Transcript

>>Good afternoon or good morning, depending on where you are. My name is Mike Davidson. My pronouns are he/him/his. I'm a Librarian at the Office of Engagement and Training at the National Library of Medicine, and I'm joined today by a panel of my colleagues, including Associate Director for Library Operations Dianne Babski, Deputy Associate Director for Library Operations Amanda Wilson, and Dr. Dan Cho of NLM's Medical Subject Headings team. Also supporting us today are my colleagues from OET, Kate Majewski, Michael Tahmasian and Brittney Davis. Thank you all for joining us today for our second NLM office hours special listening session. We're going to begin with some brief remarks from Dianne Babski and Dan Cho, but the bulk of our time today will be for your comments and feedback.

We have a limited time today and we want to hear from as many of you as possible, but before we begin, I do have just a few housekeeping procedures to go through. We've disabled chat during the presentation portion, but we're going to enable it following the open remarks, at which point we encourage you to send any feedback and comments you have to everyone to ensure all of our panelists can see them. I'll read those messages aloud to our panelists so that they can respond. We'll also-- we're also eager to hear some of your voices today. We started off the session with everyone muted, but if you would like to share your comment verbally, please use the raise hand button and we will call on you to unmute. Finally, today's listening session is being recorded and we plan to post the recording following today's session. If you would prefer your voice not to be included on the recording, please consider sharing your comments in chat instead. We will also be talking about other ways to share feedback with NLM throughout today's session. Everyone who registered for today's listening listening session will receive a notification when the recording is available, as we did for the previous lessening session. We will also be generating a report aggregating and summarizing the feedback provided during the session and we'll be posting that alongside the recording. You can also, as always, keep an eye on the NLM Technical Bulletin, which will be updated with a link to that recording. And without further ado, I'm going to now hand things over to Dianne Babski.

>>Thank you, Mike and hello everyone. And for those that don't know me, first of all sound check good. Let me just check in and make sure.

>>You sound great.

>>Fabulous. Thank you. I need to follow your cue there, Mike, and checking on that first again. For those of you who don't know me, I am Dianne Babski. I'm the Associate Director for Library Operations, one of the major divisions here at the National Library of Medicine and Library Operations is responsible for the MeSH vocabulary product, including updates and the annual review cycle. As many of you know, we closed out our editing of the 2023 MeSH cycle and conducted the year end processing to ensure inclusion in PubMed. So this is an opportune time for us to have a little capacity to have an additional listening session for feedback and Dr. Dan Cho is with us again. He, as Mike said is lead on our MeSH product team and he will be sharing

some of the highlights from this last round of MeSH and our process updates. He will be driving most of today's overview before we open the virtual floor for comments from to hear from all of you. So next slide please. Thank you.

And just as a reminder, today we are here to listen. We recognize the value of MeSH vocabulary and its impact on our users. We use mesh in several of our NLM products, most notably our flagship product MEDLINE. We also recognize that MeSH is used by a variety of stakeholders in many different ways. Beyond NLM and other MEDLINE distributors, we have heard that other products like Wikidata, the Cochrane Library and ExLibris are eager to MeSHfy or MeSHify their resources using MeSH terms. So with this in mind, we're eager to update and modify the MeSH vocabulary to reflect the literature and consider the needs of our users with the goal of improving findability and discoverability across biomedical resources. MeSH updates are made through a variety of collaborations with many stakeholders. We are proud to have partnered with our network members and the library associations like MLA for focused feedback. We hope listening sessions like today's will inform future decisions, and we thank you for your time. So, without further ado, I'm going to hand things over to Dan Cho.

>>Thank you, Dianne. Hello everybody. My name is Dan Chou and I'm the content lead and project coordinator for Medical Subject Headings, or MeSH, it's the flagship NLM product that's been making a global impact since the 1960s. I'm very excited today to share some of the 2023 updates and take you behind the scenes to highlight some of the changes that are relevant to this group. Next. So most of you, I realize, were in the first session and then are familiar by now how MeSH production works, but just to be on the same page, let's review some of the key points from our first session. So most changes in MeSH are made based on new and evolving developments in the fields as reflected in their literature. So as part of the NIH, we must also consider its priorities. And finally, we evaluate suggestions from new users very carefully. So another point that-- next.

So another point that I want to make is that MeSH has three products, descriptors and subheadings and supplemental concept records or SCRs and they are updated on a different cycle. So for descriptors and subheadings, they are updated and released annually. Whereas SCR is created and updated on a daily basis and whatever they make, changes that we make, we release them to the public in a variety of data format. Next.

So we get a lot of submissions to change and add to new as MeSH product. Typically we get about 700 and we try to follow a consistent, thoughtful and deliberate process informed by stakeholders. And update our terminology. We typically have 7 cycles. Currently we are between batch 3 and batch 4. And each and every request that comes to us are assigned to a subject matter expert that we have in our staff and the assigned staff member will draft a recommendations for review by the MeSH review committees twice over. Next slide.

So you know this is the key point on determining what makes into MeSH and we don't take this very lightly and we always rely on data. So if you request something to be added MeSH and

then we do a search with the synonyms and whatnot. If it appears more than 100 times in the title, then it'll make it if we didn't already have it. If it's less than 100 and very low, let's say let's say 5 to 10 in the title. Then we most likely will not make it unless it's a subject matter in the areas that our SCRs can cover. So we have-- remember we have 4 SCRs and a brand new SCR that I'm going to introduce later on in the talk. So we have chemicals, and protocols, diseases, and organism, and we've just this year added population group as Type 5. Next.

Another way that we add MeSH-- to the MeSH vocabulary is through projects. So oftentimes we initiate a project as a request from NIHIC to identify and harmonize with their authoritative sources. So for one example, we've worked with the NCBI taxonomy to have our terminology related to organisms updated and we introduce SCR Organism as well. Another way that we actually initiate a project is to find gaps or underrepresented concepts in the fields. So there are two examples that we've done. For example, we've done rare disease SCRs and last year we also I think I we highlighted that we added SDOH or social determinants of health related concepts. And then the last perhaps minor way to initiate a project is to highlight an emerging field. So for example, we worked on PFAS or per polyfluoroalkyl substances, so-called forever chemicals that's been contaminated at a war source. Working with the EPA scientist. We also just initiated a terminology that may be useful space to space medicine as well. Next slide.

So here. Some concrete examples of what we did in 2023, so Long COVID was a clerical terms that everybody had been used and we had it as an SCR and we in 2023 promoted to a descriptors. But instead of a Long COVID, we heard from various NIH scientists, including Dr. Fauci, that we should be using Post Acute COVID-19 syndrome. And of course we obliged. We also heard the good news from NCBI taxonomy that elected Bacillus genus famous for probiotics has been updated, and so one genus of Lactobacillus, I think it became my last count, like 30 plus genera now. So for example Lactobacillus salivarius now is known as Ligilactobacillus salivarius. Next slide.

So since the last listening session MeSH actually finished out our planned multi year harmonization of US population categories consistent with the Office of Management or OMB terminology. MeSH is now 100% consistent with the OMB as mandated, and we further introduced cosmopolitan population group categories largely based on geography. So we have African people, Asian people, Korean people, Caribbean people and European people. And in addition to these newly created population group that are relevant to population group outside of United States as well-- Next.

We also introduced a new type of SCR, that we call Population Group SCR or Type 5 SCR and these are ethnic minority terminologies or Native American tribal names. So we collected all the terms that we potentially wanted to include in MeSH from various primary sources that we trust and are familiar with, such as the State Department, Census Bureau and BIA, and from those terminology, we got rid of any what we thought were derogatory or terms related to caste system. And we adopted, by and large, the ending people. So instead of just saying German, we say it's German people, for example. And we also try to include their self-described

terms. So whatever they want to call themselves, right. And this was particularly important for the Native American tribal names. And we also heard from various people that when we work on something like this, we need to include as broad a spectrum of subject matter experts as possible as early as possible, and there was really really good advice. So we reached out to NIH scientists and researchers and many of you from the network actually participated in this and your contacts outside of an NIH scientist who work on this on a day-to-day basis. Next.

So this is sort of summary of all the SCRs and how they actually distribute according to their content. So from Africa we have 438 SCR, Type 5 SCR. So these are population groups. There are African tribal groups, ethnic groups for Asia we have 349, for North America, we have whopping 798. This is because we have many tribal groups names that are federally recognized, and we wanted to include all of them. So for Australia continent we have 48 SCR, but we also added one new descriptors at the last minute. Next slide.

So just as we were closing up our Batch 7, we heard it from a librarian association from Australia and they requested the new descriptor to be added Australian Aboriginals and Torres Strait Island peoples. And we sort of struggled with what the correct terminology was. And so we're very happy to hear from them and they did a fantastic job of explaining what-- why this terminology is what they wanted. Meaning the native people in Australia wanted, so we happily added and all the external members happily contributed after the close of the Batch 7 and we were able to add it and officially this was the last descriptor that we added to the year. Next.

So another change that we have made since the first session is that we have now a running list of descriptors that we worked on in batches, and then they're all finished, they're all reviewed, but they-- and they're ready to be introduced come November, because that's when we cut over our descriptors. So you can find it in the what's new in MeSH page. And this is just a screenshot of what we have done thus far in batches 1 through 3, I think. So we can check it out. I think the URL can be dropped in the set box later on. So how do you reach us? Next.

So the best way to reach us with your wonderful suggestion is to write to us through NLM Suggestion Portal, so that way you can actually count who's sending us. And how to get back to you if we had any questions, specifics on your suggestions and we highly encourage you know you can fill out as much as you want in this help desk and the more the better for us. But you can just say, I mean I think I actually gave an example with PFAS, the original request was it you know it didn't have a name, it didn't have a subject, it didn't have my e-mail or whatever it just say add PFAS to MeSH and of course you know we obliged, but the more you put it in the better because you know sometimes we need to get back to you and ask questions like what do you exactly mean on your suggestions? And we really appreciate for more suggestions that we can incorporate into MeSH. So I think that's pretty much it for me now. I think I'm going to hand it over to Dianne.

>>OK. Thank you. For some reason I'm clicking on my video and it's not turning on, so I'm not sure if somebody overrode that as an option here, so maybe that's why Dan-- there we go. I'm

back on here I am OK and Dan's back too. All right, so thank you, Dan. I appreciate that. And so I'm going to stay here for a second on this, that the help desk and I just wanted to address this as well and you know, Dan did mention submitting some suggestions to the help desk and we have heard some feedback and we are looking at our customer service processes and evaluating. We can do better especially with updates on submitted suggestions and I just wanted to remind everyone that you can submit year-round online, you don't have to wait for any particular review cycle. So we are eager to hear your thoughts and suggestions for the MeSH vocabulary. So the chat is on and open, so feel free to go to the chat. And I also wanted to direct your attention to the chat because while Dan was talking, some amazing librarians were putting URLs into the chat. So do check that out as well. All right, next slide please.

And so I really do, I hope that you can see from this update we heard suggestions and we implemented feedback in the 2023 MeSH updates and our processes. As I mentioned earlier, we're at a really good inflection point right now to open the floor for suggestions going forward. So with that, I'm going to hand the mic back to Mike, who's going to help moderate the chat. So go ahead, Mike, take it away.

>>Thank you so much, Diane, and sorry about those little video glitches that we had. I see we already have a couple of comments coming into chat, but more than likely I would imagine that folks are still entering those comments right now. So while you're typing in your comments, I would encourage you to, as I said feel free to continue posting those things in chat or if you'd like to make your comments verbally, you can use the raise hand button and we can call on you to unmute for those who do want to make comments verbally, I would also mention that we do have quite a number of folks here with us today who want to participate and we'd like to hear from as many people as possible, so please keep your comments to think as much as possible. And one last thing as you are probably aware, unfortunately sometimes when you log into a Zoom meeting, your full name may not appear as it usually does. Sometimes it's initials or a username. So if your Zoom name is just showing as initials or a username, you may want to use the rename option to add a more complete version of your name so that we know who we're talking to. All right. I think that's all the preamble out of the way. So while people are typing in their comments, we had a couple of folks sending comments ahead of time and one of them was Violet Fox, who also has their hand raised. So Violet, I'm going to call on you right now. And if you want to unmute and sort of speak your comment right now, please do so.

>>Yes, I'm here. Thanks, Mike. I appreciate it. So my name is Violet Fox. If folks don't know me, hello. I'm new to medical libraries. Although I'm well experienced in general libraries. So I just wanted to share this idea that my cochair Colleen Moleski and I have had about something called a SACO funnel. And this is taking a page from the LC review process, the library coverage review process. SACO is the Subject Authority Cooperative program and so Colleen and I have started a new SACO funnel that is specifically for medical topics within LC, within LCSH and other vocabularies. And we're really hoping that medical libraries will like. I will also think that this is a valuable resource. So SACO funnels are essentially just places where library workers can

collaborate together. There's no-- there's not a lot of formal structure they might have-- we might have monthly or bimonthly meetings where we talk about ideas for improving, you know, improving MeSH in some way and you know we don't wouldn't have any, you know, official authority through NLM or anything. But it is a good way for people to get together and talk about what might work. We hope that some of the you know--NLM gets 700 suggestions every year and we hope that we might instead of getting all those individual and you know suggestions that some of the suggestions that come from this collaborative SACO funnel might be a little bit more thought out or might be more, you know, have more to say about some of the structural impacts that one change can make. We know that these are, the MeSHs, are really complex beast, right? The hierarchies. So I would just like to encourage people to if they wanted to get involved in this, to leave their e-mail address and we can tell you about when our first meeting will be scheduled in March 2023, and we're excited to see what potential things could come out of it. Thank you.

>>Excellent. And Mike, I'll just jump in here real quick and I wanted to thank Violet for reaching out and making that suggestion and happy to hear more about how that would work and you see our 2024 MeSH suggestions. So kind of interested in how that would move into a funnel for review. All right. With that, I'm going to let Mike direct the chat. Go ahead.

>>Thank you, Dianne, and thank you very much, Violet, for that. We have a few things coming in, in chat already. A lot of questions, we're eager to hear your feedback as well. So I would encourage you if you have comments or feedback to send those in alongside any questions that you have. We had one question though from Kate Nyhan. I hope I'm pronouncing your name correctly. Where can I direct suggestions that aren't about terms per se, but about what MeSH terms should be part of ATM for certain searches, i.e. changes to entry terms. And Dianne, I think you wanted to handle that one.

>>Sure, I can certainly take that. So thank you, Kate. And so I-- what we do is we suggest that you write to the customer service, to the help desk, and what you might not know is that there's-- when we get questions in, our frontline people go in and check off where these things should be directed to. So they actually go routed straight to our product owners for the suggestions and to implement things or to reach out if we need additional information. So customer service is the way to write in suggestions for that.

>>Thank you for that. And I want to sort of tag that as a related-- there was another question that was sort of related from Lee Tillson here about ways to make suggestions for additional MeSH headings to be added to an article. That's sort of what we would think of as an indexing issue or an indexing error or oversight if there's an article that hasn't been indexed the way you would expect it to. Again customer service is a great place to send those. All right, let's take a look at who else we have coming in here in the chat. We have a question here from Naomi Bishop. Does NLM work with any other federal libraries or agencies? And obviously, that's a very broad question. NLM works with many federal libraries and agencies. But I think

specifically in the sense of relating to MeSH Dan, that might be something that you can elaborate further on. I know you talked about that a little bit already.

>>Sure. I mean we constantly work with any association that actually formally engage with us and other libraries and librarians. Yeah. So I mean, for example, I mean, we recently worked with the dissecting aneurysm and that was because there was a consensus committee who, you know, from UCLA were saying that you know what we have was outdated and we needed to update it and I looked, we looked at it, and looks to be proper and we went with the consensus committees decisions. So we are always working with other librarians and other federal libraries.

>>Thank you so much, Dan for that. Now it looks like we have some other folks who have their hands raised. Naomi Bishop. You have your hand raised. I'm going to click the button. That should allow you to unmute. And if you want to go ahead and make your comment.

>>Yeah, I'll just elaborate on that. I hope you can hear me. I think that it would be really important for the National Library of Medicine to work with the Smithsonian, the Bureau of Indian Affairs, any law or legal groups, because a lot of legal history around medicine and tribal communities is all, you know, kind of at a helm, there's certain names and recognitions and treaties that have things about healthcare and health information. And so I think it would just be really important for the folks at NLM to really reach out and work with groups that are known to have done a lot of work in these areas and organization of tribal names and tribal communities and even, you know, language and linguistics of spelling, because if if we're going to get this right, it can't just be taking in, you know, 574 nations as we integrate them in, we need to make sure the entry terms and everything else is going to match. Because if you write something and you say, you know, Pima, that's not a recognition from my community as a Akimel O'odham. So we need to make sure that we're going the actual steps to make it right and not just OK in doing you know, population groups and there's been a lot of research done on my community. There's been a lot of, you know, NLM and NIH and, you know, Department of Health and Human Services work in those communities. And in order for them to be able to, you know, distribute this information, it needs to be organized and findable and accessible. And it's not. You can do the searches in MeSH. You can do the searches in NLM, but the information is everywhere or not even accessible. And so I think that is really my pain point with NLM saying we want to, you know, update MeSH, but we're only going to go so far as putting in one name or one thing and not actually have consultations with tribal groups or even through the BIA working with Deb Haaland and her offices there. They have tons of information from the environment to, you know, ecology, everything, the federal forestry services, there's so many federal agencies that could be working together on this and that should be happening from a medical library standpoint of you have hired people in your office to take on this, you know, big task of organizing the information. It's not just a one and done sort of task.

>>Thanks, Naomi. Thank you very much for that comment. I don't know Amanda or Dianne, if you had something that you wanted to say?

>>So thank you. Good afternoon, everyone. And Naomi, thank you very much. I just want to echo what Mike said. Thank you for that comment. In terms of-- I think what I got a lot from what you were saying is there's already a lot of information out there and how can we work to crosswalk and link those things and MeSH and also make sure that what we're doing in MeSH is working across the federal government is that along the lines of what you were saying?

>>Yes, but also it needs to be done within your office. You need to hire indigenous people to also help with this. You need to diversify your, you know, indexing staff. It's not just a computer or an algorithm or AI that can do this work, that doesn't mean anything in my language. And so I don't think you're taking into consideration, you know, the complexity of this task would involve linguists. And you know, lots and lots of elders and different things. If you want to make you know, things accessible around health and health information You're not just doing this one step. Oh, we're going to connect all the dots. It can't be done just like that. It needs to have, you know, an office or a group or a, you know, several people from several different agencies that are getting that terminology connected. That is getting all the health information connected. I mean, there's been no mention in NLM or anything about Indian Health Services and how that terminology is different than, you know, research in tribal communities. And I would love to have some discussions specifically on that terminology and what that means to people and how is that not even helpful sometimes because there's lots of harmful history around IHS and what it continues to do and it's not trustworthy. So I think that's where we need to have more complex conversations and not just leave this as oh, we've done it. We've updated MeSH.

>>Thank you. Thank you and thank you for highlighting that last piece of your comment that I didn't pull out and that was bringing the people into the conversation, whether it's what I just heard you say was, you know, considering hiring in our office, but also having conversations across agencies at IHS. We also have a tribal health research office here at NIH. So I'm hearing you. It's it isn't a one and done. It isn't a solvable by machines. So I'm hearing you say conversations and people around the table, and this is a long term endeavor.

>>All right. Thank you, Amanda, and thank and thanks for that, that great discussion. I want to just try to go through a couple of other people, bounce around here a little bit to not make sure that everybody gets a chance to be heard. One thing that I did was just want to touch on really briefly was Aditi had a question regarding retrieving MeSH records with MeSH in PubMed or retrieving other records. I think that that's probably more of a question related, sort of a training related question which is a little bit off topic for today, but I would refer you to a lot of our other PubMed trainings. Our PubMed office hour or-- excuse me, our NLM Office Hours series of which PubMed is as a regular topic. We will probably be having one coming up in March. So if you are somebody who has specific PubMed questions or questions about how to do things in PubMed, that's what those office hours are designed for. So stay tuned to the Technical Bulletin to see the new announcement of new office hours opportunities where you can come and ask exactly that kind of question. Or as always, if you have a sort of technical

question about how something works, customer service is always a great place to send those as well. I'm going to look through the other chat questions or comments here. Let's see what I have missed.

>>Hey. Hey, Mike. I'm just going to follow up on Kate's.

>>Sure.

>>Follow up to her ATM question. So I see the ATM issues with health disparities. So we actually have some of our PubMed staff here and I think we'll direct that to them to look into for you. But thank you for following up and giving a little bit more information.

>>Great. Thanks for that. Yeah, I was going to circle back to Kate in just one moment. Let's see what else we have. There's-- All right, there's a comment here from. It looks like from Tracy, given the overturn of Roe V Wade last year, please consider revising the terminology surrounding abortion spontaneous in MeSH to pregnancy loss. There are numerous obstetric and gynecologic terms, pregnant women versus pregnant people that should be -- also be made more inclusive and in line with current trends.

>>Yeah, I'm happy to address that. So, Tracy, thank you for that. Umm, we are working across NIH for guidance with that as well and these are a couple of areas that are in our-- they're on our list of things to review given some of the changes that happened. So thank you for that and we are reviewing those.

>>All right. Let me just take another quick look through the chat here. And actually I didn't want to go back to the same person over and over, but it looks like Lee has their hand raised. Lee, I'm going to let you unmute here. And if you want to make your comment verbally, you can go ahead and do that.

>>OK, well, I've posted basically two things. The first is that it really would make sense to me if the International Classification of Diseases was added, whether as a mesh, as MeSH headings or something else. It just seems to me that given that World Health Organization is organizing all these medical concepts in that way that it could be very helpful to patients who, especially who may be familiar with their diagnosis but may not be familiar with the MeSH headings and researching PubMed and details to find information about whatever their diagnosis is. And it also would make sense to me if instead of librarians having to come up with all these new concepts, especially given that the librarians themselves are not actually treating patients, I assume for the most part it would make sense to have treaters more involved or organizations of treaters more involved in coming up with the concepts to find things. And it's just a footnote if in fact some treater, because I think all the organization of ideas is here to make information easily accessible for treaters and patients. If in fact the treater or patient had difficulty finding the information in PubMed, is there some procedure that could or is looked at or is used to see what can be done to make it easier to access the information? Thank you.

>>Mike, I think I can address the first part and I'm going to let somebody else on the team address the second part, so. I think it was Lee, right? So Lee? We have the meta thesaurus, the Unified Medical Language sources, which are about 245ish medical and biomedical vocabularies and it's part of our thesaurus. And we do map MeSH to a lot of the clinical terminologies in there. So things that happen in ATM you know somebody goes in and types something like heart attack, it maps to cardiac infarction and stuff. So behind the scenes the ATM is mapping to many of these terminologies without having to use MeSH, you know, as defined and and looking things up. But it-- there are mappings going on and much of the clinical terminology is included into the ATM lookup tables as well.

>>And I would also tag that something actually Naomi Bishop mentioned in chat, which is always a great resource, always a fan of our librarians pointing folks to our other resources. MedlinePlus being obviously a great, the NLMS, one of NLM's fantastic consumer health resources, which many of those health topics are also integrated into-- integrated in some way into PubMed by pulling up PubMed articles relevant to those topics based on MeSH. So there is MeSH integration going on in ways to help clinicians and patients research more about these topics, but also to help those patients and families get access to health information that is a little bit more consumer friendly. So hopefully that addressed Lee's points and I want to circle back one moment here because there was another-- we're juggling a couple of different threads of conversation here. But I think that that's great. Mary Hyde was sort of talking, wanted to add on to the pregnancy topic that we were talking about before when reviewing the information about pregnancy and pregnancy loss the American College of Obstetricians and Gynecologists, ACOG are also included in the conversation. So I think that that's also an important point to bring up there. Let me take another look through here and see what I have missed. This one actually just came in, so I'm going to-- while I'm looking back through what I've missed, I'm going to read this one out. Luciana says, I think it's important to think about a revision in MeSH descriptors about disability and persons with disabilities to be more inclusive and or more human centered, since MeSH as it stands is seen by this community as having only a biomedical view, ignoring the social aspects about them.

>>I'm going to refer to Dan. I'm not sure where we are in revising some of these sections in MeSh. So Dan if you could.

>>Yeah. I mean, I think that those two areas, the disability groups and gender related terminology are the two population groups that we are definitely hoping to finish working on this year.

>>Thank you for that, Dan. And I'm actually going to go right back to you because there was another sort of question from Kate, again from Kate Nyhan. I'd like to ask about the criterion of a word phrase showing up 100 plus times entitles of MEDLINE index papers. I noticed that airborne transmission and aerosol transmission both meet that criteria, but there's no subject heading for that concept. I guess that this 100 plus times criterion is not a criterion that routinely triggers consideration, but rather a criterion that NLM staff check into after a

suggestion has been made. So essentially, once you're looking once, you've already had a suggestion come in, Dan, you're looking at that 100 threshold as a determination of whether that's a suggestion that should be acted on is that, is that a correct interpretation?

>>That's a correct interpretation of what she wrote. I think there are multiple ways that we actually systematically look into and monitor what terms and phrases and concepts are emerging. And we have projects where in we are closely monitoring. I mean I think airborne transmission is one thing that I mean we have, you know terms not exactly that. But I mean we have a respiratory aerosol and droplets and when you use that descriptors and work with the respiratory disease and I think those coordination captures the airborne disease relatively well. I don't even think CDC actually has airborne disease as a category. So you know, clinical terminology as it appears by and large, when you know when we're talking about ICAT10 and SNOMED CT and MeSH, I mean we cross talk to each other, we have mappings back and forth many times over. So you know whatever is missing is, you know, deemed as an unnecessary or redundant in my mind. But you know, if you formally ask us to look more closely, we'll definitely do it. Do go to the NLM customer services and fill in-- fill out the request and we'll dutifully look at the terminology request.

>>And I would just add on to that to Dan's response that you know periodically we also go through trees or sections and just do, you know, reevaluations of them over time as well. And, you know, that's another thing that we're always looking for, suggestions for what's working and what could use a good review after so many years. So keep that in mind as well.

>>Alright, I'm looking through the chat here. I may have missed one or two, but if we-- if you made a comment earlier and we have not addressed it yet, please feel free to to enter that back in just in case I missed it in my review. Especially also if you have not made a comment yet, we we're obviously eager to hear from other folks as well. I'm just going to look through and see we actually had one other comment that was another comment that was submitted beforehand before the session into our customer service system. This one is from Gervin Boloman. I hope I'm pronouncing that correctly. I'm not sure if Gervin is in the room. Somebody who basically is saying that they regularly use the MeSH Sparkle endpoint which is MeSH RDF, our link data version of MeSH to find matching terms and conditions and likes the linked data view and it wants us to surface the capabilities of this sparkle service, this MeSH RDF API more in our trainings and in our other views and as somebody who is working on training my most of my job is in the training office, I think that's a great idea. We've definitely been working on increasing our training on technical topics and on topics that are sort of maybe things for a smaller, more niche audience, but also that can have a big impact like things like access to our APIs. Just late last year, we did a new webinar about accessing data via APIs. So that's always a great place to look. We mentioned MeSH RDF in that. So we sort of got a jump start on that there, but obviously there's always more work to be done, so we're always eager to hear what type of training people are looking for and to engage with that as well and see what we can do. Obviously, we can't satisfy every request because there's just not enough hours in the day to to

give training on everything that everybody wants training on. But this is a great example of something that we already-- we definitely want to look into more and find the appropriate venue to do more highlighting of MeSH RDF, which I am a huge fan of myself.

All right. Let me take a look through the chat and the hands and see if I missed anybody. And actually while I wait here we go. In the yet MeSH updates information, is there a way to discover preferred terms which have moved to a different tree? These really affect explode behavior and save searches, which I assume-- when I assume a term is going to be captured, but isn't there anymore right? Because sort of to tag on to that, the-- for those who are not aware of the sort of explode behavior that Krista is talking about that's referring to how when you are searching for a broader term. The results with the narrower terms are also included, and if the terms move around from tree to tree, that can be a little tricky. I think this is something that actually came up in our MeSH Highlights webinar as well. Dan is that is that something you can speak to at all? If not, we can something we can certainly look into.

>>Yeah, I think we have a fantastic Data Discovery team now and that they can generate these data really well. And I think you know we have sort of relatively limited set of reports that are posted. But I mean if there are any specific ones. Do send us-- do send NLM a request and then we can look into adding anything that you know tree, tree change report and then post it. And that will be appreciated.

>>Thank you, Dan, for that, for pointing that out. And let me just take a look throughout. And yes, Krista says in chat, a tree change report. Yes, I will send a request. So excellent. We're making some things happen here today. We are getting towards the end of our time and I want to make sure that I address everything. Oh, and also my colleague Louise has put in the Technical Bulletin article that describes that new report feature that Dan was just describing. If you want to take a look at that, that's a good place to go to see some information. Yeah, and as you know, as Dan said and as we've said, this is a newer feature. So we're still working out the best way to do this as our first year offering these. So obviously, there's there's room for improvement and getting that feedback from you is is really important. Oh, and Krista says the new reports are marvelous, and I love them all right, so I don't want to. I don't want to just concentrate on Krista's comments all the time, but it was a nice thread there.

All right, I have another comment here. Let me see. I had it here a moment ago. I really appreciate the attention people, both external and internal to NLM, are given to the headings for population groups, making sure they are appropriate. Do you measure how well these terms are working in terms of retrieval? I wonder if it's important to study questions like does the current subject indexing process help readers discover papers with data about population subgroups, even if the subgroup analysis is not explicitly highlighted in the abstract? So obviously that is a specific question, sort of focusing on a specific version of the Do we measure how well our changes to MeSH and our changes to indexing are helping in terms of retrieval?

>>I'm not sure if Dan wants to answer that. I think we rely more on feedback when we are looking for something we do some targeted research looking at some of the searching and things like that. But it's kind of hard to see you know what people were actually looking for and what you know actually they clicked on and whether the correlation is real or not. We have done some studies asking people to search for certain things and seeing how they would typically go about doing that and that might be an interesting twist to see if any of these population terms are actually helping with some retrieval there. So good point. Thank you.

>>I'm going to-- let me just add, I don't have an answer to uh your specific questions, but I think when we worked on the project, certainly there was the hope, right when we worked on SDOH terms and then have introduced many terms that are relevant to social determinants of health, and they've done-- our sponsors at OBSSR have done a study just looking at one year after introducing so many of these related SDOH terminology, what they have found it is there, you know, searchability and recall of substantially increased. So that certainly was the hope when we were actually making these population group categories.

>>Yeah, that's a great example there, Dan. And I think it's, I think one of the things that-- it is tricky, sort of about the question that Kate raised, which is, which is a good question, right? How are we measuring our success in terms of how are we measuring the the actions that we take is that there's a whole stack here, right? We're talking about MeSH and the MeSH vocabulary today. But there's a stack of the MeSH vocabulary and then how our indexing processes use that vocabulary to index things and then also how PubMed uses index terms to retrieve things. So there's a whole stack of integrated systems that are working together that it can make it difficult, I think, to tease out where specific impacts are coming from. But obviously as Dan said, you know we've looked at some of these things and we hope other folks continue to look at them as well. We are running a little bit low on time. So I'm going to give folks a chance to enter in any last minute comments or feedback that they want to put in right now. And while you do that, I'm going to actually go to Kate Majewski who is the head of our Training Team and the Office of Engagement and Training and who has also been helping me stay on top of all of your comments to maybe talk a little bit about how to find more training about MeSH and using MeSH.

>>Thanks, Mike. Yeah, we have quite a bit of training on the Medical Subject Headings and their use in PubMed and I wanted to show you a really easy way to find that if you take a look at-- here, I'll show you. The Medical Subject Headings page. There's a section on the right hand side that says Learn About MeSH and if you click on tutorials and webinars there's a nice long list of training resources related to MeSH, starting with the very basics. I guess I'm having a little glitch there, sorry. Starting with the very basics and going to advanced level searching in PubMed. Also from this page you can find all of the annual updates on the MeSH Highlights webinar that we offer every year including the recording of the highlights that we just offered and links to the MeSH NLM office hours, so please check that out and to find out about upcoming events.

Don't forget to sign up for the NLM Technical Bulletin alerts and I'll put a link in chat for you if you haven't done that already. Thank you.

>>Actually, Kate, while you're sharing your screen. Oh, I missed you. I was hoping you could also show the NLM training page as well, because we had another question come in about where someone can find a list of all of our trainings and webinars and well that might not be absolutely exhaustive. That is definitely the place to go because all of our trainings or at least the lion's share of our trainings are listed through the Network of the National Library of Medicine Training page, which Kate is showing you now. I think half a dozen people just dropped links to that into the chat, including a bunch of folks from the Network who are who are listening in today. So that's fantastic. So yeah, if you want to show that, that'd be great. All right.

>>OK. Yeah, I'll put those links right in chat. Thank you.

>>Awesome. Alright, I think we are basically just about out of time. I don't want to cut off anybody's comments. However, as we've mentioned many times today, there are still many other ways for you to give us feedback on an ongoing basis. We encourage you the best way to do that is to write to the customer service help desk. You can get to the help desk via the link in the-- and that is somebody's putting in chat I believe, or via the NLM support Center link, which is at the bottom of every NLM web page. And if you are giving-- want to give specific feedback on this topic or related to this MeSH listening session and you want to use the MeSH listening session subject line that will ensure that your message will get grouped with all of the other feedback that we've received today and leading up to this listening session. And also as Dan I believe mentioned when you contact us and write in, please make sure you include a way to contact you include your e-mail address. So if we can respond to you or follow up if we have additional questions. If you're interested in keeping up to date on other opportunities to communicate or share feedback with NLM, as Kate Majeski just mentioned, please keep an eye on the NLM Technical Bulletin where we post all sorts of product updates, event announcements, and other useful information.

And as we wrap up, I want to give a huge thank you to our panelists, Dianne, Amanda, and Dan, and an even huger thank you to all of you for showing up, spending your time today and your participation today in letting us know what you think and letting us understand your needs and your feedback we really do truly appreciate and value your feedback and we can't do this without users and we're very happy to have you as our users. So I think that's about all the time we have. So I'm going to leave it there. Thank you very much and enjoy the rest of your day.