhere to go or weren't interested in retiring. It gave us a little bit of a challenge there in terms of our staffing model where we were planning on ramping up and replacing people that wound up staying on. It just became a challenge that we weren't expecting.

Barr: Yeah definitely. In addition to your role as a pharmacist and managing the pharmacy department, have there been other ways that you have contributed to NIH handling the COVID-19 pandemic?

DeCederfelt: Oh let me think about that.

Barr: Did you administer any of the vaccines or…

DeCederfelt: I personally did not. We do have pharmacists that do administer vaccines, and they were part of the vaccination clinic. We did have part of our staff members in there; I didn't myself personally. In reality, I think the largest role that the pharmacy took on is the acquisition, storage, distribution, and support of the vaccine clinics. This kind of ties into our expertise for the annual influenza vaccine. This is what we support annually for all the employees on the campus here, as well as the remote campuses in North Carolina. This was something that we are familiar with in terms of handling, obtaining, and accounting for vaccines. However, the influenza vaccines are refrigerated and not nearly as difficult and challenging to handle. With any deep freezer pharmaceuticals, it becomes very challenging because of the handling conditions, the storage requirements, and the environmental monitoring that has to go on – indicating that your freezer is staying within range, the pharmaceuticals within them are still guaranteed to be potent as indicated on their label, and nothing has been compromised or diverted.

Barr: How did you deal with some of the unpredictability in terms of advice coming from other government entities, such as J&J [Johnson and Johnson] had some issues. People thought they could cause blood clots or different things like that.

DeCederfelt: From that perspective, we were really looking to guidance from both the CDC and the FDA on terms of what the current emergency use authorization indications were, and we responded accordingly to that. As updates were provided on the use authorizations, we developed and revised our procedures here to accommodate that.

Barr: In addition to being an NIH employee, you're also a person living through the pandemic. What have been some of the opportunities and challenges for you as a person?

DeCederfelt: Some of the challenges, which I'm sure we've all dealt with, is on the family side. Having personally come into the Clinical Center every day since the pandemic, leaving your family on the outside to manage themselves is a bit challenging and scary at times. Also having elderly in-laws and dealing with challenges related to an in-law without hearing while wearing masks, where they're typically used to reading lips – this is something we were not expecting at all. My mother-in-law lost her hearing at the exact same time the pandemic began, and suddenly everybody is wearing a mask and she can't read lips, so you can imagine that just pure communication challenges and the constant reminder to you have to keep your mask on – it's just part of the requirement. Of course, that was, you know, just a personal challenge that I've had in terms of dealing with that. Also, I have a daughter that's in college locally, so dealing with the college's response to the pandemic, the relocation of students, bringing students back home, having students work remotely, or go to school remotely – it was a challenge in itself. Then personally, my wife is recently retired, so she's at home and then dealing with the pandemic. Personally, I wouldn't say it's necessarily unique to me, but being the human, being a family member, a father, a son, and a husband – we have our challenges, just dealing with a family. I think one of the

things that was unique in my role, was knowing that I work at the NIH, everybody was coming to me for all the answers. I was constantly acting as the family's personal professional expert on how to address issues during the pandemic – how to respond to going to the store, what they should do and what they shouldn't do, when they should wear the mask, when they shouldn't.

Barr: Did you get a lot of vaccine questions?

DeCederfelt: I got a lot of vaccine questions – which one is best, which one should I get, should I hold out and get this one. Things like that. Those were unique challenges based on being a pharmacist and knowing that your family is going to reach out during a scary situation. They're going to look for an expert, so that became a new challenge.

Barr: Were there any opportunities?

DeCederfelt: One of the opportunities, I guess you would say, was unfortunate. We had a family member coming through the NIH as a patient at the same time as going through cancer treatment that didn't survive unfortunately. They actually were vaccinated and went through the whole vaccination series, and ultimately succumbed to his underlying illness. But from a challenge perspective, that was the first time since I've been here, and I've been here since 1987, that I actually went through the patient experience, because I walked that family member through the entire patient experience and actually sat with them in the clinic during their infusions. For me, it was an eye-opener to see the patient side of the NIH Clinical Center experience, having been here my entire career as a healthcare professional, but never seeing the patient side other than through the eyes of a normal patient. But here is a family member giving me insight. That individual actually provided a lot of insight. I asked them to critique every single service they had and were exposed to, to give me some real patient insight in an honest manner, so in the end, I gained a lot of knowledge through that and applied some of it just to my pharmacy staff in terms of how they interact with patients. And I think it drove home the fact that everybody coming in here has a lot of problems. They're here seeking help, looking for compassion, and I think it was an opportunity to kind of re-emphasize that to the staff – that people are at their end stage when they're coming here. They're looking for something to save themselves, some glimmer of hope, and as Dr. Collins has uniquely coined it, "We are the national institutes of hope." That was something I've really felt is true, and I've really tried to emphasize that to our staff, to be compassionate, don't just be the professional – be the compassionate professional, understand that the people here might be their last opportunity, and I just put it in perspective and treat everybody as if it's your grandmother.

Barr: Definitely. Well, is there anything else that you would like to add either about how the pharmacy reacted during COVID thus far or about your own personal experiences? Or just your thoughts about the pandemic in general?

DeCederfelt: No. I mean, in general, I'd say I'm very proud of our pharmacy department's response. I'm very proud of the staff that has not abandoned their duties. I'm very proud that we have a dedicated staff willing to put themselves at harm's risk to come in and serve the patients that they know are critical here. So, I couldn't be more proud of the response that we've had, and I felt like that there was no shirking of responsibilities. That to me says a lot to the profession and to our department and to the individuals that I'm here with. What I've missed is the opportunity to socially engage and to be able to see people one-on-one and in person over time; it's starting to come back a little bit, so I'm enthusiastic to start seeing our people come back on site and be able to see them more often. But again, I'm very amazed that social media and mechanisms have really opened my eyes to the availability that we can actually accomplish a lot remotely and through distant measures. I'm excited with being able to continue pharmacy service and into the next stage, and hopefully be prepared for the next big challenge.

Barr: Definitely. Well thank you so much and to all your staff, and I hope that you and everyone continues to stay safe.

DeCederfelt: Well, thank you very much. It's been very enjoyable, and I hope this has been useful for you in terms of giving some insight into the pharmacy service at the Clinical Center.

Barr: Definitely.