

Mary Dwight: Hello, everyone. Good afternoon and happy Monday. I'm Mary Dwight. I'm the President of the Alliance for a Stronger FDA's board and Senior Vice President and Chief Policy and Advocacy Officer at the Cystic Fibrosis Foundation.

We're delighted to have you with us to launch our webinar series for the year, and we're particularly grateful to have Dr. Cavazonni joining us for our inaugural webinar of the year. I also want to thank all the media and FDA stakeholders who have come to hear her.

The President's budget request, as I think everyone knows, came out a week ago, and we were very pleased with the proposed \$336 million increase in budgetary authority appropriations. The Alliance's board has endorsed this amount, and we will work to preserve it as FY '23 appropriations bills advance through Congress.

We're carefully reviewing the 400-page justification that details the specific ways in which the monies are proposed to be spent. And to complement that, we have scheduled six webinars over the next five weeks to hear senior FDA leaders talk about their FY '23 budgetary priorities. Today we're honored to have Dr. Cavazonni speak about priorities at CDER, the Center for Drug Evaluation and Research.

Looking forward to our future and upcoming webinars, on Wednesday we're going to hear from Judy McMeekin, the Associate Commissioner for Regulatory Affairs, whose office oversees FDA's field programs, recalls, inspections, investigations. These functions consume about 20% of the FDA's total budget, and more than 25% of the agency's staff.

After that, on April 12th, we'll hear from Dr. Susan Mayne, the Director of CFSAN, the Center for Food, Science, and Applied Nutrition.

And on the 22nd we'll hear from Steve Solomon, the Director of CVM, the Center for Veterinary Medicine.

Our series continues with Dr. Jeff Shuren. He's the head of CDRH, the Centers for Device and Radiologic Health.

And on April 29th, Dr. Peter Marks, the Director of CBER, the Center for Biologics Evaluation and Research, will be with us.

We hope you will be able to join us for many of these programs, and

please remember the FDA's mission and responsibilities continue to expand. As a growing agency, the FDA requires a budget that grows with it

And now I'd love to pass it to my colleague on the board, Ron Bartek. Ron?

Ron Bartek:

Thank you, Mary, and good afternoon, everybody. I'm Ron Bartek, immediate past President of the Alliance for Stronger FDA, and President and Co-founder of the Friedreich's Ataxia Research Alliance.

First, a quick word about the Alliance itself, the Alliance for Stronger FDA. We are a multi-stakeholder coalition that advocates for increased appropriated resources for the FDA. We've been an important force in doubling the available annual budget authority resources from \$1.6 billion to more than \$3.2 billion, and we are the only advocacy organization focused on resources for both food safety and medical products, as well as the other components of the FDA mission.

Our members include consumer and patient groups, research advocates, health professional societies, trade groups, and industry. In other words, all the stakeholders interested in and involved with the FDA.

We have about 150 to 160 members right now, and always of course welcome more members to further strengthen our advocacy and educational efforts.

In regard to procedures for today's conversation, our speaker has kindly agreed to the format that's worked so well in our earlier webinars. She will interview herself based on questions the Alliance has provided, followed by ample time for her to answer some of your questions, which you may submit by clicking the Q&A button at the bottom of your screen.

And before I introduce today's speaker, the Alliance would like to thank Ms. Freeda Moore-Johnson of Dr. Cavazonni's staff for her help in coordinating this event.

Our distinguished moderators today are Ms. Cynthia Bens and Ms. Esther Krofah. Cynthia is Senior Vice President of Public Policy at the Personalized Medicine Coalition, an advocacy group that

represents innovators, scientists, patients, providers, and payers who work together to promote the understanding and adoption of personalized medicine, concepts, services, and products.

Esther Krofah serves as Executive Director of Faster Cures, a center of the Milken Institute that works to save lives by speeding up and improving the medical research system.

I now have the privilege and genuine honor of introducing the speaker, who has been kind enough to address our group today, Dr. Patrizia Cavazonni, Director of the FDA Center for Drug Evaluation and Research, CDER.

Dr. Cavazonni joined the FDA in January of 2018 and has held a number of its key leadership positions, including terms as the CDER Deputy Director of Operations from 2018 to 2020 and Acting Principal Deputy Commissioner of Food and Drugs in the first two months of 2019. She is certified in psychiatry, is a fellow of the Royal College of Physicians and Surgeons of Canada and of the Canadian College of Neuropsychopharmacology. She is also a recipient of the American College of Psychiatrists' Laughlin Fellowship.

Prior to joining the FDA, Dr. Cavazonni worked in the pharmaceutical industry for multiple companies, including Pfizer, Eli Lilly, and Sanofi. She received her medical degree at McGill University and completed her residency in psychiatry at the University of Ottawa, where she served as an investigator in psychiatric clinical trials and in international medical research collaborations.

She subsequently received a full-time appointment to the faculty of medicine at the University of Ottawa and has authored numerous peer-reviewed scientific publications.

Dr. Cavazonni, thank you so much for generously agreeing to spend some time with us today to share CDER's current status and the resources the Center needs moving forward in its vital work that is so important to the American people. And now, Dr. Cavazonni, the floor is yours.

Dr. Cavazonni: Thank you so much, Ron, for that very kind introduction, and it's a real pleasure for me to be here today, and I really look forward to the next hour.

I'm going to limit my self-interview to 25 minutes or so, so that we have ample time for interactions and Q&A. And I'm going to start by talking about CDER's long-term budget priorities. Generally, I would go into the budget authority areas. However, one has to acknowledge that this year is not a routine year in the sense that we're also very focused on the re-authorization of the user fee programs, which represents more than half of the funding for CDER.

So, in addition to those activities, of course, we're also continuing to identify and put forward proposals for budget authority fundings for areas that have historically not been either amenable to funding through user fees or have been historically underfunded. And some of those areas also include some of the core consumer safety activities that we conduct here at CDER.

And so if we look, for instance, at the FY'22 omnibus, CDER received very small increases to advance our goals of battling the opioid crisis, and also a very small increase to further the development of therapies for rare diseases.

When it comes to the FY'23 budget, we have put forward two proposals. The first one is, again, a proposal to obtain budget authority to advance the goals to battle the opioid crisis, and we essentially put forward the same proposal that largely did not get funded in FY'22.

And we also put forward a request to bolster the budget authority funding towards post-market surveillance and the oversight of marketed products.

Now, why these two areas of focus? Well, when it comes to opioids, CDER actually has a relatively small amount of budget authority that has been appropriated specifically for opioid work, and over the past several months we have redoubled our efforts in this space by looking at all relevant areas and asking ourselves what we can do more or differently when it comes to our efforts to battle the opioid crisis, obviously understanding that FDA has a role to play in a very sort of large and complex system that requires multiple agencies and multi-modal approaches to be brought to bear.

The other area that we feel is relatively underfunded is, as I said, post-market safety surveillance. And I will speak more about some of the efforts in this space later on. But obviously we have

undertaken a process to modernize our approach to safety surveillance, both from an operational aspect of how the teams work together and the sort of expertise that we bring to safety surveillance, as well as technology.

And all of this is really to keep up with the technological advances that we see in industry, the complexity of post-market surveillance, the ever-increasing number of sources of data, and the need for us at FDA to continue to keep up with these changes so that we can effectively and promptly identify safety signals, evaluate them, and take the necessary steps.

So, we look at other priorities for the Centers, advancing the delivery of therapies for underserved populations with unmet medical needs, including rare diseases. There are also areas of unmet medical needs in very high prevalence diseases as well, and they remain a really top priority for the Center.

I've spoken obviously to our efforts around opioids and safety surveillance. Another area that is an overarching priority across the Center, is modernization of data, analytics, and technology platforms. And in order for us to be able to do what we want to do at CDER, we also have to think about the need to also fund the agency. Technology and data have historically not been an area of priority for funding at the agency level, but we're not able to really do everything that we want to do when it comes to modernizing data and technology at the Center level unless we also have the support at the agency level.

And in order for that support to come to bear, obviously the agency needs funding so that they can keep up with the modernization efforts at the Center level, and at the level of other Centers as well.

One area we didn't assess towards modernization is inspections, and obviously we're very interested in continuing to advance the alternative methods and modalities to inspection or to evaluation of facilities that we have started out of necessity during the pandemic. And we have been benefited from BA funding through the COVID supplemental and the American Rescue Plan, and this has really been a very important source of funding for us to really advance the modernization of inspections, both from a data capture perspective, work flows, and technologies, and so on.

Another area of great priority for CDER is the strengthening of the

drug supply chain. Going into the pandemic, CDER had a very robust drug shortage surveillance program. However, we quickly realized that the degree of complexity during the pandemic required expanding this program, and so also putting to good work the funds that Congress gave us as part of the supplemental bills and the American Rescue Plan. We have a very ambitious and exhaustive plan to expand the drug supply chain program and to carry it forward post-pandemic with an initial focus on essential medicines.

And then as I mentioned, there are a host of areas that are usually not in the headlines as much as new drug approvals and so on, which really I view as fundamental consumer safety responsibilities that we have as a Center and as an agency. For instance, our surveillance and enforcement programs on ClinicalTrials.gov and the posting of trial results, which is very important from a standpoint of transparency, funding for implementation of the Drug Supply Chain Security Act and so on.

And these are areas that have historically not received sort of targeted budget authority funding, and I want to flag them because they are really fundamental for public health and for protecting the public from harmful products, contaminated products, and so on. And we have seen some very major problems during the pandemic, for instance, like a contaminated hand sanitizer and so on.

Now, has CDER's budget kept up with the demands placed on it? Again, you know, when it comes to user fees, we have very robustly funded programs, and we have also – we were very grateful for the one-time supplemental funds that we have received over the past two years.

Having said so, the sum of the resources that CDER requires to advance its core activities, such as drug safety surveillance, such as the work that we're doing around the opioid epidemic and so on, also require base funding through budget appropriations.

And so depending on the work that we do, we can use these different funding sources at the same time. They all need to keep up with the priorities and the work that we are doing.

And as we move into 2022 and 2023, you know, we are facing ongoing demands in addition to continuing to double down on the pandemic-related work, which has by no means stopped at the Center. And some of the examples of things that are sort of coming

down, coming around the corner later in '22 and going into '23, is for instance analyzing the public comments and revising the draft of the combined CDER, CBER, and OCE real-world evidence guidance that we published in 2021.

We are already working with BSUFA. The next user fee cycle hasn't started. We already have boots in the ground to establish the new biosimilar regulatory research program, and we want to be able to hit the ground running at the beginning of the next user fee cycle.

We are also starting to work to establish a pregnancy safety work group to make the agreements negotiated on the PDUFA VII, would they go to develop a consistent approach to post-market requirements and commitments as it pertains to assessing the outcomes of pregnancy post-market.

We are also very focused on establishing a sustainable framework for emergency preparedness and pandemic response, understanding that when eventually we have turned the corner in this current pandemic, we have to be ready to face future public health emergencies.

And last but not least, we are really doubling down on conducting research activities and sort of expanding and strengthening our capabilities to accelerate cures for rare diseases.

Now, I'm going to now move to a different topic, which is I know a topic of great interest to this audience, which is staffing. So, do we have enough staff to fulfill our public health – to advance our public health mission, and what types of staff are our current hiring priorities?

Well, if we look at FY'22, CDER has had now for some years a very structured and rigorous hiring plan every year, where each office sets goals for hiring. We take into consideration the anticipated attrition, and then we put our budget against that to make sure that we can support that hiring, including not only backfills but also net gains above our previous years' levels.

And so if we look at FY'22, every single hire is a priority. But to give you some examples of areas of particular focus, we are obviously very focused on continuing to fully staff our drug ready programs, to fully staff our pharmacy compounding program, for which we have over the course of two- or three-year budget cycles,

we have been able to get some sizable budget authority funding in our base, and we're very grateful for that.

We also are hiring against the PDUFA capacity planning adjustment for FY'22, and we have started the hiring actions because obviously it takes some time to bring people on board, and so we have learned to get started, understanding that obviously the funds will be available in FY'22.

As I mentioned, expanding and adding more resources among the scientific disciplines that work in rare diseases, largely two offices in the Office of New Drugs, is an area of priority. And then hiring for under BSUFA, and last but not least, OMUFA. We have a lot of work to do to stand up that program, and so we're very focused on that as well.

If you look at the number of people on board at CDER by the end of February of this year, it's just above 5,300. Now, during the first year of the pandemic, we had historically low attrition in 2020, and since then, attrition has moved up. We had a bit of a spike in the summer of 2021, not unexpectedly because after months of lockdown, everybody started looking at potentially what's out there, looking at other opportunities, and it's happening across all the sectors, not only at FDA.

And we also had quite a lot of retirements. We had many, many staff who had decided to postpone retirement out of commitment and dedication to fighting the pandemic, and obviously after a year, a year and a half, some of the staff decided to go ahead with their long-delayed retirement plans.

Now, if we look at our 12-month attrition rate over the past 12 months, it's about 8%, which is really around where it was before the pandemic, so we're back to historical trends.

Now, last year, FY'21, around this time, we were actually in a net gain situation when it comes to hiring. Now, not surprisingly, this year, at the same time as last year, we are in a slight net loss when it comes to hiring, and this is really reflecting what is going on around us in the broader ecosystem. There's a lot of competition for our staff. There is a lot of competition from the private sector, other agencies. And as I said, we have seen quite an uptick of delayed retirement, and we expected that we would have this increase, this uptick, and I would expect that ultimately that will level off.

However, despite that, if you look at some specific areas, for instance there are some offices that are in a positive net gain situation, and one of those offices is the Office of New Drugs, including for maybe the first year, specifically the medical reviewer discipline. And the medical reviewer discipline was an area where over history, we had been losing. We had often been in a net loss situation, and it's great to see that we are able to really attract some more reviewers and more medical reviewers who want to work with us, and we have really reversed a trend.

Now, I am looking at the clock. I'm going to address one last question, which is: what are the areas of focus when it comes to the non-COVID activities and how are we doing on those fronts? Well, let me start from the obvious. If we look at the user fee goals, and we look at last year's metrics, despite the incredible effort against the pandemic, we have been able to meet our review goals across the programs, and I can tell you this wasn't easy because despite the fact that the work increased dramatically in certain areas of the Center, we really had to do that extra work with the resources that we had in place.

And while we're very grateful for one-time funding, and we have received a lot through the supplemental bills, that is not the kind of funding that lends itself to hiring staff that we take several years to train and then hopefully will stay with us for many, many years after that.

And so our staffing baseline before the pandemic pretty much had to resource both the pandemic and the non-pandemic activities.

And other areas that have really been notable during the pandemic have been the ongoing work around compounding, including continuing the education outreach to the compounding outsourcing facilities, despite the fact that we had to do the training virtually. But the compounding office didn't miss a beat on that.

Implementation of the Drug Supply Chain Security Act is another area that continued to progress during the pandemic. And we also continue to progress to work around advanced manufacturing. As you know, CDER has had in place an emergent technology program to advance new technologies in manufacturing, and we are doing very well in that space. We're really progressing.

The program is now focusing on clarifying the regulatory framework so that we can take what started off as an emerging program that was really looking at more as a startup approach, to really embedding the approach capabilities and structure of the emerging technology program into the core review activities in the Office of Pharmaceutical Quality so that ultimately it becomes part of our business as usual, recognizing that these technologies, such as continuous manufacturing, have gone from being – how would I say – almost sort of rare occurrences to really becoming part of how manufacturing is done, or how drug manufacturing is increasingly taking place.

So, I'm going to stop here because I wanted to make sure that we have time for questions, as opposed to sort of previous years where maybe we have had more of a one-sided self-interview. I really wanted to make sure that we have time to interact, and I'm sure that there will be more that will come up during the Q&A.

So, thank you for listening to me, and I look forward to the questions.

Cynthia Bens:

Wonderful. Thank you so much, Dr. Cavazonni, and I'm continually struck by the number of activities that the FDA, particularly CDER, needs to focus on on a regular basis.

So, I'm Cynthia Bens. I'm the Senior Vice President of Public Policy at the Personalized Medicine Coalition, and you talked quite a bit in the budget priorities about areas of emphasis that are important to CDER, and one of the areas in particular was rare diseases. At PMC, we look every year at new drugs that are approved by the FDA, and 25% of new drugs that are approved consistently are considered personalized medicine, and an increasing percentage has been in rare diseases. So, the FDA is doing a really great job.

What would you say CDER has done to prepare its staff to successfully evaluate interventions in areas like these, and is there anything that you can think of that would be helpful to the agency in terms of resources to support therapeutic development programs that, like rare diseases, leverage novel and complex scientific discoveries?

Dr. Cavazonni:

I think that's a great question. I could go on for quite a long time on that. So, when it comes to our work in rare disease, obviously we

have the very important day-to-day review of applications, and that is something that obviously has to continue. We have timelines and goals and so on.

Having said so, where we don't have the resources that I think we need is on the innovation front, and particularly when it comes to drug development science. And what I mean by drug development science is a multi-disciplinary approach to identifying and developing and ultimately embedding in our review work innovative approaches to the development and review of rare disease programs.

And that, of course, expands from biostatistics to modeling to clinical aspects of the review and so on.

And so for that to happen, we need to have some staff who are able to dedicate their time to thinking about these things. How can you do things differently? How do we interact with the communities to a greater extent to hear from them how we could be doing things differently? Because the communities right now in rare diseases have a wealth of scientific information that they can share with us, and also ideas for innovation that can be shared with us.

But obviously, if all our reviewers and our scientists are heads down reviewing one application after the other, which of course they absolutely have to do, without time to lift their head and say, "Hey, I have an idea, and can we pursue it?" We are really not going to be able to really leverage the tremendous sort of innovation that is out there and ideas that are out there.

And so what we would like to really do is supplement what we currently have in the review divisions that are focused on rare diseases by having some staff that also obviously have boots on the ground, understand development, understand how the review is done, and so on. We don't want to have scientists who are sort of out there, disconnected from the real world. But we need to have staff who are able to dedicate some of their time to innovation and thinking how we might be doing things differently to advance the work in rare diseases.

You know, I know that there have been some discussions out there and some voices advocating for organizational solutions to this. What I have to say is that the last thing that we need is reorganization, or more "boxes". What we do need are the right people and the right scientists and more of them in the boxes that we

have now.

And part of the work that we are advancing in the Center is really to make sure that we create more connectivity within the Center across the disciplines so that we really have a truly multi-disciplinary approach to rare diseases, both when it comes to supporting the development as well as the review, and also then using that nexus within the Center to also connect better to the other Centers within FDA.

And I really think that we can do that, and that can be very powerful if we get more sort of base resources to supplement what we do.

Cynthia Bens: Wonderful. Thank you. And I think you answered at least two to three of the questions that have already come in during the Q&A. But for anyone else who would like to ask a question of Dr. Cavazonni, please just type it in the Q&A box.

Esther Krofah: Well, thank you so much, Dr. Cavazonni. It was really helpful to hear about all the areas where you're focused, and certainly a tremendous amount on the plate of the Center.

My name is Esther Krofah and I serve as the Executive Director of FasterCures, where of course our focus is how to accelerate the development of treatments and cures, and you talked earlier about data modernization across the Center. Can you give us a little bit more insight, particularly the use of AI and different tools and methodologies? Were those used during COVID, and how you're thinking about pivoting those tools for use either in unmet diseases and ongoing chronic diseases, or generally how the methodology is going to evolve over time?

Dr. Cavazonni: That's such an important point, and it's a big area of focus at CDER. It actually has been since 2019, when the Center received a sizable budget authority increase that actually allowed us to support modernization of both the new drug review and generic drug review, and that was a godsend for us because we were able to put that to work.

And we have invested in developing some cross-center platforms, so moving away from each office duplicating the same technology and finding sort of local solutions to things, but really using cross-center platforms that anchor our data and technology needs.

And they are summarized roughly in two areas. One is a platform that supports the workflow and allows us to sort of automate the review activities so that reviewers don't have to spend their time sort of cutting and pasting and chasing paper. And I think the best example of this is the knowledge-aided structured assessment the Office of Pharmaceutical Quality has been developing, the KASA, which allows pretty much a fully structured review of the application, which makes the review much more efficient but also much more powerful because it allows comparison across all the various applications and so on. So, that's one.

The other very important area, which speaks directly to your question, is data and analytics. And so what we're doing is we are building a central data and analytic environment, we call it CDER One, that really will support the deployment of technologies such as natural language processing, such as AI, and so on, to be able to mine data.

And you know, first and foremost for us is to start mining our own data, right? We have vast amounts of information that has come in through applications, right? And there's so much knowledge that's been accumulated over years that is difficult to capture and put to work because it's difficult to find, right? Without having a unified approach to storing the data and analyzing it, you really don't know where the data are sitting.

And we have heard very often from stakeholders in industry, first and foremost, that hey, sometimes we wonder, decisions are not necessarily consistent. You seem to have three different answers to one question, you know, to the same question.

Well, that's where knowledge management comes in. That's where we can solve that problem by making that knowledge easily available, and then to have the analytical tools to be able to mine it, manipulate it, and learn from it so that we can sort of achieve also, among other things, a greater degree of consistency in how we view the data, and also to inform a greater consistency in our regulatory decision making, in some instances.

Esther Krofah: Thank you so much for that.

Cynthia Bens: Dr. Cavazonni, you mentioned in your comments when you were going through the major budget authority appropriations, priorities for the agency, one of the things you talked a bit about was post-

market surveillance, and we know that this is an area that is partially supported by user fees, but still needs some investment that's not tied to user fee related activities.

Can you talk a bit more about what the agency's needs are in that area and what we can do to support you?

Dr. Cavazonni:

Thank you. You know, if I go on for too long, feel free to tell me because this is a great area that I'm very passionate about.

We are doing work to modernize how we do post-market surveillance on two fronts. The first one is really when it pertains to sort of the processes and how we best deploy the scientists that we have in the various disciplines. And you know, historically, the work has been done more sort of by discipline level, with disciplines exchanging information once they have done their review – let's say of a safety issue – but not necessarily doing the work at the same time together.

And so similar to using some of the guiding principles that we have used in the modernization of the new drug review program, which was really fundamentally anchored on cross-discipline work and developing integrated assessments of the application, we are also taking those principles to guide changes that we're doing in post-market surveillance. And first and foremost, we have set up some drug safety teams, so multi-disciplinary drug safety teams. Those in the audience who are in industry, these are the safety issue teams that exist in companies and so on.

And these teams work together from the get-go to identify new signals, to validate whether what they see is potential risks, and then to evaluate potential risks, and then determine how to mitigate them.

And so from day one, we have the clinicians coming together, the statisticians coming together, the toxicologists coming together. The composition changes depending on the type of problem, but we have everybody in the same room from the very beginning rather than sending memos across the world once each discipline has done their review. And this is a much more powerful approach because if we bring all of the expertise together, we are going to be able to really maximize what a safety surveillance apparatus can do, and ultimately the beneficiary is the American public.

Now, when it comes to technology, **FAERS II** is a very important

project for us because, among other things, it is anchored on new technology including a cloud environment to exchange data. It also includes new more powerful analytical tools to evaluate the adverse event data. FAERS II will also contain the product quality adverse events.

And last but not least, it's our vehicle to implementing E2B (R3) for submission of adverse events, and I know that this is of great interest to industry.

So, in addition to that, we are really looking very carefully at what automation and artificial intelligence are doing and the role that it increasingly plays in the evaluation of safety data. And now automation is important because we are receiving increasing numbers of adverse events, and so we really need to leverage the automation and natural language processing to be able to review the information, triage it, and so on.

And we also need to really understand how industry are automating their own surveillance systems, including their transactional databases from which they send us their adverse events, because we need to understand their operating characteristics and we need to understand them if only because we need to inspect these systems.

And so there is an analogy there to advanced manufacturing, right? In order for us to be able to evaluate and inspect facilities that use advanced manufacturing technologies, we need to understand these technologies

And so there's a concerted push across all of these fronts to modernize and keep up with the technological advances in post-market safety.

Esther Krofah: If I can follow up with that description and those activities, can you talk a little bit more about what are the specific resource needs that we need in order to conduct those post-market surveillance activities, certainly recognizing the public health mission for FDA? What are you looking for to supplement the budget of FDA center in order to effectively conduct those post-market studies?

Dr. Cavazonni: Well, first and foremost we need some people, and the people that we need are necessary to populate these drug safety teams. Drug safety teams are co-led by the Office of New Drugs and the Office of Surveillance and Epidemiology, and you know, the difference is

the Office of Surveillance and Epidemiology really has not had sort of the medical safety reviewers. They don't have sort of that discipline that would be able to co-lead these drug safety teams, and it's very important that we have this co-leading approach because, again, we want to move away from doing the work in silos and then exchanging memos, right? So, we need to have work hand in hand.

The other areas where we need more resources is in having people within the Office of Surveillance and Epidemiology to really think about safety policy. That's actually the only office that doesn't have a policy group.

But there's a lot going on when it comes to policy in safety. A lot going on, for instance, internationally when it comes to international harmonization. The larger, the other super offices have policy groups. The Office of Surveillance and Epidemiology doesn't.

And last but not least, Sentinel could greatly benefit from budget authority funding for sort of the day-to-day activities. You know, Sentinel is partly if not largely an unfunded mandate, and obviously user fees have helped it with that, but one would expect that the national platform to conduct safety surveillance would have sort of more of a more robust foundation when it comes to budget authority for sort of its day-to-day operations and core operations.

Esther Krofah:

Well, I would love to talk about regulatory harmonization across other regulatory bodies, which is actually quite exciting. But let me turn to another topic, if I will, and then we'll come back to Cynthia for some questions as well.

You talked a lot about hiring. There are some great questions that are actually coming in about that, as well as your focus around unmet needs in rare diseases in particular, so this is a two-part question. One is as you're looking at the phase success, right, with the Office of New Drugs with hiring, and you're thinking about bringing on additional expertise, are you thinking about additional expertise specifically with rare disease conditions, and if so, if any particular disease? I imagine you will say not any one particular disease, but maybe across the discipline.

Second question is, as you're looking to hire, are you requiring staff to come back to White Oaks? What is your policy in terms of where staff will be located, and will that help retention and improvement?

Dr. Cavazonni: Good, I get to do some advertising to get some new recruits at FDA. Thank you. So, when it comes to the expertise that we're looking at, it would be ideal to, let's say, for a medical reviewer to have someone who has the therapeutic area expertise plus specific expertise in rare diseases.

Unfortunately, it's difficult to find that perfect combination, so generally speaking we start from expertise in the medical specialty, when it comes to the clinical offices, or expertise in the discipline, let's say biostatistics and so on. And you know, in biostatistics, for instance, we hire a lot straight out of PhD schools every year, PhD programs.

And so ideally, obviously, we look for specific expertise in rare diseases. At the same time, the foundation is really specialty experience or disease or discipline expertise.

Now, when it comes to new hires during the pandemic we have started hiring new scientists remotely, with the understanding that they might stay remote. And that has actually been a great bonus for us because it has increased our reach, as you can well imagine. If we are not limited by candidates who want to move to the DC area, and we tell them, "Hey, you can continue to work remotely if your role allows it," but of course, you know, reviewers are mostly able to do the work remotely.

That means that we have a much broader, much bigger pool of candidates.

These flexibilities are going to be very important going forward also to retain our current staff because we are very conscious of the fact that the private sector is offering a lot of flexibilities when it comes to working remotely and so on, and so we need to be able to keep up with that. And we're getting some good support from the department and from the agency in making the changes that we need to make to remain competitive in a very, very tough job market right now.

And I don't blame the private sector or other agencies who want to take our scientists because they're fantastic. We have amazing staff here.

Cynthia Bens: Great. I had a question come in through the Q&A that's related to the addition of the Chief Scientist at FDA. How do you view this

role as helping you in leading CDER and also help with FDA in activities across the agency?

Dr. Cavazonni: Well, it's a very important cross-cutting role, and we have a lot of—we intersect a lot with the Chief Scientist. You know, for instance, the Chief Scientist at FDA is the nexus where we're doing the work on alternative methods, just to give some examples.

So, it is a very important role they choose to fill after Denise Hinton was in that role, but we're really looking forward to continuing that very strong partnership.

Cynthia Bens: Thank you.

Esther Krofah: And to continue on with another question that's come in through chat. As the agency is looking to mitigate drug supply shortages, you had talked a bit about this during your self-interview, what can industry do to help support this expanded authority? More frequent reporting, structured data requests? And how are you collaborating with manufacturing facilities to fill this gap?

Dr. Cavazonni: First and foremost, why do we need to do surveillance of the supply chain? That's the most important question. We need to do that because we want to be able to detect early signals of potential disruptions in the supply chain, so that we can then intervene as early as possible to prevent or to mitigate the drug shortages.

And in order to do so, we have to get data that inform our understanding of very complicated drug supply chains, and this is why, for instance, — thanks to the CARES Act, we now have obtained the authority to require this reporting of volume for facilities.

Why do we need that? Because we saw very early in the pandemic and then throughout the pandemic for instance, that drug X is manufactured in three different facilities in two different regions, but we don't know the relative proportion of the drug that is manufactured across those facilities.

And so, for instance if there is a shutdown in one, in the countries where one facility resides, we really don't know whether that shutdown could lead to major shortages or not because we don't know whether that facility was making 0% of the drug or 99% of the drug. And that's why we need to have volume information.

But we also need to have information more downstream into the drug supply chain, such as for instance information from distributors. That would be very helpful information for us to have, and it's been more challenging to get that information.

But ideally, we would really have to get information that provides an end-to-end picture of the drug supply chain from manufacturing all the way to where it gets to the patient. And there's a lot of work to be done, but as I said, the COVID supplemental bills and the American Rescue Plan have really helped there. But we'll need to sustain it going forward. This is not going to go away, so at some point it will become a base funding need as well.

Cynthia Bens: And I absolutely love the final question that came in through Q&A, and I think it may be our last one. What work is CDER doing this year that excites you the most?

Dr. Cavazonni: Oh, my goodness. There's so much going on, and all of it is very exciting. I have to say that the work that any work that we're doing around innovation is particularly exciting. And if you look across all of the super offices, there is lots of innovation going on, and that's despite the fact that we have been heads down to respond to the pandemic.

And the other area that really excites me is continuing to keep our staff engaged through what continues to be a very high workload compared to historical volumes because we still have so many activities related to the pandemic. While at the same time our staff are also very innovative, so they want to continue to advance innovation and therefore they end up having a lot on their plates.

So, those are really the two areas that are very dear to my heart, and in fact it comes down ultimately to our people, right? So, the most exciting thing for me is to have our people happy with what they're doing and have them really feel supported and valued. That's essential or otherwise we won't be able to achieve anything.

Ron Bartek: Well, thank you so much, Dr. Cavazonni, for being so generous and sharing your time with all of us today in this audience. Thank you for telling us about all the needs and special resource requirements that you need to do all the important work for the American people that you are engaged in. And so you know, the Alliance will be doing everything we possibly can to make sure that you get the kinds of

resources you need to accomplish all these wonderful things, and couldn't be more appreciative of you spending your time with us today.

So, thank you very much for being with us today. Thank you very much for all that you do for all of us.

Dr. Cavazonni: Well, thank you so much, and thank you for having me today.

Ron Bartek: Okay.

Dr. Cavazonni: Bye.

Ron Bartek: Bye for now.

[End of audio]

Duration: 60 minutes