Dr. Janell Krack
Behind the Mask
June 15, 2021

DV: Great. Okay. Good morning. Today is June 15, 2021. My name is Devon Valera, and I'm a student assistant with the Office of NIH History and Stetten museum. And today, I have the pleasure of talking to Dr. Janell Krack, Clinical Pharmacy specialist with the NIH Clinical Center. And thank you for talking with me today.

JK: Thank you for this opportunity.

DV: So this is gonna be focusing mostly on COVID-19 and your experience in the Clinical Center, with the pharmacy. So I just want to start out with asking, what is the clinical pharmacist, what's your role?

JK: All pharmacists have the same basic degree. We all graduate with Pharm.D. But then clinical pharmacists typically have gone on and done an additional training, whether that's one or two years of residency or a fellowship. We are most often embedded with multidisciplinary care teams. For example, I work in critical care. We work with the physicians and the nurses and all the allied health providers to really focus on optimizing medication therapy and making sure we're using the right drug at right dose for the right indication. We also adjusting doses as needed based on therapeutic drug monitoring that we perform. On the flip side, we may also recommend stopping medications that are causing problems or that are simply no longer needed. Our goal is to make sure the drug therapy as efficient and safe as possible for the patient.

DV: Oh, great.

JK: Yeah. We have a lot of clinical pharmacy specialists within the NIH, each with their own specialty. Besides myself and my ICU colleague in Critical Care, we also have Oncology, Psychiatry, Pediatric, Infectious Disease, and all-around Pharmacotherapy specialists.

DV: Do you have a specialty as well?

JK: Critical care.

DV: And so I'm sure your job changed a lot with the onset of COVID-19. Or maybe it didn't. Do you want to speak to that?

JK: COVID-19 required the creation of a separate ICU unit. We had our regular ICU, but then with COVID came the need for a separate ICU, which was housed in what used to be our enhanced isolation area where we would send patients with particularly resistant organisms. That became our new COVID ICU unit. At no point were we terribly overwhelmed like what outside facilities experienced, and we never had a completely full “regular” ICU plus a completely full COVID ICU. It was definitely different in the sense that all the COVID patients had one focused problem that they were here for. In some ways it made it easy, or perhaps I should say easier, especially when we took patients from the community

through the State of Maryland transfer process who were not as complex as our typical NIH patients. For many, their only problem was COVID. It was still complicated to treat them, but they had fewer other problems that we were worrying about. My colleague and I also played a greater than normal role in drug distribution to this COVID ICU because we were both able to be fitted for N95 masks and therefore were able to safely go in and out of the warm zone to help with delivering and organizing medications to support our nursing staff. .

DV: That's really interesting. Do you remember what the timeline of when this COVID ICU was put in place at the beginning?

JK: We started with the plan to treat all COVID patients up in the SCSU [Special Clinical Studies Unit], which had previously been used for Ebola patients. And that was before I came to NIH. The hope was that we could continue to care for all SARS-Co-V2 positive patients up there. I think all it took was one patient requiring resuscitation and great effort running stuff back and forth to realize that this wasn't going to work. I was running drugs up from the ICU and others were running up supplies, going from the ICU in Three Southwest-South, to the SCSU two floors away in Five North East-South. So it was a lot of running of drugs and supplies and we realized that really wasn't maybe going to work. As with all of COVID, it has been an evolving process figuring out what works. So that was Plan A, for the critically ill patients to be cared for in SCSU. It was clear that it was necessary to create a separate ICU section for the critically ill patients with COVID, and fortunately space was available. The engineers worked quickly to make that area safe for patients and staff, and three Southwest North became our COVID ICU unit.

DV: That's really interesting. Yeah, it seems like the story of COVID is learning and adapting and figuring out what works from both a sort of logistics side and, and then even to drugs and therapies.

JK: I think Dr. Dan Chertow said it best early on when he said, "We have hundreds of years of knowledge from dealing with the flu. We have three months with this virus.," This was in the early preparation and planning stages, and he was absolutely right. We definitely were all learning and adapting as we went.

DV: Do you want to speak a bit to learning and figuring out the best ways for patient care and how that changed, potentially?

JK: I think it was interesting, because in the beginning, we had no treatments. I found it interesting being at NIH and seeing the Remdesivir clinical trial taking place which later became really the standard therapy for many patients. It was my first time watching a trial taking place with such great importance and wondering which patient is getting which drug versus placebo., We, the staff, are also unaware which patient is getting which treatment. I just remember that feeling of "I hope something is working, I hope it works!" Once it was approved, it became the standard that we used thereafter. It's a continuous learning process, so the next studies were remdesivir in combination with a variety of other therapies. Next came the use of dexamethasone, which is a steroid that is frequently used for a number of inflammatory conditions. That became an old drug that was a new trick. Luckily, that is a cheap drug, so it's something that will be readily available at all institutions. Further studies were helpful to determine which patients benefited from it and which did not. I think the coolest thing, and it wasn't a drug, was the use of proning, which I called "tummy time for adults", where patients turned over to be laying on

their stomach. It helped improve breathing and oxygenation for many, which was such a simple thing to do, but it had a good impact. It was something safe people could do on their own, even at home. It was a lot of trial and error during this time.

DV: That's interesting. Could you potentially speak to the drugs that were used in the clinical trial?

JK: Remdesivir was one of the medications that was studied and approved. It's an antiviral medication. It prevents the virus from copying itself effectively, basically. That was used mainly in the hospitalized patients. It went through the EUA, the emergency use authorization, process from the FDA that we're learning about, to allow us to use it before it became formally approved. In the beginning, we just used it for patients enrolled in the clinical trial. Once it received the[EUA] designation, and later became approved, it became the standard of care. And so that was interesting. Some other therapies that you may have heard about are the monoclonal antibodies. These were not approved for use in patients that were already hospitalized with COVID, so we did not use these in Critical Care. Those were more for patients with mild disease who were not in the hospital, with the goal of preventing the need to go to the hospital, though their approval allowed for use in hospitalized patients who were hospitalized for something other than COVID. They are mainly an outpatient therapy. They provide artificial or substitute immunity. Your own body would normally produce antibodies after a vaccination or infection; these are just lab-made antibodies targeting the specific virus. A couple different kinds were made and later combinations were used. So those were two of the new therapies, the monoclonal antibodies plus remdesivir.

DV: Very interesting. It seems like both with the outpatient stuff you're talking about, even like vaccines, the goal is to make sure you don't have to end up in the ICU.

JK: Right. Obviously, preventing progression of the disease was really the goal; keeping you out of the hospital, or if you're already in the hospital, the goal was to keep you from getting worse, becoming critically ill and possibly requiring mechanical ventilation.

DV: So do you have any stories or memories of your time during either of these trials?

JK: One of the early memories was so vivid to me. We have video monitors so that the team in the Hot Zone, which was the area inside the patient's room, can communicate with the people in other zones including the warm zone and cool zone. These zones are based on level of exposure risk and had different levels of PPE required. We were able to communicate and hear what's going on from a safe distance. I remember being up in SCSU in the green zone area and seeing on one monitor that a patient was requiring CPR . In another screen there was a patient, also with COVID, sitting in a chair by his bed reading a book. There was no way to make sense of why one patient would do so well and another would do so poorly. COVID was not the same in everyone and its trajectory was definitely not the same. So that was definitely something, that image, that stood out to me. There was just no way of predicting what the course would be as we cared for different patients. Some I thought may do poorly did great. Others I thought would do well had a rougher course.

DV: Yeah, certainly, that's, that's a really striking image.

JK: I'm certainly glad for the success stories, patients who have recovered and done well, who have come back to visit us. We remember how sick they were, and we provided truly intensive care and just hoped and hoped that they would pull through. To see that not only did they survived, they are now home, recovered, and truly enjoying life. That is such an uplifting thing! On the flip side, it was really was hard when we were not able to save patients and they died alone without family and friends at the bedside. I'd never thought of this as a luxury before, but with the strict no visitor policy, many patients died alone surrounded only by the hospital staff. That was hard to think about. Obviously the nurses and all members of the team provided phenomenal care, but the familiarity and comfort of family and loved ones during that time was just not possible and it was hard to think about that.

DV: Yeah. And certainly, it seems like this past year, people have been reflecting on the importance of other people, right? Unity? Family? Well, so we're talking about the ICU. So it seems with COVID, a lot of medicine has gone to telehealth or digital. But I doubt that that was something that you saw, or you're mostly dealing with people there.

JK: The biggest change is that instead of our usual in-person rounds, a WebEx conference was set up for rounds. The bare minimum number of people rounded on site, and the others who would ordinarily participate were welcome to participate through WebEx. This was new for all of us. Critical Care made it a priority to maintain multidisciplinary rounds. My colleague and I staggered our schedules right away, so that we were never overlapping. That way if one of us got exposed, Critical Care wouldn't risk having both of us out at the same time. We split our schedule up such that one was always on site each day of the week. The ICU really does require on-site, hands on pharmacists, so we made it work. WebEx rounds were the only new thing and they continue to this day. It's working.

DV: Yeah, that's very interesting.

JK: For some of the other teams, they've been rounding virtually or having their team meetings and maybe have just one or two people onsite to actually go see and interact with the patient. And that's throughout the Clinical Center, not just on the COVID side.

DV: It's taken some interesting creative steps in the clinical setting, it sounds like.

JK: Yes. There will always be the need for good old-fashioned in-person, hands on care, so disciplines like rehab medicine and respiratory therapy, to name a couple, were still gowning up and going into the hot zones.

DV: So I asked a question about some of the challenges, but it sounds like trying to prevent spread was one challenge. What were some of the others?

JK: From a drug standpoint, it was challenging navigating the many drug shortages, because if you think about it, every ICU around the country was vying for the same exact drugs. Examples of drugs that were on shortage are the medications we use to keep people safely sedated, and even the ones we use to

temporarily paralyze them so that their body's respiratory efforts won't fight the ventilator. So that was definitely a challenging thing, trying to conserve and be really good stewards of the limited drug supply that we had and communicating the supply to our teams. We had several meetings to assess our level of preparedness and determine how many extra COVID patients we could take safely. My colleague and I set up spreadsheets and tracked inventory so we could always provide an accurate answer about how many patients we could treat and for how long with what we had available. Our pharmacy procurement department did a phenomenal job of keeping us supplied, but there were times when they couldn't obtain more drugs either. We sometimes had to go to our second choice, even third choice drugs that we typically wouldn't prefer to use if we had everything available to us. But there were times when that was necessary. I think the drug shortages were what gave me the most anxiety. It was hard because you're like, "There's no more! How do we do the best for the patient with what we have?" It truly felt like a disaster drill training. It caused me to remember a question from my pharmacy school interview years ago. They asked, "Imagine a pandemic or imagine a disease was coming to your town, you only had x doses of drug, how are you going to dispense that?" That question is now real life! How do you allocate the resources you have? That was the biggest challenge for me.

DV: There's all the things you have to consider. Then you also have this, which adds to the anxiety.

JK: I always felt fortunate because here the NIH Clinical Center does have a level of control over how many patients we accept for admission, or how many patients we have. I have friends that work in outside hospitals with busy emergency departments and they have no control: whoever comes, comes, and you can't stop them from coming. And so unlike those systems which quickly became overloaded, we were never faced with that situation. So we certainly fared better than many places. But we still were impacted by shortages.

DV: That's very, I can imagine, very stressful.

JK: Very. So I said I really can't complain! I have maybe four or six patients. Other places have so many more. So I did feel quite lucky to be working here and know we were spared from a lot. It was much worse outside the NIH.

DV: Certainly considering in this scale. And then you widen it out. Oh, wow. Well, we spoke a bit on some of the new innovations and new practices as far as therapies go, and also WebEx, which was the technological side. Is there anything else you could think of—some outliers or new, interesting, creative solutions?

JK: Certainly, telework was a totally new concept. To me as a pharmacist, I had never teleworked before, never ever had even considered that as an option. I remember my first days of telework, and I even marked them on my calendar because I didn't know how long this would last, how the silence in my apartment was unnerving. Luckily a friend told me that on YouTube, you can find videos of ambient hospital noise with no beeping and dull pages overhead. I played those for a while, to give me some background noise, but eventually I got used to the quiet. I found myself going out to my cupboard way too often and had to learn some discipline of not constantly going and snacking! I also made it a point to go out for walks after work. That was my pretend commute and I found myself noticing things that I've

never really paid attention to before, like watching the leaves emerge, watching stuff bloom, and watching that whole process day by day; even noticing how many birds there are!

Over the course of the year, I was able to arrange my schedule so now most of my meetings occur on my telework days. Telework continues and it does seem to be working far better than I expected. So what's funny is now going back into the office occasionally. Sometimes I want to use my dual monitors, and I'll be on a meeting trying to be really quiet because my officemate is also in a virtual meeting. It's almost actually better to stay home as long as these meetings are remote like this; I don't need to worry about talking over someone else's meeting. There were always going to be adjustments as we went into this, and there will be adjustments as we figure out what's the best path forward. Certainly it was fascinating to see that it can be done, and patient care can continue. Many occupations have been able to successfully telework that we never probably ever would have considered it before, so I hope it continues.

DV: Yeah, certainly, it makes sense. And it's very funny or interesting to hear that you need that background noise to write.

JK: I eventually got to the point where I was adjusted to the silence and I didn't need it anymore, but those first few days were unnerving, and it was definitely an adjustment. And I can't tell you exactly how long it took. I was definitely not used to working in silence!

DV: And then you get used to working the quiet and now you have to go back.

JK: Yeah. I remember that joy when going back in. I was onsite every week, but it was really exciting to get to see other colleagues who were also onsite. That was one of the takeaways for me: people matter, like your work colleagues, and I had really missed those friendships and day to day conversations.

DV: It's, that's what makes it fun. So we're going to be getting to the end here soon. But as a history office, we are really trying to encourage people to look at what they're doing right now is making history. So we wanted to ask, as far as historical objects, is there anything that made your work? Like was critical to your work that you think people maybe down the line [should know about], and it might slip through the cracks? But was sort of critical during your time while working?

JK: That's a good question. I mean, it seems silly, but I have this one Amazon box that I kept and have been using all year because it is the perfect height for propping up my NIH-issued Surface Notebook. I have a full-sized Bluetooth keyboard, and using that box made for far better ergonomics than just having the screen on my desk. I'm kind of attached to the box now. I also wrote out the phonetic alphabet on the box to help spelling things over the phone. I also kept a wall calendar. We would get those screening stickers every time we went into the Clinical Center and for whatever reason, I just started saving them. Whenever we'd have the pink sticker days, I would cut them into the shape of lips to make a smile. I actually saved those stickers and would stick them on the corresponding date on my 2020 calendar. It was interesting to go back through that and look at my days on site as well as all the trips that I had planned, some amazing trips, that of course were canceled. They are all crossed out. The

days kind of ran together so I was glad for my calendar to help me keep sense of where I was in the year. But yeah, the things, I guess my Amazon box and my calendar were my critical things.

DV: That's really fun. Yeah, I mean, unfortunately, hopefully, you can reschedule some of the trips, because that's…

JK: Not so far, not yet. I had other ones lined up for this year. I definitely learned flexibility. I just had something planned for October that was cancelled this past week, so it's clearly not over yet. If you want to travel, you have to really be flexible. Yeah, I do love travel. And that's something important and I can't wait to go again. Once it's all opened up and safe to go. But yeah, I've had a number of big trips that were international trips pushed off and never thought at the time this started that we wouldn't be able go places.

DV: Yeah, and so for final question, is there any sort of personal reflections or anything you want to speak about COVID, in general; it doesn't have to be work focused.

JK: One thing that was made this year, especially this past year, especially memorable is that my mom was diagnosed with cancer a few weeks before COVID in January. And so she started quarantining back in February, as she was starting her chemo before the word quarantine was ever a thing. And so she was avoiding contact with people. I had flown out there to Washington State to be with her and I was leaving Washington State to come back here just as we were hearing about these first cases at the nursing home in Kirkland [Washington]. When I left, I said, "I'll be back two weeks, or I'll come back every month and see you and support you through this." That was on March 1, the day I flew back. Within two weeks, the world had changed. I still was able to go out there as needed, and was obviously super, super careful. I did have some fear when traveling and was quite relieved when we were all vaccinated, but but goes to show how unpredictable life can be. I had no idea everything would change so dramatically and I wouldn't be able to be as carefree about travel and planning. It was tough to try support her through this from afar and I'm certainly grateful that there were people near her that were able to do grocery shopping and errands to allow her to stay in and stay safe. So for me it was an unforgettable year dealing with a parent's cancer in the midst of a worldwide pandemic.

I'm a planner and it was difficult to have so little control. I can't make plans like I normally would. That was definitely an adjustment and I still struggle with that. I certainly don't shop as much. I found out I don't need as much as I used to think I did. I guess the pandemic has saved me a lot of money! . I hope I remember these lessons, come through this pandemic better and have learned some good lessons about what really matters and what really makes you happy. In the moments of intense change is when you realize what matters and what you can do without. I also realize just how much time was wasted in previous days. I finally have all this time that I've always wanted, but I guess I never am to get my craft project finished! But I've been glad for the gift of time.

DV: Well, these reflections on the early days of COVID, it's not done yet, but it is looking back. We've come a long way. It's certainly been strange and unprecedented.

JK: Right. One of the funniest comments I saw on Facebook was someone saying they thought it'd be interesting to know what life was like during the Dust Bowl, the Civil War, the Civil Rights Movement, and the Spanish flu and a few other things…but not all at once!

DV: It's been it's been intense past year, year plus, at this point. Well, that's why it's so great to talk to you and so great to be able to just talk about this and record it and so we can look back and see how far we've come. And this is all just a memory.

JK: Yes, certainly.

DV: Thank you so much.

JK: And thank you for talking with me today. This has been my pleasure.