

ICARE



Interagency Collaborative Animal Research Education

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ICARE Dialogues: Contingency and Disaster Planning: Incorporating Lessons Learned from the Covid-19 Pandemic

Presenters: Interagency Collaborative Animal Research Education (ICARE) Project faculty members: Bill Stokes, Wayne Barbee, Bill Greer, Tanise Jackson, Jane Na, and Susan Silk.

A record of this meeting will be posted on the OLAW website (<https://olaw.nih.gov/home.htm>) on the ICARE Project webpage (<https://olaw.nih.gov/education/icare-interagency>).

Silk: I'm Susan Silk, the director of the ICARE Project, and I retired a few years ago from OLAW. It is my pleasure to introduce our Bill Stokes, the lead facilitator for our **ICARE Dialogue** today, Contingency, which is USDA's word and Disaster, which is OLAW's word, planning, and implementing the lessons learned from the pandemic. Over to you, Bill Stokes.

Bill: okay, thank you very much, Susan. I would like to extend a really warm welcome to all of you and thank you for joining us for this **ICARE Dialogue on Contingency and Disaster Planning, Incorporating Lessons Learned from the Covid-19 Pandemic**. I really appreciate you taking time to participate today. That clearly indicates your commitment to ensuring good animal welfare and good science through the role that you serve in your facility.

We'll begin by introducing the ICARE faculty that will be facilitating our discussions today. I'll start. I am Bill Stokes. And I work as an independent veterinary consultant and animal research and welfare. I've been working in the field as a laboratory animal veterinarian for over 40 years. And served as the attending veterinarian and animal program director, for several government research facilities, including through the NIH institutes. At NIH, I also directed a national toxicology in our agency center that worked to validate and to gain global acceptance of three Rs, refinement and reduction and replacement methods for laboratory testing. I served as assistant director for Animal Welfare Operations at USDA. Relevant to disaster planning, I as well as many of the former and current Public Health Service officers on the OLAW staff, deployed to Louisiana for hurricane Katrina disaster response to help with animal rescue and sheltering efforts. And while we were there, that included helping to rescue animals from a research facility where we were able to witness firsthand the disastrous impact of the hurricane damage on the research facility. That really drove home the point for why we need to prepare, have a plan, so that we can respond to disasters in the best way possible.

They're always going to be a challenge, we're never going to be able to completely prepare, but we do our best and that will make sure that we do our best when we do respond.

I'm joined today with five other outstanding ICARE faculty members who have an incredible depth of experience and they will serve as co-facilitators for some of our key topics today. So I'll ask them to briefly introduce themselves, starting with Jane Na.

Jane: hello, I'm Jane Na, I'm a veterinarian who did vet school as well as a laboratory animal residency in Michigan. Currently I am the director of the Division of Assurances of the Office of Laboratory Animal Welfare, and NIH. And although I don't have quite as many years of experience as Bill Stokes, I'm happy to share what I know and look forward to our discussion. Thank you.

Bill: thanks, Jane, and Carolyn McKinnie.

Caroline: Good morning, everyone. I'm a supervisory veterinary officer for nine years. I supervise large area of the U.S. from Hawaii, Guam, and to the Dakotas. I am always happy and available to take any questions that you might have or if you can't get ahold of one of your inspectors in that area. Prior to USDA, I worked for retired research chimpanzees as the attending veterinarian. Before that I was an associate professor at St. Matthew's University of School of Veterinary Medicine in the Cayman Island and the attending veterinarian for a group of dolphins in Hawaii where they were doing studies. It was really quite fascinating. So, welcome, everyone.

Bill: thank you, Carolyn and next is Tanise Jackson.

Tanise: good afternoon, I'm Tanise Jackson, the director of Animal Welfare and Research Integrity at Florida A&M university. I'm here in Florida so I do have experience when it comes to hurricanes. We get a lot of them here. I have been here about 20 plus years. And I'm excited to help to share information that I do have. I'm not as well traveled as Carolyn, but -- but that's really interesting because I love Hawaii and the Cayman islands - wonderful stuff. But looking forward to having a great conversation with you today.

Bill: okay, thanks, Tanise, and next is Bill Greer.

Bill G: Good day to everyone and a warm welcome. My name is Bill Greer, I'm the assistant Vice President for Research and director of Compliance Office at the University of Michigan. I have been involved in animal care and use for over 30 years, 15 years at a pharmaceutical company, making animal vaccines. About 15 years at Penn State University, overseeing pretty much the same programs that I oversee at U of M – for the last four years I have been at the University of Michigan. And I'm also intimately involved in IACUC Administrators Association (IAA) and the IAA Best Practice (BP) meetings. Myself and Dr. Ron Banks run those BP programs, as well. I thank Susan and the other faculty members for allowing me to participate and I look forward to our conversations. So, thank you, Bill.

Bill S: and, next, we have Wayne Barbee.

Wayne: hi, everyone. I'm professor of the department of Physiology and Biophysics at the Virginia Commonwealth University. I have been involved in this for almost 20 years at Virginia Commonwealth University (VCU), first as vice-chair and then recently stepped down as IACUC chair after about 17 years of service in that role. Before coming to VCU, I served on the IACUC at the Medical Center and was the IACUC chair at Oxford Medical Institutions as a cardiovascular physiologist, I have been involved for four decades in research with a variety of animals, primarily I studied circulatory shock and resuscitation. Relative to disaster planning, I went through a number of hurricanes pre-Katrina in New Orleans and some in Charlotte, North Carolina, and Richmond, Virginia, among other issues. Glad to be here.

Bill S: okay, so as you can see, we have a lot of experience here but we're also looking forward to all of you sharing your experience. We'd like to give you each a chance to introduce yourself. In the interest of time we will not have you do that verbally, but we'll invite to you do on the Chat feature, which you can open by just clicking on the Zoom Chat Line. Just tell us what your role is and add your institution if you would like. That way everyone can see who is on and where they're from. That might help you-- you might find somebody there that you want to touch bases with after our call with regard to an issue or an area they have expertise or experience in.

All right it looks like we're coming up pretty good here. Thank you all.

Susan: we have IACUC members and we have one person just on the phone so if you would like to speak up real quick, that would be fine. Okay, lots of expertise. Lots of folks involved in IACUC operations as well as animal care and use facility operations.

Isn't that wonderful what a broad representation of institutions and roles that we have today. Really, a lot of strength in our diversity. Lots of institutional and geographic diversity here. From coast-to-coast.

Bill S: Okay, it looks like we're slowing down. If you haven't had a chance, go ahead and add your information in. I'm going to continue on. I would like to briefly review three objectives for today.

- First of all, and most importantly, we want to review the OLAW requirements for having a contingency/disaster plan. Obviously, the terminology depends on whether you're talking about USDA, but that's on hold right now, or OLAW.
- Secondly, we want to share the challenges that have been encountered by all of us during the Covid-19 pandemic and the strategies that have evolved and what we've had to construct in order to address these and to keep programs running.
- Lastly, we want to share the lessons learned by all of us that can be used to update contingency/disaster plans to improve preparedness and our response to future pandemics and other types of emergencies.
- Also I want to briefly talk about lessons observed, versus lessons learned

If you're involved in emergency response, you might have heard this. Lessons observed have been defined as "experience gained from actual events, tests, and exercises -- what worked well and what didn't work well." Lessons learned, then, have been defined as sharing and using the knowledge gained from our experiences. We can improve our future practices in order to promote the recurrence of desirable outcomes and avoid the recurrence of undesirable outcomes. And learning these lessons and then revising our plans accordingly will make us more effective the next time that disaster strikes and hopefully result in a better outcome for our facilities. So we're going to focus on five key areas today.

- We're going to begin with "requirements" and talking about resources. And there's obviously been a lot written and a lot of presentations on this topic and we want to refer you to those.
- Then we'll move to discussing issues related to supporting and sustaining research. Which is why we're all here.
- We'll then move to ensuring IACUC functions, followed by ensuring the care of animals and ensuring their welfare.
- And then, finally, we'll talk about ensuring personnel safety, access and well-being.

Okay, so starting with requirements and resources, I'll turn to Jane Na and have her talk about the resources and the requirements from OLAW

Jane: Okay, thank you, Bill. In April we launched a dedicated Covid-19 landing page which was developed specifically for Covid-19 guidance and information <https://olaw.nih.gov/covid-19.htm>. You can navigate to that landing page by going to our home page, OLAW.nih.gov, and clicking on that very inconspicuous red banner in the middle of the page. Next slide, please. And on that website, includes the link to OLAW disaster planning and resource page which is actually a separate resource available, just non-Covid specific, and includes lots of good links and resources there. The landing page also includes currently 21 F.A.Q.s related to Covid in a pandemic. Links to relevant guide notices. And that includes things like for example, disaster plans and other resources.

And, next slide. In addition, also on that landing page are links to three webinars that include specific discussion on pandemic planning and in the Covid-19 pandemic response resources and FAQs for animal care and that was posted in April, and in the march, the impact on animal care, Dr. Bob Gibbens of USDA Animal Care and Dr. Patricia Brown, with OLAW, discuss the most recent updates and guidance for animal care and use programs related to the pandemic. And then in early March when the pandemic was just beginning to impact programs and IACUC, on building a research and occupational health program, OLAW answered questions related to the pandemic in both the beginning and the end of that webinar. So, please, feel free to check those out if you have not already.

Next slide, please. And so as institutions that are governed potentially by the Public Health Service Policy, that includes individuals that receive money from NIH and any of the Public Health Service agencies, including FDA and CDC, as well as institutions that have funds for

animal use within NSF, and NASA, you are required to follow the *Guide* for your animal program. The *Guide* requires that institutions develop disaster plans. So these are mandatory. They're required. Disaster plans must account for the well-being of animals as well as personnel. And should define the actions necessary to prevent animal pain, distress and deaths. And should be reviewed and updated to adapt to program changes, evolving risk, and lessons learned from drills, tabletop exercises and actual disasters, including the pandemic that we're currently in.

Susan: Jane, I'm going to ask a question that we usually get. Could you please clarify that this is what the OLAW requires. There isn't a specific plan or a template or more specific designation, is there?

Jane: no, definitely nothing very specific. There is the general guidance because each institution is highly variable, as I'm sure that we'll hear later today as some of you share some of your stories, challenges, approaches to solving different challenges. But, yes, in general we're focusing on specific things that relate to ensuring the health and welfare and well-being of the animals and the people of the program.

Susan: it's a performance standard.

Jane: Yes, we won't tell you x, y, z, this is how you have to do it. We want to make sure that the program functions in a way and has prepared for situations that are not -- are unexpected, such as the pandemic.

On the slide is a list of considerations that you might include in your disaster plan. Certainly, we expect institutions to have some kind of way to ensure healthy proper environment for the animals that you're housing and working with. So, you might consider - do we have back-up systems for failures of HVACs or alarms and are those alarms going to the right people. There are also considerations for if the facility is in a condition that you would actually need to move the animals. So you may need to have provisions for animal transport, relocation, or even considering euthanasia and OLAW requests this as being a last resort in all considerations but it is something to prepare for. And then the rest of the considerations relate to supplies, personnel, policies and procedures. So I'll let you read that on your own. And I'm sure that we'll go into speaking about each of these potential areas.

I look forward to hearing comments from all of the participants. And there's no contact us OLAW slide, but please know that we are always here for you and we are willing to answer your questions, field emails. So, please, contact us. <https://olaw.nih.gov/contact-us.htm> Thank you.

Bill S: Thank you, Jane. We'll move on to USDA and the current status of any requirements relating to the contingency planning and I'll turn it over to Carolyn.

Caroline: Okay, thanks, Bill. In January 2013, as Susan had mentioned previously, we instituted a contingency planning regulation, that is 2.314, if you have your Animal Welfare Act Blue Book,

https://www.aphis.usda.gov/animal_welfare/downloads/bluebook-ac-awa.pdf it is there and it is good and I hope that you take a look at it at some point or another. I thought that you might be interested in the back story and why we're no longer doing it. Initially, what we did is to do reach out to all of our licensees and registrants and told them about the rule. And everything that should have been in place by July 29th. But on July 16th, a huge expo, a Washington Post article had front page news. The title was "Watch Him Pull a USDA Rabbit Disaster Plan Out of His Hat." The story referred to a magician with his rabbit and the requirement that he have a and a disaster plan which he did not agree with whatsoever. Apparently had a friend there at the Washington Post. So it caused quite a bit of publicity, resulting in numerous outlets picking up the story. And then there was a review put in place that same day, July 16, by the Secretary of Agriculture. So a couple days after the plan was to be in place by everybody, a stay was issued on July 31st, 2020. And it's been there ever since. We're waiting for it to be revived and we are now in the process of trying to do that. If you look at the 2.134 regulation we have a lot of similarities to OLAW and what they require. But I thought that what was also interesting is that we had detailed evacuation instructions or shelter some of in-place provisions for food and water, as well as identifying a chain of command. So there was some good stuff in there.

Next slide. So right now what we're doing is working on re-writing proposed rule to lift the stay. It takes several years to work through this process and -- but it is actively being worked on right now. There will be a Public Notice put in the Federal Register, so everybody can send in their comments. And then the Final Rule will be written. Because there's a change of administration coming forward in January 2021, everything comes to a halt in terms of regulatory actions. So for about three to six months during this transition period it will not be worked on. But I'm looking forward to being able to have that rule to complement the law and for every other facility that is not a research facility that is not regulated in some way that they will now -- especially with all of the disasters that we have been having of late with the fires and hurricanes that are just non-stop -- it's really crucial. So the rabbit there is a nod and a hello to the whole magician and his rabbit situation.

All right, next slide. This is just a few contacts in case you need to get hold of me or animal care and you can contact me directly as well. That phone number is to our office. So you'll probably get a recording but if you need anything, please do feel free to reach out. Thank you.

Bill S: Okay. Thank you very much, Carolyn. And then as the last thing about resources, I wanted to ask Bill Greer to comment on the initiative that he undertook through the IACUC Administrators Association.

Bill G: Sure, thank you. Thank you, Bill, for the opportunity. Just a little background very quickly. About two or three years ago Ron Banks and I worked with Carol Clark from the USDA and a few from FEMA to pull together some presentations for an alas program that was looking at a comparison between the Zap Fusion Program, <https://www.aza.org/zahp?locale=en> which is a standard set of resources used by the zoos and available resources to the academic and the research community. One of the things that came out of that was an effort for the IACUC Administrators Association to kind of facilitate the opportunity to develop something similar to

the Zap Fusion Program's documents. And what we did was establish a sub-committee with some folks from the IACUC Administrators Association, and Julie Marshall who works for the San Diego Zoo and was taking the lead on the Zap Program as far as relating it to available resources for academia, with the idea to develop a similar resource and to have it available through the IAA website. <https://iacucaa.org/> And we talked to Carolyn and others where the resources will be available, through either the USDA website or through the IACUC Administrators Association website, and we have not pinned that down yet. But at the end of the day we hope to develop a similar resource. I think that if you look at what bill has provided as resources you will see the link to the Zap Resource Program and it gives you an idea of what is there. We're looking to kind of mirror that, to reflect what we do in research. And you will see everything from tabletop exercises to template SOPs to various things. If you want to be involved, reach out, let me know. We are trying to get as many from the community as possible to help us to develop this. We did get sidetracked with Covid, obviously, we all had a lot of things to take care of, but we want to get this up and running again. So, again, if you're interested please reach out. wggreer@med.umich.edu Bill, thanks for the opportunity to give the update. So I'll turn it back to you.

Bill S: Sure. Thank you, Bill, we will look forward to that product and it sounds like it will be extremely useful and we hope to see that in the near future. Okay, we're going to move on to the topic of supporting and sustaining research and I'm going to turn to Wayne Barbee to start us out on that discussion. I'll move to his first slide.

Wayne: Thanks, Bill. Before we dive too deep into the dialogue of supporting research, I wanted to emphasize that if some of the challenges that you're facing with regard to that topic seem a little scary, well, they are. And that is due to the wide variability in the infection rates and the differences with what has happened to research departments. So, for example, I located the county infection rates for you with the Covid dashboard site. And as you can see, unfortunately, compared to what it was earlier in the summer, there is precious little green and a whole a heck of a lot of red and orange. So if you look on the right you can see North Dakota is at the top of the country with rather large local infection rate. Their infection prevalence is up about 50% now. I put together a spreadsheet which I turned into a PDF.

Bill, you can go to the next slide there. And here are all of the organizations and the cases range all the way from Texas at a low of 4.9. This is daily new cases per 100,000 individuals, averaged over a seven-day period, ending this past Sunday. They range all the way from 4.9, up to South Dakota at 113. So an institution with that rate of 4.9 could be still thinking about ramping up. While an institution with a rate over 100, could be discussing a shutdown. So that makes things a little bit -- a little bit more difficult.

I'm going to just mention the topics that I want us to discuss and then move to a couple of questions you sent to us in the days before this presentation. So we are going to ask you to talk about triage of research animal population studies, how you ID and preserve animals and cryopreservation and postponing of unnecessary procedures and how you minimize or avoid early euthanasia.

One question that came in said - it's been challenging to track whether animals should have been placed on protocols or called back due to management. Or if the experimental time frames are accelerated due to COVID-19. I'm interested in whether other facilities have had success in tracking and communicating with the researchers about these colony management and experimental time frame changes.

I'd like to hear what other folks have seen. I can tell you that at VCU we did not have to euthanize animals on our own, but we did have researchers cut back. There was no formal labeling of the reason why, but for the most part there were people with a lot of breeding colonies that just decided, okay, this is a good time to cryopreserve and cut back on the number of animals that I've got. And I would be interested in hearing what others have to say. While we are waiting, Bill, do you have anything to mention about the University of Michigan?

Bill G: Sure, I can share some of our philosophies. You know, it all goes back to communication. So when we were starting to ramp down our and we talked to our PIs about not starting up new projects and only maintaining animals that were absolutely necessary. By that I mean don't breed animals for future research – just enough to maintain your lines. We too, as you did, Wayne, we wanted to support the idea of cryopreservation and we brought it to people and we talked about it and we're still having trouble getting people to step forward. I don't know why they're resistant to doing the cryopreservation. We have a resource that can do it for them. But very few people take advantage of it. And the other thing that we tried to do was to let researchers know that although the capacity was limited, our veterinary team, our vet tech team and others could try to help people bring some of their research to fruition. So, for example, if we were two weeks into a three-week project, whatever we could do to help to finish up that project and get the data, we wanted to do. We made various offers and did the best that we could. But, again, it was all about communication. We let people know what we were going to do. As with all of us, when the restriction and order to ramp down came, it happened really fast. There were cases where people just had to go home and not come in the next day because of state restrictions or other things. But, in summary, we just tried to communicate out to everybody and encourage them not to produce more animals for research. And let us know if there's anything that we could do, or let the veterinary team to know if there's anything that we could do. And finally we got ramped to the point that we could manage the remaining animals in the facilities through the ramp down period and up to the point where we started to resume some research.

Wayne: Thanks, Bill. Some answers are coming in. A participant said - to ramp down, we had a few instances of animals aging out during the shutdown orders.

Yeah, that's often the case with time studies and with some of your breeding colonies that the animals maybe getting old and need to be culled.

Another participant says – they didn't need to euthanize any animals, and were able to ramp down research. I would say that my impression from hearing from other institutions that PIs have been largely responsible and new projects were not started unless they were Covid

related. So, yeah, I think that from institutions, a lot of PIs have stepped up and saw that they needed to do the right thing.

Another participant says – after the initial voluntary ramp down, as we've slowly ramped back up, we have added layers of review for new animal orders for animals that require housing longer than one month.

It's a good time to put that policy in place. And to provide lab-specific personnel safety and ramp down plans. That's a good topic, and Tanise and Bill will talk about that later, personnel safety. So we'll definitely expand on that topic.

Cryopreservation, we just briefly touched on. I will say that is something that we preach to many and very few utilized until our shut down. And then we went from very few people ever discussing cryopreservation to a lot and we're able to cryopreserve a lot. Other folks, has that been your experience? I will add that while we can do this in house at VCU, that there are commercial organizations that will do this for you. All you have to do is send them male mice to freeze the sperm.

I see another participant indicated - while we offered cryopreservation as a service, we did not have any labs take us up on this offer. That is often the case. And then another said basically said a lot of labs cryopreserve their various lines. So that's a good thing to do. It's not a magic bullet. You cannot take those lines and immediately get the right aged animals immediately, but it is faster than going back to another source, particularly if you had multiple crosses involved in creating that line.

Susan: Well, Wayne, there's just so many reason to cryopreserve. I mean, you can preserve strains against genetic drift. And there's lots of new ways to -- for example, super ovulate a whole cohort of young females and then you can produce a large cohort all the same age. So, you know, it's funny that actually that the investigators resist this, because it provides them so much protection and so many opportunities. And there's been advances in the field since the early days of cryo. So it's really worth doing some research to help them to understand how valuable it is in numerous ways, not just protection during the pandemic. But cost savings, genetic reasons. So many reasons.

Wayne: I see another comment in the chat. Our labs shut down and only projects considered essential by the department heads were allowed to continue work. Investigators decided on their own whether or not to euthanize some of their rodent colonies. We offer cryopreservation and now are just doing more of it. We are willing to subsidize the cost. I think that is important. It is great customer service. Because you may say, well, it can't be that much. Yes, spending \$1,500 on cryopreserving a single line for a couple years, if you were a small player as I was, was not a big thing. But try multiplying that times 10 or 20 if you have multiple cryopreserved lines and then it gets to be a rather substantial part of your budget. And if your institution can help in subsidizing that cost, I think that's a great service. Even if they can't do all of them and they can pick the most difficult lines to bring back, that's great.

I see one more comment - relatively small, and a few labs slowed down but overall it's stayed normal.

That's been the case with a number of institutions. Has anybody started that process of identifying if we had to shut down or had 50% or 75% reduction in husbandry staff, these are the animals that we would preserve, these are the animals that we would euthanize? Anybody gone through that yet? I ask it because it is a difficult thing to consider. I see this participant that her university did not think that it would be fair to select one project over another.

And that is an argument that you hear, but if your husbandry staff is down 50% or 75%, you may have to start making those decisions. And there's many ways that you can do this. Generally it should involve the leadership, the IO and the attending vet, but depending on the institution that may involve the department chairs, research deans, people in other roles.

Another participant says - we're working on including an addendum to the animal study protocols, part of the emergency contact details, prioritization of colony in the event of an emergency.

Yes, this is something that you can do as part of the protocol review process. Particularly if you've got investigators with large protocols with multiple lines, you can say in the event of an emergency, what are your top lines that you want to preserve and so you can put this back on the principal investigator and ask them as part of the process.

Another participant indicates that at her past institution, all labs identify evacuation animals in irreplaceable lines and she has started to introduce that idea at her current institution.

If you get the PIs involved early on, that makes your planning a little bit easier.

Bill S: Wayne, I'm going to add that during Katrina there were some valuable transgenic lines that were rescued after the Katrina storm from one institution. And, you know, the folks that went in to do the rescue were not folks that were not that familiar with the facility. So if there's a way to somehow to identify a really critical resources, animal resources, that should be evacuated if there was to be a severe impact on the facility. That's a good thing to do, especially if you know that something is coming. Sometimes these disasters, you don't know that they're coming. But if you know that a hurricane is coming you can sometimes start to prepare by identifying those most important animals or cages.

Wayne: Yes. So I can add to that that one of the universities was able to preserve some of their lines because they had husbandry folks wade through some pretty darned deep water and use the vehicles to transport those to neighboring institutions in another state. They made a valiant effort and they were able to do that.

I see from a participant – Regarding the requirement to set out an emergency plan. We didn't need to go through the process. We planned it out for all our USDA covered species, and

followed by irreplaceable breeding animals and followed by experimental animals and followed by stock animals.

Wayne: You need to think about certain species, of course, as the highest priority and then develop your list from there. And yes, it may be dependent on which species if you have non-human primates you're obviously going to need to make a big effort to preserve those.

I did get one question about the holding protocol, asking - did any institution subsidize per diem costs during the closure. Either directly or as part of the holding protocol. So I'd be interested in what folks have experienced at their own institution. I see a participant saying we did not at my university. And a couple other other folks answer -no.

That's something, of course, done on an institution-by-institution basis. Here are a couple more responses. Yes, mostly did not at my hospital. So for the most part that has not happened if you're in a shutdown again, that's an individual decision that you'll you'll need to make.

I'll just bring up the holding protocol. As an administrative tool that you use -- if the investigators are not doing any research procedures anyway, there are some places that will put their animals on holding protocol and as long as they're on the holding protocol, we will pick up the cost, but, of course, that is an individual institution decision.

A participant indicated, yes, we just started this month. We identified a small amount of internal funding for support of Covid related costs.

Yes, if you can get Covid funds, that's the sort of thing that you can do to offset people's NIH costs. And let me tell you from a formally funded investigator there is never -- never enough money when it comes to keeping your animals on per diem, particularly if you're in the last phase of your grant - year three or four of your grant. So while we're waiting for other responses, Bill, you want to add anything from the university of Michigan? Your practices there?

Bill G: Sure. We did not subsidize any of the per diems. One of the things that we did, we talked to PIs upfront and we asked them to just voluntary to identify which animals they could cut back. And they did. So it didn't require us to force any restrictions or anything like that. We did some various things that we'll talk about when we get to personnel protection, but other than that, we were in a good place. And the ramp down kind of happened in partnership with the PIs, they understood the circumstances.

We always had our holding protocol in place. And we basically used it for things like expiring protocols that get caught up in a de nova review or we didn't get the review done in time or some animal on the noncompliance status. So I would say that Covid really didn't impact the number of animals that went on our holding protocols because of the way that PIs cooperated

with the ramp down. Does anyone else want to comment on that because you, too, were intimately involved.

Participant: I don't know that I agree with you Bill. It didn't really impact the researchers that much, other than having to identify at the cage level which animals they would keep and which animals they didn't need to keep. And then using the holding protocol, I don't really think that we really even put animals on that holding protocol. Because at the same time we were still working remotely with a compliance staff and moving protocols through the system and amendments, you know, just as we were doing our normal business.

Bill G: Yes, I would add to that, just like everybody else, I think we ran a state-by-state and, in many places, a county-by-county, hour-by-hour update on what was going to happen and how it was going to happen. One of the from you-to us pieces that came out of that uncertainty or ambiguity is the fact that everybody was just waiting for anything. So being prescriptive on what we wanted to do was difficult. Setting the stage at the University of Michigan, we all figured this out together and drew direct lines of communication on what we should be doing. So there wasn't a whole lot of mass movements but, certainly, all of these considerations were in the air. So all things considered, that was one of the advantages of kind of being hour-by-hour.

Participant: Yeah, and I also think that it really, really helped a lot that we could actually pull together and quickly to get communications out and to get F.A.Q.s on our web page fairly quickly and update them on a routine basis. So that the researchers knew where they could go to look for information and so forth. We were gathering that fairly quickly throughout the whole process, and still are.

Wayne: That helps, that communication and coordination, so PIs feel they're in the loop and not having decisions arbitrarily made without their input. So in closing up this topic, briefly I will just mention a couple other things to consider with your ramp down and your ram up. If you're in the process of opening up and it may, or may not, be a mirror image of your ramp down. So, for instance, if you're ramping up briefly, you may have some senior graduate students that you want to get their project finished up. So they can get out in a timely manner and to get those post-docs done or PIs that have some quick experiments that they need to do for their next grant application. Try to put in some potential contingencies and even if they may seem to be arbitrary, benchmarks. So, for instance, at VCU, we have our Division of Animal Resources operating right now in the green zone 100%. We have a possibility or plans for a 25%, 50%, and then 75% reduction in things that will be triggered at each of those. So some of you already talked about voluntary ramp down. Consider the neighboring institutions that you can use to share your animals, share vets, share vet techs. This is easiest if you have a Memorandum of Understanding (MOU) or if you're part of a big university system, but if you're not, just your buddy down the street may be able to help out and you can always get those understandings going and then make them more formal, via MOU a bit later.

Tanise: One thing that I wanted to add there, Wayne, I think that is why it's so important to have tabletop exercises because you may think that you have your lines of communication set up and figured out how they're supposed to work. And then they don't work and then you're in the middle of a disaster. That kind of happened at my university with the hurricane. So then we changed the way that we do our communication and that happened in a hurricane. But it would be good if it happens at a tabletop for you.

Wayne: Excellent, excellent suggestion, Tanise. I will put in at this point that plug for the USDA contingency rule and this idea of tabletop planning. There are people that will say - you really can't predict everything that will happen during a disaster so why should you put out this effort? It is correct that you can't predict everything but -- having been involved in a tabletop exercise you would be surprised at the things that come up that you hadn't thought about that enable you to go through a second, and a third, and even a fourth version of this. And is it going to be perfect? No. There are things that will come up that you have not anticipated but it will help you to eliminate a whole lot of the surprises. So I would as a somewhat objective person, say to take a look at that USDA Contingency Rule. It was developed by looking at areas that needed improvement of many research institutions. Take a look at that. If you think that your plan is great, take a look at what they have in there and see if you need any of that. Thanks.

Bill S: Thank you, Wayne. I think that you've gone over some really good points. I would just like to add that some situations where you can anticipate some occurring, such as this pandemic, and, unfortunately, we have heard many of the experts predict that we can probably expect more pandemics in the future. It won't be a hundred years between pandemics that we experience. So we probably need to learn lessons. But as soon as you begin preparing for some kind of a disaster or an emergency, whether it be a natural disaster such as a hurricane or a pandemic, just simple things like - we're going to cut off ordering to start new projects. Or new studies that are long term. And you minimize the likelihood of having those interrupted. You've got those in place and especially if you practice those during a tabletop training exercise, then people become aware of that and it becomes an accepted concept.

We're going to move on to the next major topic, which was ensuring IACUC functions. And that is something that you want to make sure that you're ensuring that those functions are available and that you're complying with the OLAW requirements as you approach these and move through these disasters. So I'll turn it over to Jane to get us started on that topic.

Jane: Thanks so much. So, IACUC functions, just referring to some of the comments -- Tanise had indicated they didn't use their holding protocol and your IACUC was also still reviewing and holding full committee meetings. I'm happy to hear that things were able to continue, because the expectation is that your IACUC still functions and that within your disaster plan that there are things in place to ensure or to help to ensure that IACUC business still can get completed. We did receive a comment from a participant that remarked on how one of their successes is that they were able to quickly transition to virtual. Which I think that a lot of us have experienced, and I feel that this is something that pretty much all of the institutions out there have had

maybe some dabbings in and if there are other successes or specific features of how the virtual setting helped or hindered things, I would be open to any comments or questions from individuals.

Participant: Our IACUC semiannual inspection and program review just happened to fall just as all of this was happening. We do the whole institute, not broken up by month. So our month of March is normally our inspection time. We were able to convert quickly to do our inspections via Zoom by using the essential personnel that were also IACUC members and invited the rest of the IACUC to view via Zoom. And we were giving them directions on looking up, looking down, looking left, right, pointing out different things, expiration dates. So our inspections continued and we did find that it took a lot longer than doing it in person and they were modified, obviously, that way. And you couldn't cluster areas where -- in past where I can use like three different rooms that were right next to each other because I didn't know how long it would take to give the person who was doing the actual camera handling the directions. The left, right -- and so it was hard to judge. So I had to spread it out quite a bit. And it did take, as opposed to something that would take three rooms, maybe an hour and a half, to we were doing basically a room an hour. So it was going a lot slower.

Jane: Thank you for that comment. Yeah, I don't know if I realized that it would go that much slower. But it's good to know that they did get accomplished and that you did have those completed on time. So some of the comments in the chat are that IACUC members prefer to hold the meetings virtually and that is definitely something that we've heard in previous ICARE sessions as well -- better attendance. And then inspections were modified as well as the need for signatures. One drawback is with technology, not everybody has access to virtual or digital electronic signatures. That is also something we had to navigate at OLAW. I'll just point out there that I contacted our IT department and they suggested using Adobe Acrobat, because that is available to anybody with an internet connection and you can use the fill-in sign and, either with your mouse, (even though it looks pretty terrible usually) or your little track pad or if you have a touchscreen (that usually looks pretty good), to sign your document. There are other things available that are free from Adobe. And so, yeah, a lot of attendance and discussion being improved during virtual meetings. So discussion has improved.

I have a comment about the timing issue. In a way it depends on how you count that time because you don't have all of those people driving to campus and parking and preparing in all of the ways that you prepare. Multiplied by the number of people doing it. And it's also true that down in the control parts of Zoom, you can change whether your image is a mirror image or not. So if you are having trouble directing people, go to the right, go to the left, you can get into the control function and make some changes there. And my third observation is that everything takes longer the first time that you do it. So if we do have more disasters and we continue to use these kinds of electronic technologies we'll get better at it.

Tanise: Yes, those are great points and I feel definitely like before Zoom was a little bit like, I don't know where everything is and I'm comfortable now. So we all definitely adapt. And once we're forced to using something, it becomes easy once we actually have to do it.

Susan: Once we learn how, they update the software and then we learn again.[Laughter]

Jane: Technology. But, you know, got to keep those security protocols in place. So speaking of using virtual methods for inspections, we also had a comment from an individual who successfully used video facility inspections with individuals that either took the videotaping and then the rest watched, or using individuals in the facility and completing their inspections that way. And at this specific institution they relied on their attending veterinarian and then there was some discussion of whether this was a fair and balanced inspection, did any of you run into concerns with that, like you're using the people in the facility, any stories or concerns regarding that aspect?

Tanise: Jane, we did use some of our husbandry managers to actually to go in and to help us out as ad hoc to look at some of our facilities. But it was only a small portion of the facilities. Because when we went to ramp down we were three-quarters of the way done with semiannuals. So we did use that ability to have them and gave them the checklist like we'd normally give our IACUC members and what to look for and how to pick things out and so forth. So it seemed to work really well.

Jane: Great. And I know that some institutions that didn't have an internet connection available so that the committee could watch live, we have heard of video recordings from OLAW where it's not a live feed. I know that it has to be a live feed for USDA. But for OLAW, that is certainly acceptable to do video as well. And there's actually a lot of comments, so thank you so much for putting your feedback in. I see a lot of good functioning using virtual, members miss the free lunches -- I can see that for sure. And one participant says- we received an OLAW waiver for our March semi-annual lab inspections.

And that's great. So individuals and institutions that were unable to safely complete those inspections due to whatever restrictions because of the pandemic, they contacted OLAW and OLAW is the authority if your PHS Assured -- well, the authority that can grant waivers for provisions of requirements in PHS Policy. So if you had obtained a waiver, then you were able to delay until you are able to successfully to complete your inspections.

And this participant - indicates that they were able to hold in-person inspections in September. And so I'm glad to hear that you've continued your inspections and that you hopefully have done it in a safe manner now that we're used to the masks and social distancing, I'm sure that was the case and for institutions that maybe haven't got back into inspecting and maybe are just relying on your waiver, just for information, and the waivers don't expire, although the longer that you wait, the longer chance that you will miss picking up things in your facility, and potential chances for missing animal welfare concerns or noncompliance. And so we do expect that if you have a waiver that you are looking at the flexibilities that have been issued by OLAW that allow you potentially to do things such as use somebody holding a video camera. And then the IACUC watching the feed. So, yeah, we do want you to complete your inspections as soon as you can safely do so.

Participant: Jane, can you comment on when OLAW might decide that waivers can no longer be used? Because the change in the pandemic.

Jane: We have not crossed that bridge yet. OLAW, especially the Division of Policy and Education has been proactive in providing guidance to the community as you can see with all of the FAQs and the landing page. So if there are changes and it is deemed something that would need an update, we'll certainly convey that. Definitely if you are not on our list serve and you want to be in the know, please go to our website. You can even google it I believe and say OLAW list serve, and you can navigate to it. Or shoot me an email, it's just something that you sign up by email and you get all of our announcements, Guide Notices, important trainings that may be available. So it's a very handy tool to keep informed.

So a lot of individuals are continuing IACUC meetings virtually. Limited personnel, semiannual inspections had to be modified - says one participant. So I don't know if you're a willing participant as far as talking about how your semiannual inspections had to be modified. That would be something that I'm sure that individuals would like to hear about. It is perfectly fine if you are --

Participant: Well, to explain what most of the people have been mentioning about, my finding a sense of personnel attending and we did it some by phone and some by camera, facetime. Not many of us could attend because of this. And just the facilities itself, they have limited people there just because they want to maintain social distancing. And, the same thing with the signatures. It's been - not problematic - but it's been difficult because we're used to just meeting and everyone is signing and holding a meeting like we normally would do. But due to the circumstances that has also been modified. And to go with Adobe Acrobat, that's what we use as well.

Jane: Great. Glad to hear that. And, yes, for semiannual reports to the IO, where the majority of the IACUC members are supposed to be signing, OLAW accepts email, this is okay. For semis -- and I believe that for the pandemic in this situation that USDA has -- and, Carolyn, if you wanted to speak on this any -- you accept emails for the pandemic situation for semiannual reports to sign? Yes, I see her nodding. Great. So confirmed. So, thank you, and thank you for sharing. And a lot of comments.

So, you know, we're all doing the virtual. A participant indicated that they're allowing people to take photos of the signed page. Yes, that's perfectly acceptable. You know, because we don't all have scanners at home.

And here's a question from a participant. The semiannual inspections have been a challenge. Can they be recorded?

So per OLAW, yes, they can be recorded. It is a different story if you have USDA or animal welfare act regulated animals. Did you want to go more into this, Carolyn?

Caroline: Yes, I think that in that situation that maybe you would need to get together with the inspector, the supervisor for that area and that can be discussed further. But typically we do require a live feed. So, the best thing is to connect with the supervisor and to discuss that further. Okay, because I do understand that there are some hospitals with machinery and that kind of thing that you would have issues. But, yeah, we generally require live feed.

Jane: Carolyn, could you also comment about the flexibility for conducting those inspections with two members that have been mentioned on a previous dialogue?

Carolyn: Yes, sure. So what's totally allowed that we're fine with - is if there's two IACUC members or a designee or a consultant that you may go to different parts of the facility - So, yes, you can have two separate individuals going to different parts of the facility. You can have somebody else videotaping as long as two IACUC member are available to view that video. So an employee can go to various parts of the facility and to be sending that back live streamed to other IACUC members. So those are some of the flexibilities that we do allow.

Jane: Okay, thanks. Thank you. We have a nice tip from a participant about Scannable - a free scanning app available and to save as JPEG and to be able to mail out so that could be helpful.

Okay, so I think we've gotten the virtual kind of discussion played out. Another question individuals were asking about in a previous session is - should meeting minutes reflect the method by which they are conducted, live versus film, versus teleconference. And, if you wanted to chime in and to indicate how your institution does your meeting, those comments or stories would be welcome. Some of the last **Dialogue** sessions had discussion about - would there be concerns with FOIA as far as specifying which modality, if there's more security issues with a particular software. But in general, some people did indicate whatever platform they were using in generic terms which I kind of thought was nice of -- like teleconference or web meeting. So it was generic but you could tell and have context that such as - we asked the individual to step out of the web conference or whatever. So that is certainly acceptable. Your meeting minutes are not anything that OLAW is prescriptive of. They just need to be taken and you need to document kind of the general discussion and outcome of what was deliberated on.

Susan: Okay, so we're looking good here. From the chat line, Jane is it acceptable that our first semifinal in April that I requested a waiver was done by our veterinarian chair and facility managers, IACUC coordinator?

Jane: So from the OLAW perspective, semiannuals can be conducted in any way that the IACUC deems acceptable. So if that is a method that works for your institution and your IACUC has decided that is the way that they're going to do it, that is certainly acceptable. It's encouraged for everybody to be able to participate and individuals have to have the option to participate. And nobody can be restricted against participating for those semiannuals.

Oh, from a participant, they had a guest, a few members attending the meeting virtually just on a regular basis. So then switching to all virtuals was pretty seamless. So that's good to hear. And they don't indicate in the minutes if it's virtual or not. And as we didn't previously for security reasons. And then they're still keeping track of the members being recused and leaving earlier or arriving late. So, excellent, great. Okay.

So another kind of concern that was brought up is when a required member of the IACUC is, unfortunately, unable to serve on the IACUC any longer. So, for example, this question specifically indicated potentially or theoretically, a person dies, how or what is needed or how can the IACUC function if they are not duly constituted. And from PHS Policy, you do have to have a duly constituted IACUC to conduct IACUC business. And you must have a quorum of the duly constituted IACUC to hold a meeting. And -- and complete the reports, vote on concerns and to work to fulfill the functions of the IACUC that are required by PHS Policy.

Are there questions about any aspect of the members not becoming available or becoming available? Any challenges? Institutions have faced -- the best way to prevent yourself from getting into that situation is to be sure that you have alternates lined up and then always be on the look-out for those hard-to-find non-affiliated or non-scientific members. So always be recruiting constantly.

Wayne: I will chime in, Jane, in addition to that the practice of having the alternates it's good to have the alternate and the regular member communicate with each other so if you're regular non-affiliated and can't make it, they tell their alternate - I can't make it, can you be there? And also to say that if not just the death of a non-affiliated member. If they're away for a prolonged period of time, that is a problem. I was at an institution in which we had a AAALAC site visit and they went back to our minutes and noted that non-affiliated member had not been there for eight months. And the IO said, Oh, he was at his pharmacy. He's started his own business and he's just been busy. He'll come around. And the site visitors said - you may have a duly constituted committee by letter, but certainly not by spirit. And when they started discussing this is a Mandatory item, our I.O. freaked out and immediately put another non-affiliated member as a back-up on the committee to make sure that that didn't happen. So I can tell you that it's not only OLAW that wants to look at that, but we had that come up in an AAALAC site visit and if you have a non-affiliate there in name only and not participating, then that can cause you problems.

Jane: Thank you, yeah, so definitely make sure that you're utilizing the alternates and I'm glad to read a couple comments about institutions having alternates. Here's a participant indicating that they always keep two non-affiliated members on the committee. And another says - we had four non-affiliated -- as two of the four have been on for over 15 to 20 years. The thought process there is that the two that have been on there that have been very engaged and we were thinking oh, my gosh, what if they ever decide to leave and they leave at the same time. So let's back it up with two more. So we were able to do that too. So it worked out really well. But they still stay on because they enjoy it. Wonderful. So it seems like you do not have term limits on IACUC membership then in that case. I'm seeing you laughing.

Participant: We do --

Jane: You do?

Participant: Well, it's three years. But a lot of times they just keep re-upping and of course our affiliates have always re-upped.

Jane: Oh, that's nice

Participant: Which is nice.

Jane: Yes. So that is one consideration if institutions have more finite term limits. That's something that you can consider in your disaster plan - to include in case of disaster if somebody's term has, you know, expired and they're able to be extended in unusual circumstances such as like pandemics. So we at OLAW just want to ensure that the IACUC functions as much as it can in the circumstances and meets the PHS Policy expectation.

It was mentioned about the holding protocols before, and the expectation is that protocol review still continues. It seems like a lot of you did -- which is great -- so, please, conduct your protocol review and make sure at least for OLAW every three years the de novo review is completed on protocols. And make sure that you might have a provision in place should they expire. Think about if they're going to potentially be able to go into a holding protocol.

Okay. So we had some additional comments from a participant that bring up some good points about cross-training. But this is certainly something that should occur. Especially in pandemic situations, individuals may be absent from the workplace. You still need functions to occur. So perhaps there could be slightly non-traditional tasks being taken on by even the director -that should be able to pick up and to make IACUC meeting minutes or fulfill functions that need to occur.

Participant: Jane, I have a question. What about non-universal disasters?.] I mean, obviously regional hurricanes and fires and earthquakes and tornadoes -- are there like unique local situations where OLAW and USDA kind of band together and say that that part of the country got hit and we offer exceptions around there. Can we learn about more local impact as opposed to universal changes.

Jane: Sure, that's a great question. So for local impacted situations, for example, hurricanes or fires or flooding, I am not the specific individual to query, but I do know of individuals being given a waiver if they happened to be in the emergency declared areas for fires and OLAW actually reaches out or sends emails directly to those institutions that are eligible for this blanket waiver for affected areas. So we do recognize that if there are serious impacts, we're going to give some leniency. Is that -- something of what you were looking for?

Participant: Yeah, certainly. I presumed that there would be a little bit of slack given but all things considered from the amount of localized lessons learned and how that applies to maybe these universal exceptions, or exemptions or exceptions to the exemptions, I learned that term the other day -- I think that is an interesting method of really learning from each other in many ways but also one of the things that I find really interesting is how sometimes unique disaster or contingency plans can be applied in a different format. In a pivoted way, so oftentimes we look at many of our disaster plans, probably didn't have, you know, pandemic paragraph section C in it, but we basically just pivoted out flooding or some kind of component in that way. So I was just curious if there's any -- or specific local lessons that, yes, that came from Katrina years ago or something like that?

Jane: Bill might have some stories I will wrap this up and I appreciate your comments and your feedback and chats.

Bill S: Okay, thank you, Jane. And, yes, participant, there are specific lessons learned in every kind of disaster. We hope that folks work to get those out. There are some notes on the OLAW disaster plan page that describe some of the lessons learned during Katrina, including a PowerPoint presentation that I had given about some of the things that we found that would have been more helpful to make the response be more effective the next time.

[Break]

Bill S: Okay, well, we're going to start back and talk about the key topic of ensuring animal care and welfare. We've got three areas that we want to definitely focus on. But we can cover any topic that you would like under this broad topic. One of them is ensuring appropriate staffing levels because we know that one of the consequences of the Covid outbreak has been a reduction in available staff in many facilities. Second area is ensuring animal health and well-being with limited staffing. And then finally ensuring adequate essential supplies. So we'll start with the first topic and I'll turn it over to Tanise. I think that you had some questions about that that maybe you could start with.

Tanise: Yes. I want to poll the group a little bit about adequate staffing. Did you find that this was a big, big issue when it came to COVID-19 -- did you have people in quarantine and different things? So please write in the chat for me, did you find the issue of adequate staffing very difficult to navigate during this pandemic? And include lessons learned or lessons observed from the pandemic? Because our job is to make sure that everybody is taken care of. We sometimes can go in and identify who the essential workers are. And one thing that I noticed that we did was to look at who was working and did we do some cross-training. So if you had large groups of individuals that that had to be quarantined and were unable to come into the facility, did you have somebody else who could actually do those duties? In my situation too, when we looks at cross-training, we have a vet tech program. So we have students that have colony hours and we used those students and cross-trained them. One thing that we also ensured is that we had really detailed SOPs because sometimes there were the higher-ups, like me -- I haven't run a cage wash in a while and if I was going to have to run the cage wash, I

needed some detailed SOPs to make sure I was successful and safe. Use pictures and visuals in the SOPs. Because how you may describe something in an SOP - sometimes people -- especially when they're already stressed out and a little bit nervous -- if they had that picture of how to do something, a quick visual, that could really help to move the work along within the facility.

Susan: I have a couple of comments about how people dealt with this. A participant said they didn't have a personnel issue, but they broke their care staff into two teams. One team did not work at the same time as the other. If one team got infected, it reduced the chance of the other team picking up the infection.

Another participant also said they did half of their staff at a time on staggered shifts with the other half of the workers. And they luckily have not had too many sick or quarantined individuals.

Tanise: I think that has been a popular way to try to deal with this is to divide up into two separate complete teams that don't interact.

And one thing, too, that we did was we added the husbandry hours in a particular room. So as we started to bring back and rotate our researchers back on campus so that we can still maintain the social distancing, we had husbandry hours. For example, in this particular room was from 8:00 to 10:00. And we let the investigators know that only two people can be in the room, the size of the room at one time. And so don't try to come in and manipulate your animals during that time. That made it very easy to make sure that we kept with the university guidelines when it came to the social distancing and keeping people safe.

Normally you don't have to wear a mask walking into our the animal facility, but that ended up having to change for everybody.

We already talked about cryopreservation and how you work that out within your PIs. But do you have in your plans to be able to transfer animals to different buildings? And we had mentioned, too, about M.O.U.s with other institutions. To maybe to be able to move some animals to another institution if will need to happen.

We also changed our procedures a little bit when it came to our limited staff. And so we extended some of the cage changes so that they occurred less frequently. Did anybody have to do that? Let's see -- they had husbandry hours and research hours with room occupancy limits. We try to keep our teams separate, but we were struggling with adequate staff on site due to the possible exposures off-site and childcare issues. I have noticed in the chat before that childcare has been a major issue. That's why if you can at least do some cross-training that will really help with that issue. We have a lot of people who are homeschooling their children right now, which makes it quite difficult when you're in a rotational basis for coming into your facility to do your job. How deep are you cross-training? Do you just have one other person that's able to do this particular job? Or are you cross-training more than one or two people deep?

Susan: A participant offered that they identified a voluntary labor pool made up of investigators and cross-trained them on rodent husbandry. And then had a hands-on tour with the scientific director. Also they created a visual and posted in all rooms showing when a cage needed to be changed. I think that is a really great idea. A lot of good communication on many levels.

Tanise: Awesome idea. And participant, would you be willing to share with us how well that worked? And if you had to call on those investigators to do the care?

Participant: All right. We put out an email requesting volunteers – it was strictly volunteer. This was organized for the IACUC. We received a large number of investigators that volunteered. These were people that were already approved on rodent protocols. And we set up a list, prioritized it with the good investigators, because a lot of people volunteer and we wanted to make sure that we had people that were going to be able to show up. And we had socially distanced hands on-tour with the facility manager to show them the washroom and where to put the cages. And then we had a visual that the managers made up about changing cages. We had how to cover water bottles and how the bedding in the cages had to be and the food hoppers, it was really well received. And luckily, knock on wood, we didn't have to use it. So it was in case we lost a large number of the facility staff, but luckily we didn't.

Tanise: Hmm, okay, great. Also did you ever - another option is to extend the cage changing time, but make sure that if you have to have deviations from the *Guide*, make sure that your IACUC had the option to approve that.

Oh, I see, three dozen research teams volunteered to perform rodent husbandry. That's awesome. Yes, we have this issue too on our campus. You know, you have the cloth mask and you have to wear your mask on campus at all times. But you have to change that mask to a facility mask once we come into the facility.

Also with room limitations and social distancing. Another comment -- we had rotations at the beginning but slowly worked it out where we're all on campus. There is testing done regularly and some other rules on campus for the pandemic response. Yes, we are lucky that we have rapid testing right on-site. So it's quite easy. But we have really worked to keep our distance and we have been, knock on wood, very lucky that we have had not had any issues of infections in our animal care staff.

We also want to look at plans for evacuation and transporting animals out of the facility. And this is where the MOU and these tabletop exercises really worked. Because we had an issue with communication and when we did a tabletop we realized that the form of communication we had planned, was not quite the way to communicate during a hurricane, so we came up with another plan.

And making sure, like I said, that you had the visual for the SOPs. I think that there was a question that came. I think that somebody asked - what are other institutions doing when the entire animal care staff has to be quarantined?

Unfortunately, temporary workers are not an option for us. So I think this is where the comment about the researcher and the PIs come in, because if they are still continuing their research, I think they can be easily be trained to change animal cages. Did anybody else have any other comments on that particular issue if you don't have others that can be cross-trained?

Participant: I know for some health care facilities that had severe staffing shortages, when somebody has had an exposure and they would normally quarantine, that they're screening those health care workers to make sure they don't have a fever and if they don't have any clinical signs, they are letting them work. Even though they would normally be in quarantine. So that's an extreme measure. But that is something that I have heard that is being done in human health care facilities.

Tanise: Okay. Well, any other comments on making sure that you have adequate staffing and, even though we're talking about Covid, some of these same things can happen in the hurricanes, earthquakes and fires. And so these are the kind of things that you really need to think through as you are making those changes to your disaster plan. And as OLAW has told us on several webinars, now is the time when all of this is happening to actually make that change to that disaster plan.

Susan: Tanise, a participant points out that there's a lot of difference amongst species. PIs can be helpful, but when it comes to non-human primates that is difficult.

Tanise: Right and I think that, Bill, you had a comment about that?

Participant: I would just be curious if you had to bring in other folks to cover for workers that were absent in your non-human primate staff?

Bill: Fortunately, not at this point in time. But out of the six people that we had caring for the NHPs we had one come down as a potential exposure. So he was out for 10 days. But the question is always there and it should always remain there, what are we going to do.

Participant: Do you have a contingency plan for, say, you had three or four or five of your -- your five employees were not available?

Bill G: We do. We'll pull from another site.

Tanise: Okay, okay. Well, that's good that you've got that resource. Yeah, yeah, it can be more of a challenge because you need folks that are properly trained and interacting with them and handling them. And particularly you need to make sure that you've got back-up staff that have been TB tested and measles if that's appropriate for the primates that you're handling. So --

Bill G: One thing that I too did want to comment is that I know that at the very beginning of the pandemic that there was a big emotional strain on the staff because, you know, it was kind of -- everything happened really quickly in the month of March, late March and first of April. And

everybody was struggling. So, we really need to think about the health and the well-being of the individual as well as the animal, because, if the individual is not in good health, you're not going to get good animal care. So, you know, thinking through these things now and bringing up these issues now and talking about -- and having places where these people can call and making sure that the employee assistance program and different things like that are up and running -- because everybody went to virtual work. That was something that we had to make sure that was available to our staff as well. Okay, well, Bill, I'll turn it over to you to talk about essential supplies.

Bill S: Okay. One of the considerations for preparing for contingencies and disasters is making sure that you've got enough supplies on hand, at least to hold you for a while. That could be feed, bedding, sanitizing supplies, veterinary supplies such as euthanasia agents, particularly CO₂ if you're a rodent heavy facility, and anesthetics or procedures that are ongoing for protocols that have already been approved and are underway. So, it's important to have adequate inventories.

I wonder if any of you had faced shortages of those things due to the disruption in the supply chain that we have seen during the pandemic? And the ways that you've dealt with that creatively or working with other facilities? I saw a comment earlier from someone who said they had weekly calls with the directors from the 10 different facilities in their major metropolitan area. They just checked in with each other and compared notes on how they were handling specific challenges. And what a wonderful way to coordinate with folks in your geographic area and to touch base with them. Particularly if you're having a shortage of some kind of essential materials such as food or bedding or euthanasia agents. I think that it's always good to be in close touch with those folks in research facilities in your geographic area.

If you do stockpile supplies -- and I know that most facility managers are pretty good at doing that so that they never run out of things. But you do need to make sure that you rotate those supplies, that you've got the expiration dates marked on things. Particularly like diets that can expire and rotating those and getting the oldest out first.

And then there are things that are susceptible to breakdown. I heard of a situation at a VA facility where they had stockpiled years and years of face masks. But when they took them out to use them during the pandemic, all of the elastic bands had completely deteriorated and didn't work. They broke instantly when you tried to stretch them. So if you're storing things for a longer period of time you need to make sure that the environment that they're stored in is considered as heat and humidity can particularly be devastating to different materials. Particularly diets.

Bill S: So, Bill, thinking of PPE, I know that early on being connected to a hospital, a lot of the researchers that were not coming in or had PPE supplies - they were seeing if they could donate them to the hospital when the hospital was running low. So then when you ramp back up and you have to worry about your researchers, do they have enough PPE and can they get enough P.P.E., so I think that was something that we kind of had to go through with some of the

researchers, not necessarily maybe the animal care staff group, because they needed their PPE because they were still functioning 24/7. So that was an interesting thought that, when they ramped up, whether or not they'd be able to have enough in the lab.

Bill G: Right. I know that during that March and April period, I heard from many people that the animal facility had contributed PPE to the human hospital that they were affiliated with. And, of course, it was so terrible at that point. Nurses and doctors were having to re-use masks over and over and they were coming up with creative ways to disinfect the masks. You think about wearing a disposable mask for eight hours a day and then turning it in to be disinfected and then getting it reissued to wear again, it's not a good situation. I hope that we won't run into that again. But it was very critical for a while. And, you're right, some of the investigators in the animal facilities and the animal facilities themselves probably got into a bind because they didn't realize that it was going to be so difficult to re-fill their inventories.

Susan: A participant is telling us they shared out their ventilator so that it could be used in the state.

And a participant comments they can't get gloves right now. And then participant, I don't understand your question. Can we plug in a vendor for PPE? As the government, we can't promote private industries. Is that what you're asking? Maybe she can unmute and tell us what she's asking.

Participant: For the PPE, I found a new supplier and I was wondering if I was allowed to share that or not on here? They actually have a large amount of gloves and I know that has been challenging for everybody to try to get in.

Susan: Well, why don't you type it into the chat? The government is not endorsing the supplier, but we're encouraging to you network. So, okay.

Another participant offered that they keep about a one-month supply on hand and I assume that is in reference to most all of the different things that are used in the facility.

And someone is commenting about the increases of pricing when things are not available.

Capitalism at work, folks. And the supply goes down and the demand goes up, the prices go up.

Bill S. Yes, I don't think that the prices have come very close to what they were pre-pandemic when -- and now we look those prices and they are bargains and you -- if you had had a warehouse and you had foreseen the pandemic, you could be a rich person right now.

Susan: People got in trouble for that, didn't they? They stockpiled, I don't know what, hand sanitizer, I think.

Bill S: Right, and we've all learned a lot about the differences in quality. I think that most of the folks in animal facilities, particularly if you work with non-human primates, you you're wearing

n95s and you have been fit tested to make sure that they're giving you the proper protection. And now we've seen a lot of masks that are not quite rated that high. And don't work as well. So there is a significant difference in the mask qualities.

Okay. There was another question that someone had sent in that said - does anyone give care staff hazard pay, bonus time or some other way to compensate for the extra work they might have to cover, particularly if it's completed within the regular workday? So I know that most of our employees when they do work, they're working extra hard and perhaps doing a lot of the work they don't normally do. But anybody have any experience with rewarding your employees for going over and above the call of duty?

Participant: We weren't allowed at our institution to change the pay scale.

Susan: A participant says that she knew of union facilities in in a major metropolitan area that provided hazard pay. But they were not able to.

We had an earlier ICARE dialogues where people talked about thoughtful and kind things they did for their team members outside of pay. And those included parking places, maybe I think bus passes or transportation subsidies and real personal little items like Carolyn, didn't you have an occasion where you -- you personally subsidized some masks for your people -- somebody made them -- just thoughtful gifts.

Carolyn, Yes, yes, so we did -- we had one person on our team that actually offered to make them -- and I paid for postage -- so she was like busily sewing masks and that sort of spread -- I don't know how many she did for Animal Xare, but it was quite a few. So she donated the materials and I paid for the postage. Is that what you're referring to, I believe?

Susan: Yes, personal acts of kindness and thoughtfulness. And also kindness among team members and helping parents who had extra demands or generosity towards the people who had terrible commutes or had caregiving responsibilities at home. There are things that people are doing on a personal level.

Participant: I also heard, Susan, that some colleagues said they had bought lunch for people. You know, or brought lunch in, which was a really nice thoughtful thing to do for the staff.

Susan: But it's not hazard pay, is it? No. One participant mentioned they had pay freezes and we know that many of the public institutions are really having a financial crisis right now. So it may be difficult to get funds to provide any kind of hazard pay or any extra incentive pay Some institutions provided food a couple times a week. So that's a nice thing.

Here's a nice thing from a participant. She said that there were \$100 one-time gifts. And pay cuts and no extra pay.

Wayne: I would add that even if you are strapped for cash and your institution is in dire financial straits, something that the leadership can do that costs absolutely nothing but a bit of their time is to go back and say to the animal care husbandry staff, we know that you're considered essential and you've had to come in and many of us had the option to telework. We value all that you have done to preserve our research at this university. And actually say this is how many millions of dollars that we have coming in and you're helping to preserve that. And bravo to you. That can do a lot to preserve morale.

Bill S: There was another question that we received that asks, has anyone had staff reluctant to come to work? And, if so, how have you dealt with that? Has anyone experienced reluctance of the staff to leave their home and to come to work? I know that we had heard earlier that was an issue for some of the institutions in bigger cities where the workers normally took public transportation and they were concerned about the increased risk of exposure on buses or subways. And so at least one institution did offer to provide parking, which was quite a premium in some of the bigger cities, so that those employees could drive in and to avoid having to take public transportation.

Bill G: We had a little bit of that, Bill, in Michigan. But it never really funneled down to staff because it was so limited that we were able to address the issues independently. And it was people that went on to the C.D.C. site or just from news briefs found themselves in the high risk. They would call and say I'm not happy coming in and I'm not comfortable taking care of animals or such. Can we help them to make arrangements? And like I said it was so few that we were able to address it individually. But it was an issue that was discussed.

Bill S: Well, I think that employees want to do the right thing. So when they hear governors pleading that people stay at home, sometimes a conflict arises. Should I really stay at home instead of going out to work or not. So I think that those kind of conversations are helpful.

Another thing that, you know, that we're seeing with this resurgence that in some places curfews are being imposed. You know, where there's a strict stay-at-home order being implemented and individuals may be questioned if they're on the road or trying to access campuses. So it's always a good idea to provide a letter to your essential personnel identifying them as such so that they can provide that to law enforcement or other authorities that might question them as to why they're out on the road and trying to access a facility. You know, having that signed by some - a letterhead and giving it to them so they can keep it in the glove box of their car. To say this is effective for a certain period, for a year or two years or three years or whatever, so that, the person can't say that it's not current is another approach that we've heard.

A participant says that essential personnel had letters and all non-essential personnel had access turned off via key card. So, yeah, having access electronically these days is really important too. And making sure that the essential personnel don't have their access cut off. And then that goes back to making sure that if you've got keys to the cages where non-human primates are kept, or keys to facilities instead of card keys, do the people that might have to

take over that are two or three deep, if the first or second deep person can't get there, do they know where those keys are so they can get access to get into those facilities. That's really important. The same way with electronic access. Okay, the essential person can't get in, is there somebody that they can call that can actually give them the access and do they know how to do that. Is that posted on the door? Or somewhere they can find it. So all of these are contingencies that need to be thought about in advance in case that happens.

We are getting lots of comments about essential personnel having letters. I'm glad to see that. We don't want to put up anymore hurdles for essential people than they are already facing.

And then finally, just going back to the animal husbandry, just a reminder if you do go to less frequent cage changing, and any of those husbandry procedures that are less than what are provided for in the *Guide for Care and Use of Laboratory Animals*, you need to make sure that those are reviewed by your IACUC and they have approved those procedures. So those are options when you have reduced staffing, but you've got valuable animals that are animals that are on study that can't be euthanized.

Susan: There's a little private chat going on that might be entertaining to you about a spirited colleague who made laminated cards with lots of bells and whistles for his essential staff. So he made --[Laughter] he made up some cards. And he made them look important and official. And so we all got a laugh out of that. And I think we can guess whom that was. [Laughter]

Bill S: Any other comments that anybody has or questions?

Susan: Bill, there's a comment here. For their campus, you have to have a pass, and you have to complete a health report every day, whether you're coming to campus or not. So institutions are monitoring the health of their staff in various ways. And I think that we talked last time about having to have your temperature checked to enter a facility.

Bill S: Well, I think that we've talked a lot about personnel -- essential personnel. And I think that it's really important to make sure that the folks that are essential personnel - that as managers and supervisors that you're doing everything possible to support them because we can't have good animal care without good care for the employees.

At this point then we'll move on to our last major key topic which is ensuring personnel safety, access and well-being. We have touched on that a little bit. But I'm going to turn to Bill Greer to get us kicked off on the discussion about some of those, including communicating up into the administration at a large institution, which is, obviously, an institutional plan. And then also coordinating with the authorities outside of your institution, such as law enforcement and emergency management. So, Bill, I will turn it over to you.

Bill G: Okay, thank you, Bill. As Bill said, we touched on a little of this while talking about the animal welfare related issues, with things like PPE management and managing staff coming in on campus, and various things like that. So I'm going to just start with the idea of we all have

different state regulations, state laws, and we found ourselves in situations where some of the mandates were coming down from our governors or our local law enforcement agencies that basically said - stay home -- don't go out on the streets. And so it kind of sets the stage for people to worry about whether or not they should even come in. That was alludes to the point that Bill made before, was anybody afraid to come in. One of the things that we did at U of M (and I am interested in you sharing your approaches) is to meet at a high level. Myself, and the attending veterinarian and folks from environmental health and safety and others, we met almost every day for March, April, right into May. With the understanding that what we decided on Tuesday morning might change Tuesday afternoon. Or definitely would change Wednesday.

The first thing that we had to do was to develop a communication tree and from there we got all of the research deans involved and the chairs. And then we developed ways through communication to filter things down through to RPIs. Some of the simple things that we did, once we shut down the facilities and the buildings, was to lock the building and if you need to come into the building you had to be on a list. Eventually we ended up having building monitors. Not right away, but down the road where when you would come in, they would do a temp, and a symptom survey and you would need to be on the list.

Some of the reasoning behind the list is that they wanted to manage the number of people per square footage in the building and rooms. Obviously, the idea of social distancing, not just the six feet, but also the population within any given space and the opportunity for them to come in contact with each other. These were the measures that we took upfront.

We too -- especially the veterinary team and the husbandry staff -- developed methods and letters to make sure that we could inform state police that may pull you over on the way to work and that said - yes, we are critical staff and we are out for a specific reason. We need to go care for research animals.

And we're monitoring the things that we need to monitor to ensure our own safety and the safety of others who are in the facilities. Naturally we had PPE requirements. If you come into the facilities you had to have your masks on, you had to have covering.

Tanise mentioned earlier about the number of people in an animal room. Obviously, the animal rooms aren't that large, so we didn't want folks to schedule times to go in and to manage animals if the caretaker was in there changing cages. In some cases we had more than one caretaker that would typically in normal circumstances be changing cages in one room. It couldn't happen because of our population density. So it took longer.

And we had to break our shifts so that we ensured all of our animal husbandry teams weren't in the building at the same time. So we split the shift half and half and gave them opportunities to circulate in and out.

What did you guys do, what kind of questions do you have, what were your thoughts? How did you protect individuals in your facilities? Ramp down happened quick and ramp-up happened slow. The idea is when the risk was high for infection and all of us, frankly, were in a period of we don't know what's going to happen, what is the infection rate and how is this going to impact us. So we shut it down quick. And then we ramped it up very slow. We're still at only 60% capacity at U of M, and we're managing social distance and managing the number of people in spaces.

We don't plan to increase that anytime soon, especially since cases of Covid seem to be increasing across the country. There are a lot of concerns with folks saying that we're not going to ramp back down, are we? And we would like to think at U of M that we have it managed and you probably do also, and you are doing Covid testing and you have a handle and you can do what you need to do.

Hopefully we're not forced by the government to make cutbacks again. But, anyway, let me stop for a moment and pause and give you guys a chance to weigh in and let's get some communication and discussion going. What specific things that you want to talk about -- what specific things did you do that worked for you. Let me kick it out to you guys.

Susan: A participant had a question of who your monitors were.

Bill G: We had to get volunteers. It was not hard. There were folks that were willing to do it. We actually had an associate dean monitoring a door at one point in time. She came in and said - I'm happy to take my turn. These are people that were familiar with the U of M and they were people that just stepped up to the plate and volunteered. We eventually got away from the door monitors and started using an app that was later built at U of M and everyone had to get on the app and log in in the morning and once they did their symptom survey, they'd get an icon on their phone that they could simply hold up and show to -- particularly environmental health and safety as they were going through the facilities and trying to make sure that we were enforcing or at least adhering to our pandemic restrictions to ensure personal safety. So it wasn't difficult to get those monitors.

Participant: Bill, certainly that was the case. We actually did that in phases at the University of Michigan and the Ann Arbor campus. So the initial coordination with facilities as well as our Department of Public Safety and Security S). Initially, when we were getting things off the ground, we did have DPSS monitors for building entry. And to do that access. And then eventually once that was established, we did determine that it was something that we could do, manage, and evaluate numbers and evaluate cases and contact tracing and then DPSS was taken out and we brought in volunteer personnel. But, once the app occurred, it was essentially go through the app, that gives you your permissions as long as you're on our master list of being allowed to be on campus.

Bill G: And this goes to the participant's point and to the communication tree that we developed. It's important because those folks are two parts of the IOs or the Vice President for research's communication team. They were at the top and they filtered this down. So it was a

very strategic plan put together. It was a day-to-day discussion and a day-to-day process and, you know, every little bump sideways caused a correction moving forward. So we would have to do something to correct and eventually it got us to where we are and as the participant said, it definitely was a phased process. And I can comfortably say that the phase occurred from March and it's still ongoing right now. And so we're doing tweaks to our systems and our processes.

Participant: When you look at the calendar now, we had designated ramp down and we had designated ramp up and designated reengagement and designated hold fast. We had designated all of these phases and looking at the calendar in hindsight, these phases did not make any sense. It changed every week.

Bill G: Happened every day -- I would have the I.O. meeting and then I would have a staff meeting the other directors and they'd ask me for an update, and what is the point, it will change -- it probably changed before now. So that's how -- well, we used the word nimble the last time, but that's how nimble the programs had to be. We had to be prepared for the new curveball or the new thing that was going to come down the road. And we were. And it was just a process and it took a lot of people, a lot of players in the game, very effective communication is the key. Because everybody needs to know what's going on.

I will tell that you we were very strict. We had one PI that -- one in particular that did not play by the rules. And our Vice President for Research politely said - you're done, you're not coming back on campus until all of this is done. And that was the public hanging that basically told everybody that this is the way that it's going to be. And you'll follow the rules.

Participant: And, Bill -- if I may -- that gave our office, that gave a lot of the other administrative resources and departments - a collaborative approach to where we had a standard set by leadership. I think that was incredibly insightful and proactive on behalf of our university leadership. But that's reflective of our state government and culture. I mean, we at Michigan had a kidnapping plot within our local politics. And all of those components. I see the comment that a participant wrote about her state. I think that is particularly helpful to not only gauge your local culture, but to kind of what are the individuals going to tolerate and what is your leadership going to represent in that way. And that is something strategic on behalf of our offices. Like, look, we cannot have misinformation, disinformation, and lack of standardization. It just needs to be -- we don't know what the answer is yet, but when we do you will hear it from this source and that's what we're going to go with. That was something that we had in the research community. And that involved transparency as well as bringing in from the PI level all the way up to the department chairs and deans, we needed to do that. Because Michigan is too big of a place where a little dissension will ruin the whole thing.

Susan: That makes me think of having a good culture. And you guys you build public support. That's what OLAW has always hoped and USDA too, I think, that there was a culture of compliance and a culture of cooperation in our programs.

Participant: It worked out really well and especially when you had to go on campus to do your semiannual inspections or to do a site visit in the middle of the summer, it worked out really well. All of the labs had already posted on their doors what their capacity was, and how many people could be in their rooms and so forth. So we were able to manage it that well because from the leadership down and the deans and the directors and the PIs were told, have your SOPs ready. Have exactly the space, and how many people can be there. I heard from other people they didn't put that posting on the door so a lot of people just didn't know what their densities were and didn't know how many people could be in a room at one period of time. So I think it worked out really, really well. The challenging part is like Bill said it changed from hour to hour. So keeping up with the FAQs and the changes was something that our staff had to keep on their toes in order for them to actually to communicate back to the research community whenever the questions came in via email or phone calls or whatever. So it was a constant communication amongst the staff and I think they did a really good job of really communicating back.

Bill G: Yes, I think that one more point that I'll add from March until August we had the opportunity to develop a fairly solid system that then allowed us to test on some outside visitors. We're not the only one that has gone through an AAALAC site visit under pandemic restrictions, but it helped us to prepare for that site visit. We brought our site team of eight in and we were able to split them up and talk to them a little bit about how we are doing with the pandemic restrictions and what things looked like and what we needed them to do and they were very cooperative. And they did everything that we needed them to do. But, actually -- I know that most of you have gone through a site visit. The first thing that you do is to go through your program description. Usually sitting around the table and we did that via Zoom. We hooked up with the AAALAC team and we had the document available and we all looked through it.

Again, managing the concerns and the safety of individuals, not just from those that are on campus all the time, but also visitors. I will share that when the site team came in, one of the things that we had to do was to remind them of the clothing and the protective equipment. And they obliged and did what we asked them to do. So it went well. So I don't know how long pandemic restrictions are going to be going on, but I know that AAALAC is shifting to ways to do this under restrictions. So if you have a site visit coming up, use the times that you are experiencing right now and the practices that you're putting in place as a practice session and think about how you'll do it when your visitors from out of state come in.

Currently, some states require a Covid test, a clean Covid test, two days before you enter the state. I know that all states are different. But Pennsylvania just made an announcement that if you go out of state that you need a negative Covid test 72 hours before you're allowed to come back into the state. So these are the things that you need to think about as you have visitors coming in on campus. What are their histories? And for that matter your campus folks.

One of the other things that we did is eliminate travel during periods of our restrictions. No international travel all the way and then we actually limited and for some time prohibited any

national travel. Again, with the idea to not expose our staff to multiple circumstances where they could bring Covid back to the U of M campus and spread it amongst our staff.

So tell us a little bit about your institutions. So you have heard from participants about U M. And I have seen chats pop up with similarities. But who wants to talk about the things that you have done that are unique to your situation but what things are working well for you? give us some ideas.

I think that it would be important too for those people that are going to share, could you give us the kind of idea - are you medical school heavy, research heavy, ag school heavy, and small institution in terms of the research world? Because that's something that I'm interested in is learning from a diverse spectrum.

Participant: we are from the a HBCU School of Medicine in. We have very similar programs where we have the daily symptom tracker. And early on, the rotation of teams was implemented where we have for those non-essential, they're like in blue and green teams and that all of that was with the capacity of the buildings and how many people can be socially distanced and at the same time in these places. For us with essential personnel, we have an orange sticker and so we show a sticker and then we go through a station where they take our temperatures, see that we did the symptom tracker say and then we're okay to work.

One of the things that was a big hiccup when you work in any institution is understanding that it is not the same to be essential for public safety and facilities building as being essential for the animal facility. So they kind of sent emails out about when things could have happened or a storm happened and say, everybody is working remotely today. And never once put a line saying that essential personnel report to their supervisors. Now, we know better than that and everybody shows up and is working. But we are aware that we have are squeaky wheel in every planning meeting to add that line that says that essential personnel need to report to their supervisors. Because when you say everyone needs to work remotely or shelter-in-place, we're all part of the institution, so those little notes - I'm being added to all of your plans. And spelled out completely, this is important. Now we have those plans for our department and they are included. But when they put out complete communications, I think that they forget to mention those little things for all of the essential animal personnel. So those were the things that at the beginning were a problem

Now it's understood and everybody knows what to do. Plus, we have to do testing every seven to 10 days and it's a self-administered Covid-19 test and we do the symptom tracker, whether we are on campus or not. So far, luckily the whole team has been healthy. So we are very grateful for that. But it's a very comprehensive plan.

And we also had our AAALAC site visit back in August. One thing that I wanted to do share -- although we keep social distancing, with my staff and some of the lab people that had to come in, we did a practice where I, as the director, and the manager, were the visitors

and we even practiced how many people needed to be in a room. The distance to keep any, if you were to ask questions and tell them to show me something -- how they were going to do it to practice, like, who gets in the elevator. Who gets into this room and into this lab and how you'll guide the safe teams. So we made a route that the visitors needed to follow and then rooms were set up for them to sit with the program review and they will communicate through the screen and Zoom into us. We were located either remotely or in another room, if it was a member of the facility.

And then we had a back-up folder with the program review and any document in case the technology failed, because it can happen. And they were very grateful for that. Because they say that they had experiences where technology was just not cooperating. And previous to them visiting our campus we also shared with them all of measures that they needed comply with, like to be tested three days, 72 hours prior to campus entry and they needed to follow the policies on campus and all of the PPE they needed to have. So it was very successful. I think that practicing safely, if you can, helps a lot. And make that map. Because we even made a map of what elevator we were taking and what rooms we were going through. And it was like a radio telephone thing with the labs, they're coming your way, please be ready. Two people per lab so they can evacuate anybody that was extra and allow the visitors to safely walk through their facility.

Bill G: That's perfect. And I'll add -- we did a lot of what you did. But one other thing that we did too that may be overlooked, we empowered our staff that they have the authority to tell, for example, the AAALAC site visitors that you're too close, you need to wait. No two, of you can't go in this room. We wanted really to demonstrate that we were taking it seriously and it didn't matter who you were, if we got to a room and let's say that it was a euthanasia room and it was only able to accommodate one person -- if both of the site visitors wanted to see it. One would go in and when that one came out, we would allow the other one to go in. So the practicing and that conversation and just getting ready for the site visit, simply because you're dealing with people from out of state. More than one person at U of M saying that these folks are coming in from we don't know where. And some are coming in from maybe areas that have a higher risk of Covid infection than we have here, and we want to make sure that we're able to do what we need to do and to ensure our protection.

We actually had one PI that did not want to participate in the site visits. So we made arrangements for the team to do a virtual visit of their lab. And the site visitors got online with them and talked to them and they were shown around via virtual systems so they could see her areas. So, again, I think that it goes without saying, all of you guys know the remote processes that we have put in place to ensure our own personal protection and that's everything from remote IACUC meetings to biosafety meetings and to facility inspections, to everything that we can do from a remote location. And it's all in the idea of decreasing the personal contact which, obviously, from spreading the infection philosophy cuts down the risk of us cross-contaminating each other.

Participant: Bill, I will add to that having the feedback if you have outside visitors that come in, it is important to keep in contact with the outside visitors and whether or not they have come down with anything later. And then the feedback, the loop back and forth to the institution is really important, because you've got all of these people in that came from different states and making sure that there's that tracking mechanism as well.

Participant: Our university of just had their AAALAC inspection as well. We're an ag institute, non-medical -- mostly a lot of behavior research and we also have an ag site and some off-site campuses. Our essential personnel they wear a device around their neck that vibrates when they get within six feet of somebody. [Laughter] It's cool. And it's calculated that if somebody is comes down sick they know who they've been in contact with.

We made our site visitors take a Covid test before arrival, asking they had to have a negative Covid test. We have this pain in the neck thing that comes through every night at 3:00 am, a symptom tracker that comes via email since I monitor the university a lot, it's a pain because it comes on at 3:00 in the morning through email to tell your symptoms and whatnot. Obviously, you don't have to answer it at 3:00 in the morning, it just happens to ping my phone at 3:00 in the morning. But we have symptom trackers, along with the fact that if you're an essential employee you have to have a negative Covid test done every two weeks on campus. But everything else that the others have brought up, we have the same thing. I just wanted to add that we're non-medical and ag facility. I guess that -- obviously, it's big as NIH, down the road from us.

Participant: about how many personnel, staff, is that? How many trackers do you guys have on that? That's an interesting and really fascinating program.

Participant: I don't know -- I'm not an essential employee so I'm not one wearing one. I'm obviously at home. But I do know that the animal care staff and the veterinarians and any researcher that is deemed an essential employee has to wear one of these trackers and for a short time, the athletes were practicing on campus - they too had to wear them as well. I don't know if they wore them during practice but they had to wear them once they left the practice fields. But as of Monday our whole campus shut back down again. So we're back to where we were back in March.

Susan: Bill, you better keep an eye on one of your staff, because he wants to combine these with shock collars. [Laughter]

Participant: Whoever doesn't wear a PPE gets shocked.

Participant: They do vibrate. I don't -- I don't think they shock but they do vibrate.

Participant: Didn't a company come out with something early on too? I don't know - someone saw it on TV - it was a watch. If you got too close to your neighbor, they could trace it and do contact tracing as well.

Bill G: Now remember when we're dealing with animals we're emphasizing positive reinforcement. So we should try to treat the humans the same way. [Laughter]

Susan: My Apple watch has given up on me. It doesn't even try to get me to do steps anymore. Now it just reminds me to breathe [Laughter].

Participant: I tell that you it would make IACUC meetings run more efficiently, that's for sure. [Laughter]

Shock collars. You are going to have even more trouble recruiting members.

Bill G: Okay, anyone else have anything to share? Any other thoughts? That's a lot of comments that were coming in and I wasn't able to keep up with them. So I don't know if there's questions there or not.

One of the questions that I had posed - a couple of people had responded was just kind of how are people managing the upcoming fall and winter holiday breaks. You know, a lot of institutions -- it looks like one participants institution thought proactively and started a semester early so they sent everyone home after this week. Which I thought was kind of interesting. And with fewer personnel, vacation days, kids in school, there's a lot to consider there in the next couple of months. So just curious as to if anybody had a unique situation or solution as well?

Participant: Yes, at our institution, usually people would take off a lot during the summertime. So at the end of the year, we they have leave they have to take or lose. And we were so busy during the summertime trying to ramp the labs back up and getting personnel in. So the animal care staff had to work a little bit harder. Now we're at the end of the year and these employees have leave they need to take or they lose it. So now I'm juggling schedules around now trying to make sure that we have enough coverage. I don't want people to lose their leave but it's just kind of where we are right now. So we're working through Christmas and Thanksgiving and you may have wanted Christmas off but you will probably have to take more time at Thanksgiving off to keep everyone staffed. But we're working through those same kind of issues.

Bill G: Are there any smaller institutions where, you know, every individual basically wears 30 different hats at the same time, -- Tanise, you mentioned that. But I've got to imagine, you know, there's got to be some unique situations.

Tanise: our numbers are going back up in Florida. So we had already set our Fall semester that the week before Thanksgiving everybody goes home and now we're looking at do they stay home. And when they do transition back in January, what is that actually going to look like or

are they going to stay home through spring break so those are the options that we're talking about now. And also are we going to have quarantine areas for students on campus. The tracking thing that is good because people are going off for the holidays and we know that come January it's going to be not a nice situation. So we're looking at more locations to be able to house students who are positive. And I've been on a Covid call since early March, so, yeah, I'm really done here with COVID-19.

Bill G: I'll second that, Tanise.

Participant: We're not a smaller institution, we have cancelled spring break. They're starting this semester a little bit later and they are giving students sort of these random days off that will equal the five days they would have off during Spring break. And you can only imagine the consternation this has caused amongst the students. Following the students on reddit right now is sort of humorous. But we also proactively -- nobody is coming back to the university after Fall break, after Thanksgiving break. Those exams that need to be still be done, final exams, are technically all online even if your class was in person.

Susan: I read a wonderful article the other day by Tony Fauci and I don't know if I can find it again. But he talked about assigning -- figuring out for yourself what your risk tolerance is. And so he said, that if you are a 50-year-old parents who are healthy and active, 50-year-old parents of college students, you may have one risk tolerance for your kids coming home and if you are, you know, 65-year-old parents of college students and you have a 90-year-old grandma living in your house you might have a different risk tolerance. But he explained it in such a nice way saying that there's no such thing as zero risk. Because all of us have to figure out what tolerance we have for risk. And then we think about how to mitigate that risk. And so if the kid coming home has a Covid test, you only know that they're safe until then and so if you want to have them use a separate bathroom or, isolate in the basement or everybody at Thanksgiving might have different serving tools. It's really a detailed and thoughtful explanation for families of how to think about managing their students in and out of the home. Very nice. So maybe you can do a google search for that.

Bill G: You know, another consideration is that we move toward the vaccine becoming more available and tweak the schedules of who gets priority for vaccination. Institutions may want to consider the essential personnel and their animal care needs programs as receiving a higher priority, along with the medical personnel. Because a lot of these people are actually, you know, the veterinarians and the vet techs and the animal care people are supporting COVID-19-related research, still looking at ways of finding better treatments and continued vaccine development. I'll use animal models. So I was curious if anybody has had those discussions and looking forward yet in your institutions. Maybe a little bit premature for that, but it's certainly something to keep in mind and to raise with your institutional official.

Wayne: Yeah, we have not had those discussions yet Bill, but I won't be afraid to bet that if we start ramping down again and we continue to see the uptick in cases that all of us will probably start thinking about that. Especially if there's talk about shutting down states in the country,

per se, as most people being at remote locations when they're working. It's hard to say. But that's a good point to remember for future discussions for sure.

A participant mentioned that at the hospital where she works many of the medical staff are participating in two clinical. So that's a wonderful thing if you have staff -- essential personnel staff -- that are involved in those trials. The only thing is they don't know whether they got the placebo or the real thing until the trial is over and they find out. And I assume they will get the real vaccine after if they got the placebo during the trail. That doesn't really help them.

It's been interesting to watch everyone bring their personality to their reaction to the vaccine. You know, some of our friends are going to be the first one in line and others are never going to get it. And every shade between.

Bill G: Okay, any other comments? I don't have more to offer. I'm happy to answer questions. You know, we're still focusing on personnel safety. Did we miss anything? I have a few caveats. I know that at U of M, we gave people six Covid days. You know, we had to deal with folks that - parents that are taking care of kids because their schools shut down and we had to accommodate needs. So not only did we have to deal with people having access on campus, but we had to manage their availability off-campus. And the time they had to work remotely when they had children that they were trying to teach at home. Or taking care of maybe parents or maybe a spouse that is sick. Or all of that. So that kind of played into our plan as well. You know, with us trying to, you know, accommodate the needs of our staff.

Susan: That's a wonderful thing, Bill. I think that we've heard that a lot of programs have been very flexible with their staff, both those working remotely as well as those coming in as to when they are giving them the flexibility to come in at different hours. So they can still come in. Even though it has to be at a different time when they might usually do their work.

Any of the faculty members have any final comments?

Wayne: I just made a -- I put in the chat a shameless plug for Dr. Nicollette Petervery's article in ILAR Journal.

And other staff at OLAW jut published an article in the lab management magazine that comes out about how to find staffing in times of staffing shortages so that's another good article that could be looked at. Thank you, Nicolette.

Susan: You can find those articles on the OLAW website. Okay, it strikes me how incredibly hard all of you are working. And we've always known that this community is a very dedicated and hard-working community. You have just really exceeded yourselves during this pandemic crisis. So I'm glad that you were here today and that we had a chance to see you and to speak with you. And I hope that you'll all remember to take very good care of yourselves.

We had one last question that just came in -- and I will open it up just real quick -- because we're getting towards the end. The participant asks - did anyone make any changes to their

existing disaster plans based on what they learned from this pandemic? And if anybody has made any changes that they'd like to share we'll open it up for that real quick.

Participant: In my meeting with my boss next week, I'm bringing up shock collars. [Laughter]

Susan: A participant mentions that she's going to do an update based on information that she learned today. That's very gratifying. Thank you for telling us that. And it is our hope that you will not let all of this hard-earned experience slip away. Just find a little bit more energy and get it documented.

Bill S: Yes, I want to second that. That's one thing that is really important. We have all been tied up, but we have to do our work from a day-to-day basis. So whenever this is all over and at least when you get some time, take a look at your disaster plan and update your pandemic section. Because you probably have more to add to it now than you would have ever imagined and you have some ideas and plans that you can better formularize, and so if you have to deal with this again you are prepared for it.

Susan: We had a question last time about is it okay if it's in SOPs? Yes, certainly. It's okay to document it any in any way that works for you just get it written down so you don't lose it. Don't you agree, Bill?

Bill S: Yes, we have heard from others that they take photographs of things that you have done. Signage that you have put up. Those are just great ways to prevent people from having to reinvent the wheel - that are going to deal with this down the road in your facility. So, again, we have heard a lot of good lessons during this session. Thank you all for sharing. Asking good questions. And so I would remind you **now** take those lessons that we have observed and make them lessons learned by incorporating them in your disaster and contingency plans so that you're better able to deal with the future pandemics. I hope that we don't have them, but, unfortunately, they and natural disasters are predicted to continue to occur.

Again, as Susan said, thank you all for your dedication to animal research. You know, I think that you all and all of the folks in your facilities are animal research heroes. And, you know, that's bringing the solution -- animal research that we're doing is vital in bringing the treatments and the vaccines forward. As well as all of the other advances in biomedical research. We thank you and continue to thank all of your employees for what they're doing. Also I want to thank all of the faculty members for participating today and preparing for today and responding to questions. And also I want to thank Susan and Erin for their behind-the-scenes work and organizing this Zoom session. Again, thanks to everyone for participating. And your dedicated service to ensuring good science and good animal welfare and the health and safety of all of those that you work with in the animal world. So I'll turn to Susan for any additional comments and to close us out.

Susan: Well, I just have a couple things. If you have filled out our pre-survey, please do fill out our post-survey. And all of you, whether you filled out the pre-survey or not, please go back

and fill out the demographics survey. We're trying to develop a new, more nimble, more inclusive and responsive style of education. And we need this information to build a better product and to continue to fund what we're doing. So these things that you do are very valuable to us. We want to keep doing this for you and we need your feedback to help us to do it well. We have these meeting transcript reports that we're working on and where we have slides and those include the slides and when we have resource sheets, they include the resource sheets. So please do scroll through the web page and find that information. If you can't find it, send me an email and I'll help you.

I see that a participant is asking could he have a list of the participants? No. Because we are the federal government and we have privacy laws. So, no, we can't distribute that. But you guys have a connection with IACUC Administrators Association and they have email addresses for everybody. So, surely, you can all find one another and get in touch and we encourage you to do that. And I think that this is the third time I have attended a recent webinar on disaster planning and managing Covid. It's the 10th one about managing Covid.

And the thing that comes out in every single one is that you need to be nimble and you need to communicate. And you need to be honest. And that really seems to me to be the most important parts and pieces that you need to continue to function well. If you have ideas about what we should do next or anything that you want to tell us in addition to whatever you put in your survey, send me an email. You can use my [ICARE.SERO@gmail](mailto:ICARE.SERO@gmail.com) account. And with that I think we're finished.

End