Elyse Sullivan: All right. Let's get started. Thank you for joining our sessions on After Hours Conversation: Update on the Implementation of the New NIH Data Management and Sharing Policy. My name is Elyse Sullivan. I'm your moderator today for the 45-minute session. I am presenting today, we have Dr. Cindy Danielson. Cindy is the Associate Director for Systems Integration in OER's Office of Research Reporting and Analysis. We're also joined by Taunton Paine. Taunton is the Director of Scientific Data Sharing Policy division within the Office of Science Policy here at NIH. The format today includes a presentation from our presenters followed by some time for Q and A from you all, so let's get started.

Taunton Paine: Great, thank you so much for that introduction. I'm Taunton Paine, and I'm joined by my colleague, Cindy Danielson, today. And I'm going to start by giving you an overview of the policy and what it expects, and then I'll turn it over to Cindy to discuss some of our plans for implementation before we get to discussion. And I just want to note really quickly that I won't be able to see your chat or the Q and A until the end of the session, but we'll try and get to it then. So why does NIH want data to be shared? There are many benefits of sharing data, but there are several reasons that are emphasized in the new NIH Data Management and Sharing Policy that I will highlight here. So first, sharing data can help to advance the rigor and reproducibility of NIH-supported research by enabling the validation of research results. Sharing data also has the benefit of making high value data sets available for additional research questions that were not considered in the original study with the potential to sort of accelerate future research directions. And last, making data available, and especially when it is made available in a form that is findable, accessible, interoperable and citable, increases the opportunities for citation of researchers' work and for collaboration between researchers. In addition to these scientific reasons, another goal of sharing data is to promote public trust in research. Sharing data helps to foster a transparency and accountability in the research we support and demonstrates good stewardship over taxpayer funds. There's also I think an ethical argument that responsible data sharing helps to maximize research participants' contributions. And last, that data sharing policies always present an opportunity to sort of articulate or to reaffirm appropriate protections and practices for sharing research participants' data. So NIH has a long history of promoting data sharing, but the Data Management and Sharing Policy that NIH published in October 2020 was in development for many years, and it resulted from an iterative process of consultation and engagement with various stakeholders. So NIH first announced its intent in 2015 to actually change the 2003 Data Sharing Policy. And in 2016 we issued an RFI on strategies for data management and citation. And the feedback on that RFI was used to develop another RFI on proposed provisions of a draft policy, which was published in 2018 for public comment. And feedback on that RFI was in turn used to develop a full draft of the policy which was published for public comment in November 2019. So we got about 200 public comments from a variety of different stakeholders on that draft policy, but at the same time we also started a formal tribal consultation specifically on the draft policy in which we organized through multiple meetings with tribes in different areas of the country to discuss and obtain their input on the draft policy. And the draft was also taken up by the Secretary's Advisory Committee for Human Research Protections who offered several recommendations for improving it. And after careful consideration of the multiple rounds of public comments, the tribal consultation and SACHRP's recommendations, NIH revised the draft policy as described in the preamble to the final policy. And if you haven't read that, I do recommend it if you're interested in understanding what the difference is from the draft to the final were and what the reasons were that we made those changes. And we published it in October 2020, almost exactly 1 year ago. And the policy will actually take effect for new and competing awards on January 25th, 2023. So now I'll give a kind of quick overview of what's in the Data Management and Sharing Policy itself. So the policy is very straightforward in that it only has two basic requirements. So first it requires submission of a data management and sharing plan for all NIH-funded research, whether it's supported by grants, contract, cooperative agreement, or is conducted by the Intramural Research Program. And this plan will generally describe how, where and when the data will be shared as well as some other details that I will talk about. And I want to point out that this is a change from the current overarching Data Sharing Policy here at NIH, the 2003 Data Sharing Policy, because the 2003 Data Sharing Policy only applies to applicants who are seeking $500,000 per year or more while the new policy applied regardless of funding levels, so there's no funding threshold in it. And second, once an award is made and the plan is approved by the funding NIH institute center or office, compliance with the actually approved plan will be a determining condition of the work. And we're serious about compliance, and the policy states that compliance can affect future funding decisions. So as I mentioned earlier, the policy will take effect for new and competing awards that are submitted for the January 25th, 2023, receipt date and going forward, at which point for those applications, it will replace the 2003 Data Sharing Policy, but we are not there yet, so the 2003 Data Sharing Policy is going to stay in effect. And we also published three supplemental information documents alongside the policy that are I think really intended to sort of help people understand the different provisions in the policy and to provide some additional detail. And these include supplemental information describing the elements that should be in a data management and sharing plan, allowable costs of data management and sharing, and desirable repository characteristics, and I'll discuss these in more detail later. But going back to my sort of original slide about the goals of data sharing, the purpose of all of this is really to try and foster a cultural change towards greater data stewardship, where data management and sharing are viewed as integral parts of the research process, and are really adequately planned for from the beginning. There are several other aspects of the policy that I think are important for the community to be aware of. So first, and central to understanding this policy, is that the policy applies to all NIH supported research that generates scientific data. And scientific data is specifically defined in the policy as being the "recorded factual material commonly accepted in a scientific community as being of sufficient quality to validate and replicate the research findings, regardless of whether the data are used to support scholarly publications or not." And I want to emphasize this notion of quality and sort of validation and replication of research findings. There are certain things however that are excluded from this definition, such as preliminary analyses, peer reviews, and any physical objects such as biospecimens. So this policy is not creating an expectation to either tell us or to share physical objects like human body specimens for example. And I also want to point out that there are potentially certain activities that do not generate scientific data, and these will generally not be subject to the policy. So for example, some forms of infrastructure development may ultimately not be subject to the policy. In terms of timelines, the policy expects the data should be made available no later than the time of publication, or might be end of the award for unpublished data, whichever comes first. And in terms of how long data should be made available for, the policy doesn't provide a specific timeline, but it does ask applicants to consider requirements that they may be subject to from other sources as a minimum timeframe from making data available. So for example, many repositories set expectations for a minimum timeframes that data will be shared for, as do journals. And NIH awards also has sort of records retention requirements that come with them, so typically 3 years for grants or 6 years for contracts. There's also a number of additional expectations that I'd like to draw your attention to, especially because many of these represent some changes that were made from the draft policy to the final version, often in response to public comments that we received or sort of input from other sources as well. So first, I think, you'll note that the policy requires only the submission of plans and compliance with those plans. It doesn't directly require data sharing, but it does expect that in drafting their plans, applicants will attempt to maximize appropriate sharing. And of course because these plans become binding, awardees will be held to what these plans say. But the policy describes three categories of reasons why sharing may be limited to some degree, specifically for ethical, legal or technical factors. So while all scientific data should be managed, not all scientific data must or can be shared, and sharing should always be responsibly implemented. And the policy and the supplemental information expect that plans will outline now research participants' privacy, rights and confidentiality will be protected in data sharing. It's also important to note that existing laws, regulations and policies will all continue to apply. There is nothing in the policy that changes expectations under, for example, the Common Rule, or HIPAA, or the NIH Certificates of Confidentially Policy. But it's also worth noting that some NIH Data Sharing Policies will actually continue to apply as well, such as the NIH Genomic Data Sharing Policy. And in general, the policy emphasizes prospective planning and calls on applicants to consider when they're drafting their plans, how they will communicate what they're proposing to reach those participants as part of the informed consent process, with the goal of avoiding situations where applicants propose something to NIH in their data management and sharing plans only to find later that prospective participants would be unlikely to agree to it. And last, the policy also encourages applicants to really consider whether access to human data, even if de-identified, should really be made available only in a controlled manner, so through for example a controlled access mechanism. So as I mentioned earlier, NIH has provided information both in the policy and in associated supplemental information about what data management and sharing plans should look like. The policy is clear that the approach to data management and sharing that is described in the plan should attempt to really maximize appropriate sharing, while also trying to be consistent with the FAIR principles, so findable, accessible, interoperable and reusable. Plans should also be updated throughout the award. For example, as a result of changes in scientific direction, a change in the intended data repository or a timeline revision, but these are intended to be fairly concise documents and generally should target two pages or less. In the supplemental information, NIH recommends several key elements for data management and sharing plans, so first there should be a general description of the type of scientific data that would be expected to be generated and the amount. And the example that we actually provided in the supplemental information itself is, 256 channel EEG and functional MRI images from 50 participants. There should also be a description of the modality of the data, such as imaging, genomic or mobile device data, as well as a description of the level of data aggregation and processing. It should also indicate which of these data will be preserved and shared, including the rationale for this decision, and should really describe any accompanying metadata or associated documentation that will also be shared. Plans should address related tools, software and code that will be needing to access or to manipulate shared scientific data by providing the name of the tool or software and how they can be accessed. And standards that will be applied both to scientific data and any accompanied metadata should be described, for example, by stating the data formats, data dictionaries, data identifiers and also data documentation. In some cases, there may be no commonly accepted standards for the scientific field in question, in which case plans really should just indicate that there are no consensus data standards. Plans should also provide detail on data preservation, access and associated timelines. And this is where the selected repository can really be indicated, and should include information on how data will be made findable and accessible, including through the use of persistent identifiers, which is something we're very interested in seeing people use more of, and maybe closely related to the features of the repository itself chosen for the project. The fifth element should actually describe the access, distribution and reuse considerations including any factors that might limit data access or availability to some degree, such as the informed consent or the need to protect research participant privacy. This is also where plans could sort of indicate whether access to data will be controlled, and I want to again remind you that the policy encourages researches to consider controlling access for human data even if it's de-identified. And last, the sort of final element should include a description of how compliance will be monitored at the institution and who will have that responsibility. In terms of the method for sharing data, the policy is clear that it strongly encourages the use of established repositories rather than, for example, retaining a copy of the data to be made available upon reasonable request. We heard from the public comments interest in sort of understanding how to select an appropriate repository and what NIH would think would be an appropriate one, so we provided supplemental information on selecting repositories that sort of provides desirable characteristics that they should have, such as the use of persistent unique identifiers, availability of metadata and sort of quality assurance processes along with many others. We do also make available sort of separately from this a list of NIH supported domain or program specific repositories, as well as some kind of generalist repositories, but this policy does not require the use of any specific repository. Nevertheless, NIH institutes and centers and offices or specific programs may go beyond the policy and sort of designate specific repositories. And indeed, we may have other policies that may continue to exist beyond the actual implementation date of the Data Management and Sharing Policy, such as the NIH Genomic Data Sharing Policy that would point to a more limited set of repositories or to a specific repository. So with that I'm going to turn it over to my colleague Cindy to talk a bit more about the supplemental information, and to then go into the implementation of the policy.

Cindy Danielson: Great, thank you. So we've also provided supplemental information on allowable costs, highlighting what type of costs can be considered costs of data management and sharing allowed in budget requests. And those costs that are allowed in budget requests will include things like curating data, developing supporting documentation, reserving and sharing data through repositories and local data management considerations. Costs that cannot be considered part of data management and sharing include infrastructure costs, which would typically be included in indirect costs, as well as costs associated with the routine conduct of research. Next slide, please. Now I want to give an overview of how data management and sharing plans will be submitted and reviewed. The details described here apply to Extramural Grant Awards, but there will be analogous requirements for other types of funding such as contracts. The policy expects that plans outlining how scientific data will be managed or shared will be submitted with the application for funding, and specifically as part of the budget justification section. In peer review, the peer reviewers may only comment on the proposed budget for data management and sharing, but these comments will not impact the score. The plans themselves will undergo programmatic assessment by NIH as determined by the proposed institute or center. After an award and as a project progresses, plans should be updated by researchers and assessed by NIH program staff during regular reporting intervals or sooner. Then once an award is made, compliance with the approved plan will become a term and condition of award. Compliance will be monitored at regular reporting intervals, and mechanisms and tools to support oversight are currently under development. The policy states that compliance may factor into future funding decisions, so institutions will need to take these plans seriously. Next slide, please. We are in the midst of our implementation activities with just over a year to go before the new policy goes into effect, and I want to highlight a few areas of consideration that we are working to address. In addition to continuing to reach out to the community to understand any implementation challenges, we're also working across NIH to implement the policy in a way that will work for all types of science, all institutes and centers, and the NIH staff and external organizations who will all have roles to play related to data management and sharing. A large part of the implementation effort is working out the technical approaches to support this policy, so we are developing approaches and workflows to implement the policy in a way that will help to advance the rigor and reproducibility of NIH supported research. In terms of how the plans will be assessed, we are focusing on determining the appropriate roles, responsibilities and processes by which NIH, institutes and centers will assess plans. In terms of the monitoring for our compliance, we are working to determine what information and tools are needed to help ensure that awardees adhere to the plans that were approved and that the community has access to any data that should have been shared. And again, since the policy allows for noncompliance with the approved plan to affect future funding, monitoring institutional compliance will be important. All of this certainly involves system changes, so we are working to define those requirements for enhancing our award management systems, and developing tools both for the community and NIH to support the entire process from submission of plans to the programmatic assessment, all the way through monitoring for compliance with the plans that were approved and updated as things change. We are also considering approaches for posting some plan information publicly to ensure that they are useful to researchers looking to find data generated through the use of NIH funding that may have been shared. We want to do this in a way that encourages researchers to share reusable data and adopt good data sharing practices. So we are making sure to engage with data science colleagues across the NIH and in the community as we consider how to link out to repositories, employ persistent identifiers, and promote fair data principles. We are also developing resources for the community and NIH staff so investigators and institutions will be prepared to comply with the policy and staff will be well prepared to provide oversight and guidance for the community. And with that, I will turn it back to Taunton to talk more about some policy considerations during implementation.

Taunton Paine: Great, thank you. So as we work to implement this policy, NIH has been engaging the community to sort of understand implementation challenges, which will inform the development of things like additional supplemental information and other resources to prepare the community to be ready to implement and comply with the policy. So these include things like FAQs, which I can talk more about if there's interest in that. We are also conscious of course about how this policy may interact with other NIH wide or institute center and office specific data sharing policies, and obviously I've been talking a little bit about that interaction, and the bottom line to it has been that they will continue to apply, but certainly we are considering how to harmonize processes and expectations under those policies and sort of across multiple Data Sharing Policies to really ensure that we are decreasing burden and simplifying compliance to the maximum degree possible. And I just want to say on this one particular point, for the Genomic Data Sharing Policy stay tuned, we are actually focusing on efforts to sort of harmonize these two, and we should have some more news about that soon that we can share, and hopefully very soon I think. And as planning for sort of responsible data management and sharing becomes kind of a routine part of research, I think understanding the cost associated with that management and sharing will be needed, and NIH plans to develop resources to sort of help inform appropriate data management and sharing costs. And we said in the preamble to the policy that we would sort of monitor plans, and of course because people are expected to report cost and budget we will eventually be I think in possession of pretty good information about what kind of different aspects of data management sharing costs and we intend to collect that. I think our efforts in this space will also sort of ultimately be informed by the National Academies of Sciences, Engineering, and Medicine report on forecasting costs from last year that was produced with NLM support, and a more recent workshop that they held actually earlier this year on the sort of culture of data management and sharing. And we are also focusing on sort of developing approaches for incentivizing good data sharing practices to help facilitate this cultural shift of making findable, accessible, and interoperable and reusable data available sort of by default. So part of this will sort of involve considering various approaches for how to sort of cite and reuse shared data appropriately. And this is something I think we're particularly interested in, and I want to point out that this last point really I think goes beyond what I think the policy is sort of specifically expecting and probably has sort of roles here for people who are not just NIH to participate as well. So I think there's a number of kind of questions that we're thinking about, and we're always sort of interested in people's interpretations and what they're sort of concerned about and what they're thinking about. So I think in particular what we really want to understand is whether there are places or parts of the policy or parts of the current data sharing landscape at NIH that you find to be sort of especially administratively challenging, and whether you're aware of sort of strategies to help address these kinds of challenges. Whether this sort of specific resource is, certain types of guidance, training or tools that you think will be really valuable or sort of important for investigators and also institutions to sort of successfully implement the policy. Whether there are kind of mechanisms that can help incentivize fair data sharing and encourage data citation. And I said, this is something where we're very interested in. And sort of beyond NIH policy and implementation, what other actions you think might be necessary to achieve this sort of cultural change that's envisioned by the policy. So this is just a list of the different resources that we have here. OSP does maintain a website that has a number of things like old versions of the policy in case you're interested in seeing its evolution over time as well as the policy itself and multiple supplemental information documents. And of course we maintain an inbox and we're always happy to sort of answer questions after this as well too. So maybe with that I think I may end the presentation part of this and maybe we can begin sort of switching over to the discussion session.

Elyse Sullivan: Great. Thank you so much, Cindy. Thank you so much, Taunton. It looks like we have time for a few questions. And if folks have a minute to reflect on those discussion points that Taunton put up, go ahead and put some of your reactions or some of your comments in the chat or in the Q and A while we're starting these other questions and we can get to those as well. So the first question is about applicability, "Do training grants like T32s count as generating scientific data?"

Taunton Paine: That's a great question, and I think you'll notice from the policy that we haven't explicitly clarified what codes are subject to it or not. But I would just say sort of stay tuned because this is an area where we are hoping to provide further guidance on what exactly falls in and out of the policy. Cindy, did you want to add anything more about that?

Cindy Danielson: That sounds good. I would say we generally would not expect that training grants would be subject to the policy, but do stay tuned to more detailed guidance so that it will be more obvious as you're making plans for an application whether or not you need to include a plan.

Elyse Sullivan: Wonderful, thank you. A question about timing, "If at the end of the award the data is unpublished but my publication is in preparation, can I delay my data sharing?"

Taunton Paine: So that's a great question, and we haven't offered guidance on this specific point yet. I think the policy is pretty clear that data that underlie findings have to be shared by the end of the award as they haven't been the subject of a publication yet. But I understand the challenges in this and wanting to make the data available while the publication is in preparation, so this is a good point and I think this is something we can I think look into further and perhaps think about what might be allowable here.

Elyse Sullivan: More of a technical question, can you define a little bit more what is a persistent identifier when you were talking about fair data?

Taunton Paine: Actually, I think Cindy might actually be able to offer the sort of best definition here.

Cindy Danielson: Sure. So persistent identifiers, there are multiple types of this, but essentially this means it's a unique identifier of some sort. It could be numbers or letters to identify something, and that something, and most of what we're talking about here would likely be a data set that is available, but there are also persistent identifiers for individuals and many other things. The idea especially what the persistent identifier for a data set is that there is just always a place to point to and that does not change, so what's underneath it might change, but there's always one location. And so when you're talking about making data shared and usable you need to make sure people can easily find that data. So persistent identifiers are an important part of that idea. Anything to add, Taunton?

Taunton Paine: No, I think that's right.

Elyse Sullivan: Great, thanks. Can you elaborate on how researchers will be expected to report in progress reports after their plan has been proposed and they get the award, what kind of monitoring activities are going to be required?

Taunton Paine: So I'll actually I think refer this one to Cindy.

Cindy Danielson: This is one area where we'll certainly have more guidance as to what to include, but we expect that at least on an annual basis when you're doing your RPPRs that there will be a designated area to report on the progress and really implementing your approved data management and sharing plan, and reporting on did you do what you said you would in terms of any timing, if you anticipated you would deposit the data at a particular time in a certain repository. Then you will have the chance to say what you've done, and that will be assessed in terms of looking at compliance with the terms and conditions of your award more generally as well.

Taunton Paine: Yeah, I would just add really quickly to that also. I think there's a second part of this question that's actually a pretty interesting one about whether we'd include DOIs in the progress or sort of final reports. So in the data management and sharing plan we are asking people to report what sort of persistent identifiers they intend to use, and we do also say, I don't think I mentioned this during the presentation, but we do also say in the policy that we may make data management and sharing plans publicly available. And that's something we are very interesting in doing, and so to the extend that they can include things like DOIs that would help people then find the specific kind of products of research, that's definitely something we're taking a very close look at.

Elyse Sullivan: Thank you. I think you mentioned that this was still in development, but can you talk about how NIH is going to monitor if people are really are really doing what they say they're doing and accountable for, does the data go up there and then come down when the award is done? So what can you talk about in terms of compliance?

Taunton Paine: Cindy, do you want to take that?

Cindy Danielson: Sure, I can start and talk about, a lot of this really is that we're expecting a lot of thought and detail in the plan at the outset, so we expect that researchers and intuitions have really thought through their plans on, "What type of data will I be generating? How much will there be? What will be a suitable repository? Does it make sense to share? Is that appropriate?" And so that they really would have considered that before their award is even made. And so then after an award is made, they really have a good outline of what they need to follow. And of course things will change during the course of a project and everyone will have ample opportunity to update that as more details emerge and as things change. So in terms of compliance, really checking whether people are following through on that, we'll have more specific guidance, but in a general sense, at least on an annual basis during the annual progress reporting time, the POs are going to be looking at what was entered and reflect on back to the original plan that was approved, saying "Did they make adequate progress? Is there anything that's holding them up? They said they were going to deposit data in the repository, if that hasn't been done is there anything there needs to be addressed??" And so I think that probably is the best answer we can offer at this point, that there will be really well thought out details in the plan so everyone knows what to expect, and then the PO and the awardee can work together to make sure that nothing is getting in the way of helping them achieve that. Taunton, anything to add on that?

Taunton Paine: Yeah, going back to the last point a little bit about making data management sharing plans public, I think there's also the sort of outside sort of compliance mechanism to an extent, also because people may be working backwards from a publication or from something they find about a grant and trying to find data. And if the plans are available and they sort of include things like DOIs or at least enough description that people can sort of understand what data sets should have been made available, I think that these are sort of one more tool that people can use to make sure that people are actually doing what they are saying they are doing.

Elyse Sullivan: Are there any specific considerations for the small business awardees in terms of privacy and proprietary data?

Taunton Paine: Well, so I'll just say really quickly about that, so the policy lays out three factors that people should really I think consider very carefully in drafting their data management and sharing plans, and that would be considered acceptable factors for limiting sharing to some degree. So ethical, legal or technical factors. And the law does provide certain types of small business awardees the authority to withhold data sharing for a certain period of time.

Elyse Sullivan: You mentioned that the plan is not part of the scored review criteria, but part of a U54 center may disseminate data, and so will that plan in that case for the U54 be evaluated for scoring? Will that be a scored criteria?

Taunton Paine: I don't know if Cindy maybe also wants to jump in on this, but I would just say that I think historically when data sharing is part of the sort of proposed research, we said that we want people to really think about this as being sort of an integral process for all research, but there may be some proposals for which that is the proposed research project, and you can't really assess it without also considering that. I think historically that's been permitted in the past, but Cindy, I'd like your views on that too.

Cindy Danielson: Yeah, that's right. And this is not for everything, so that's why we didn't focus on that here, but in those cases where the data sharing is an integral part of the research, then we would expect most likely that that will be addressed in the research strategy, for example, and that although the data management and sharing plan is not going to be a score criteria most likely, it will be part of the overall research strategy, and so we'll certainly be offering more guidance on that, but yeah, basically what has happened already under previous policies was we still expect that when it needs to be a scored element, then it will be, just not directly looking at the plan.

Elyse Sullivan: Great. And can you speak a little bit to requirements for sharing personally identifiable information or other sensitive information?

Taunton Paine: Yeah. So this is really important. So what the policy says is that it expects that as you are writing your data management and sharing plan that you will attempt to ... the default stance will be to maximize appropriate data sharing, recognizing that not all scientific data can or should be shared. And those three factors that we mentioned, ethical, legal and technical factors would very much I think come into play when we're talking about identifiable or potentially sensitive information. Now, I think we also say specifically, we want people to address how they are going to protect the privacy rights and confidentiality of research participants whose data they are planning to share. But I want to point out also that just because data have some potential identifiability, just because there may be some sensitivity does not necessarily mean that there is no way to share it. So for example, there are many repositories at NIH, for which there is controlled access, as in data comes in, but people can only access it after providing a data access request that gets reviewed by a data access committee to ensure consistency with the informed consent and that appropriate privacy protections are in place and things are de-identified, and it's protected by a Certificate of Confidentiality, which is a special legal protection that prohibits disclosure in response to things like court orders and law enforcement subpoenas. So there are a number of measures that can be applied to sort of maximize appropriate data sharing. And I think we would really want to see people considering those as they are sort of thinking out these plans. But there is nothing in it that says, "You must share identifiable or highly sensitive information about research participants."

Elyse Sullivan: Thank you. We're almost out of time. One more question about costs. Do costs of data sharing, can this be included in our regular direct costs?

Taunton Paine: Cindy, do you want to take that one:

Cindy Danielson: Sure. And yes, so there's the supplemental guidance that talks a little bit more about what costs might be related to data management and sharing, and those that are specifically parts of data management sharing, it's possible that those would be requested as direct costs. Other things might already be handled as institutional overhead. But yeah, certainly in some cases we expect that certain types of costs would be direct costs.

Elyse Sullivan: All right. I think we're about at time. I want to take the time to say thank you, Taunton, thank you, Cindy, and thank you to all who attended. Please let us know in the session feedback area of the conference site how you liked the sessions that you attended. There is an area for overall conference feedback, so please let us know how we did there. And like we mentioned, all of the transcripts, the videos and the slide decks will be made available in a central place that will be e-mailed out to you as they are uploaded. So give us a couple of days to get them all up there, but we want you guys to have all of these materials to take with you. So with that, I'll let you guys enjoy your evening. Thank you so much for joining us.