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Transcript

MIKE: All right, good afternoon, everyone, or as I said, good morning or good evening for those of you who are in other parts of the world. Thank you for joining us for another NLM Office Hours. My name is Mike Davidson from the Training and Workforce Development team here at the National Library of Medicine. My pronouns are he/him/his. The goal behind these sessions is to give you a chance to learn more about NLM's products and to get your questions answered by our trainers and members of our product teams.

And today's focus is on PubMed. We're going to kick things off with a brief presentation from Amanda Sawyer, who is a Technical Information Specialist and part of the PubMed team for NLM's National Center for Biotechnology Information (NCBI). Amanda's team are the folks who develop and maintain PubMed, and she'll be sharing some information about the recently released improvements to PubMed's filters. We're then going to use the rest of the time that we have to have our panelists answer your questions.

Before we get started though, a few quick logistical notes. We are recording today's session to share with those who are unable to attend or for you to refer back to you later. The recording is going to be posted shortly following the Office Hours, and everyone who registered for today's session will be emailed a link to that. We have a pretty substantial crowd here today, so we've muted all attendees, but please feel free to submit any questions that you have as you think of them throughout the session using the Zoom chat feature. When we get to the Q&A portion of today's session, I'll be directing the questions you submitted to the right panelist so that they can answer verbally when you're chatting. Make sure to send your messages to Everyone so that we can make

sure that all of the panelists and participants can see them. We may also occasionally be using the chat feature to share some links to helpful resources, so keep an eye out for that as well. But before we start addressing questions, I'm going to hand things over to Amanda Sawyer to bring us up to speed on what's new with PubMed's filters. Amanda.

AMANDA: Great. Thanks, Mike. Hello, everyone. My name is Amanda Sawyer. My pronouns are she/her/hers. And thank you so much for joining us today for PubMed Office Hours. We're excited to talk to you about the new filters interface that we released a few weeks ago.

So I will give you a little bit of background information today about why we made this update and what the process actually looks like when we're making changes to PubMed. Then we will go and do a kind of like a live demo of walking through the new filters interface and what changes have occurred. But we will leave most of the time today for your questions.

So why did we update the filters interface? The PubMed team prioritizes new features, improved features, and other updates based on user feedback, analytics, and other user research, as well as usability, best practices, technical feasibility, and our available resources. So we started looking into this change in the summer of 2023 based on feedback that we received via NLM's Help Desk, as well as comments that we received attending the Medical Library Association conference in 2023. We heard from PubMed users that the Additional Filters interface was not intuitive and that it required too many clicks to apply filters that didn't already appear on the default sidebar. So it was our goal to develop a solution that provides a more user-friendly experience for our PubMed searchers.

How does an update like this come about in PubMed? The PubMed team uses agile development practices, which means that we work in cycles of planning, executing and constantly improving our features even after we have released an update. So we release updates and then we monitor the system performance as well as the feedback that we get from our user community so that we can evaluate the improvements that we've made to PubMed. Collecting the feedback that we received from PubMed searchers, from the Help Desk, from MLA, that is what kicked off the planning stage of our project to improve PubMed's filters. We used that feedback that we collected to design a few potential solutions addressing the frustrations that users were experiencing with our filter sidebar. And then we recruited participants for a usability study and spent several months conducting usability testing with PubMed users from different backgrounds, including medical librarians, a clinician, a scientist, among others. We used the feedback from those user tests to refine the design for the new interface. And then we moved into developing the interface improvements.

A few weeks ago, the new filters interface was released to the public and we've begun collecting feedback so that we can evaluate the changes that we just made. And I'll just emphasize that since we are an agile team, we will continue collecting feedback and evaluating any areas where we can make incremental improvements to the filters interface as well as any other features in PubMed.

OK, so I'm going to switch the screen that I'm sharing and we will do a quick walkthrough of the new filters interface. So I'm going to check with Mike.

MIKE: Looking good, you're all set.

AMANDA: Great. Just making sure I'm sharing the correct screen. And now I'm going to pull that up so I can look at it as well. Great.

OK, so we're going to walk through a search results page. You can see here I have a search for uncomplicated type B aortic dissection with 408 search results. And most of our time today, we're going to be looking at this left-hand column to the left of our citations, this is our filter sidebar.

So the first change that was made is just a label change. This feature here used to be called My NCBI Filters and we've relabeled it My Custom Filters to make it a little bit more obvious to users who may not be familiar with My NCBI that they do have the option to create custom filters to filter their search results. The behavior of this feature has not changed. If you click on My Custom Filters, it will take you to a login for My NCBI and if you don't have an account yet, you can create one and then go and create custom filters. When you are signed in, you'll see that you're signed in the top right of your PubMed search page. Instead of Login, it will have your username displayed here and any custom filters you've created will then be listed under this label here at the top of your filter sidebar.

The second change that I want to draw your attention to is to the publication date filters. We have moved the publication date filters to the top of the filter sidebar, and we did this for two main reasons. One, we want to group our filters that are about dates together and make that a little bit more intuitive. And also because publication date filters are some of the most used filters in PubMed, it makes sense for them to sit at the top of the page here.

There's also been an update to the validation rules that the custom range filter uses. So now if you'd like to search for a specific one-year period, you can enter the year without a date or a month into both the start date and end date year fields and click Apply. And we can see now I have this green bar at the top of my search results, and my results have been filtered down to citations just from the year 2021. And that's citations with a publication date in 2021. You have the option to clear that filter if you'd like, from this green bar at the top. I'm going to leave it checked just for now while we move on to our next section of the filters.

Next are our default filters. These are some of PubMed's most commonly used filters. They display by default for every user, regardless of whether you're signed into My NCBI or not, and they will display here in the left. This has not changed. What has changed is for categories like Article Type, where there are quite a few options for you and it's not really feasible to display them all in the sidebar at all times. You can click the See all filters link here. That will open a pop-up window with all of your article type options and we can go through and select any that we would like to add to our sidebar and apply to our search. So I'm going to say I'd like to look for comments on this topic and click Apply. Clicking Apply from that pop-up menu now applies the filter to your search with that one click, and it also adds that filter to your sidebar.

So then if I decide later I'd like to uncheck this box and no longer have that filter applied, we can see in my green bar at the top that we just have our date filters here for now, but the comment option remains in my sidebar. So when you make changes from these pop-up menus, those changes are stored in your browser cookies. So this option will stay here until my browser cookies are cleared or until I choose to reset the filters menu, which we'll talk about in just a second.

So now all of our additional filters, which going back to when I was talking about the background of this project, this was one of the main pain points for PubMed users is that these additional filters were hard to access and require too many clicks to apply. They now live in an accordion menu. So you click on the Additional filters button and it'll open this accordion here, and all of your additional filters live here in this menu. When you're done with it, if you'd like, you can hide them by closing that menu again. And these work the same way as the default filters that I just showed you.

So article language is another category where there are quite a few options for you if you'd like to choose another language to look for citations. We don't have any citations in French for this particular search, but now it's been added to my sidebar, I can uncheck it so that it's not applied anymore, and the French filter will live here in my sidebar again until I clear my browser cookies or I reset the filter interface. So the goal of this is to make all of these filters that are in the additional filters category make it more apparent what is available to you and make it more obvious what you can use without overcomplicating the sidebar for users who don't use these too often.

Just two more things that I want to pull your attention to. We have two buttons at the bottom of the filter's interface now. We have Clear applied filters, and clicking Clear applied filters does exactly what it sounds like. It clears every filter that I had checked for my sidebar. So my date filter is gone and we're back to 408 results. But you can see that, like comment is still available in my sidebar, so is the French option that I added from the pop-up menu.

If I wanted to reset the interface back to the default filters in the way that the default is set by PubMed, I can click the Reset filters menu. Clicking this button will pop up a warning message to let you know exactly what you're doing, and your filters on the sidebar will reset to the default list. So any customization that you've done will be gone and any of your currently applied filters will also be cleared. So I will click Confirm, and now we can see we are back to our default list of filters. Comments is no longer here, French is no longer here. But if I wanted them back, I can just go back into the pop-up menu, add it again, and it will remain customized until I click that button again to reset the interface. Or if your browser cookies end up getting cleared, that will also reset your filter interface.

The final change I'd like to draw your attention to are these information buttons. We as a team are working on providing more contextual help for users in PubMed. And so right now we've started with these filters that users may not completely understand what's happening when you apply a filter. So if you click on, for example, the information button next to the Sex filters, this will take you to the PubMed user guide to the section that tells you exactly how this filter works. So the reason why this was important to us is that these filters here, all of these that have the information button, excluding these two, are based off of the MeSH vocabulary. So when you select, for example, Female, you are limiting your search to citations that have been indexed with the MeSH term Female. And it's important to know that because you should know that you may be excluding some citations that are not indexed for MEDLINE or not a part of the MEDLINE subset. So we've added some information, links to the user guide about how these filters work, and that is kind of the sum of the changes we've made to the filter sidebar. I'm going to switch what I'm sharing again, and we're going to go back to our PowerPoint slide for just a few more minutes, a little bit more information about this change that we've made.

So it's important to note that the available filters in PubMed and their underlying search strategies have not changed. This update was focused on making the existing filters more intuitive and easier to use. So we've changed the interface. We have not changed the search strategies or the filters themselves.

We also wanted to point out that we have received a few reports of a bug. A small number of users have encountered a bug where additional filters get activated alongside their selected filters, and then they're shown in the green filter supplied banner at the top of their searches. We did release an update to address this bug on October 31st. However, since PubMed filters use cookies that are stored locally in your browser, if you're still seeing this issue, you can click the Reset Filters menu button on the sidebar. So that's the button all the way at the bottom of your sidebar. It will remove the PubMed filter cookies from your browser and it should resolve the issue. So far, this has resolved the issue permanently for the handful of users who they've been working with via the Help Desk. You can also contact us at the Help Desk for any support with this issue or anything else. We are keeping a close eye on this, but we always want to hear from you if you encounter this or any other issue in PubMed.

So to find more information about filters in PubMed and this update specifically, I recommend you check out the Technical Bulletin announcement that we released about this improvement. That includes all of the details that I just walked through in our demo, but in a really handy written announcement, so you can refer back to that when you are learning more about this update. We've also updated the PubMed User Guide to account for this update and to provide more detailed help on the filter search strategies themselves, as well as how filters work in PubMed.

As always, I want to point your attention to where you, and if you are a trainer or a librarian, where your patrons can find more information about PubMed, we always recommend taking a look at the User Guide. We also have a variety of on-demand training resources as well as a trainer's tool kit for anyone who teaches on PubMed.

But if you don't find the answer to your question in the user guide, or if you're noticing a bug or something with PubMed just doesn't seem to be performing correctly, or if you have feedback on filters or anything else in PubMed, we encourage you to reach out to NLM's Help Desk. When you write to us and you provide your use cases and suggestions for improvements, we use that information in our planning and developing process. So we welcome your feedback that you have about filters specifically and PubMed in general. You can reach the PubMed customer service team, which includes myself and the other team members on this call as well as many others, by using the Help link that's at the bottom of every PubMed page. Or you can just go straight to this link, support.nlm.nih.gov and open a case for the Help Desk. Questions about PubMed are always sent specifically to the teams that are trained in answering PubMed questions. And when you provide feedback on PubMed, that is always sent to us at NCBI, the PubMed team, we receive all of it, we track all of it, and we keep a record of it. And I think that this filters update is a really great example of how your feedback has improved PubMed going forward. So keep writing to us and keep making your suggestions.

You can also stay up to date with any changes to PubMed by following these two resources. We always publish a Technical Bulletin article when an update is made to PubMed, so following that resource is a great place to stay in the know about what's happening with PubMed. There's also the

PubMed New and Noteworthy RSS feed that's specific to PubMed itself, and we will often link to the Technical Bulletin from the New and Noteworthy feed as well. And with that, I am going to finish my presentation. I will hand this back to Mike so that we can take your questions.

MIKE: All right, thank you so much, Amanda. We're now going to spend the rest of our time answering as many of your questions as possible. We had a few folks submit questions to us ahead of time, which we greatly appreciate. As always, if you have questions ahead of time for Office Hours, please submit them ahead of time so that we can make sure that we get answers to those. We'll be filtering those in along with the already great questions that we have coming into the chat. We're off to a good start. Please keep submitting any questions you have in the chat box so that I can read them to our panel and have them answer your questions verbally.

Speaking of our panel, let me give them a brief introduction before I start asking them your questions. In addition to Amanda, our panel of NLM experts includes Marie Collins, who is the PubMed Program Head over at NCBI. And Alex Sticco, who is the Team Lead for Automation and Strategic Analysis in our Controlled Vocabulary Services program, and who should be able to help us out with any questions related to MEDLINE indexing. We also have behind the scenes support today from Jessica Chan over at NCBI and from my colleagues Catherine Staley and Michael Tahmasian. Between all of these incredibly knowledgeable folks, we should hopefully be able to answer any PubMed questions that you might have.

And now I'm going to go take a look and see what we got. I think we're going to start off with this question from-- well, let me start off by saying there's already been some very nice comments about the new filters updates in there. So I appreciate that and I think our whole team appreciates that.

This is a question from Lori for Amanda, I think. **What is the associated data filter? And in what cases would one use this filter?**

AMANDA: This is a great question. The associated data filter includes links to citations that have links to other NLM databases. So you can use this field to find citations that have links to records for example in like GenBank or ClinicalTrials.gov, or external data repositories like Figshare or Dryad. The links in this field are provided by the publisher. And also sometimes by the data repositories who participate in NCBI's LinkOut service. There's a little bit more information about this in the User Guide, so you can start there. And then if you have any specific questions about searching for data in PubMed, write to the Help Desk, we would be happy to help with that.

MIKE: Excellent. All right. We have a couple of questions here that relate to dates, especially in the date filters, which are now, as we saw, much more prominent pushed up to the top of the filter sidebar. The first one is from Ed: **which MEDLINE field is the publication date derived from? Asking DP or YR.** Which are two of these MEDLINE format fields, I believe.

AMANDA: Yeah. So the publication date filters use the DP, publication date of publication field. And in PubMed that can include both the electronic and the print publication dates when those are available and supplied by the publisher.

If you have questions about date searching, there are a lot of dates associated with publications these days, and we have a section in the PubMed User Guide that's specifically about searching by

date, and it's got a lot of really helpful information. It depends on what your purpose is when you're searching. If you're looking for new citations versus looking for publication dates specifically, you may need different dates for those. So start there and always feel free to write to us if you're not sure which field to use.

MIKE: And this is sort of a follow up that ties into what you were just saying, which this is from Donna about the epub (the electronic publication date) also being included in there. **If the electronic publication date and the print publication date are in different years, does it show up in the filter for one year or the other year or both years?**

AMANDA: Both years. So when you use the Results by Year timeline and you search, or if you're searching in the publication date field, if you search for one of those years, it'll show up in that year. If you search for the other year, it'll also show up in that year. And so that can be when you're looking at the results by your timeline. There are publications that get counted twice, like in one year and in the next. So if you're looking for individual citations that appear like you need just one date, you're probably going to want to use the create date, which is the date that the record was created in PubMed.

MIKE: Excellent. And as you said, there's more information on the date, all of that date stuff in the User Guide.

All right, changing gears a little bit. This is a question from Kelly who asks, **what percentage of PubMed citations are indexed in MEDLINE?**

AMANDA: MEDLINE accounts for around 31 million of the 37 million PubMed citations. That's around 84% of PubMed is MEDLINE.

MIKE: All right, short and to the point. Here's a question from Diala. This is actually going back to talking about proximity searching, which is something that we did in Office Hours around this time last year I think. Maybe it was in the spring.

Diala wants to know if the proximity field is active in PubMed keywords, [tiab] searching, proximity 0. So we might need a little bit more clarification on that, but I don't know if you have any explanation about that.

AMANDA: Sure I can give an answer and if it's not what you're looking for, feel free to add more detail into the chat and we can come back to it. Proximity searching is available in the title, the title abstract field [tiab], and affiliation field. So those are the three fields you can do. The title abstract field does include keywords, so the author supplied keywords are searched when you search title abstract, so you can use proximity, it will include those keywords. You cannot specifically do a proximity search in only the keywords field.

MIKE: Gotcha. OK, let me take a quick look here. We got a lot of questions coming in. I want to make sure we get to as many of them as possible here. This is another one going back to filters and I think that this is actually a really important thing from Elliot. Elliot's asking **in the past, applying filters other than publication date such as Sex or Age risk missing some MEDLINE in-process records that have not yet been fully indexed with MeSH terms. Is that still the case or does MEDLINE index now happen more quickly?** So I think there's a couple of parts to this answer.

AMANDA: Right. So as I mentioned in the presentation, using some of those filters that are based on MeSH terms are going to limit you to the MEDLINE subset. So like we just said, around 84% of PubMed is MEDLINE, so you're limiting it to that subset. But there is that other chunk of 16% or so that will be excluded if you use those.

As far as MEDLINE indexing goes, it happens much more quickly than it used to in the past, typically within 24 hours. And so the risk of missing those in-process citations is much, much lower.

MIKE: All right, excellent. I'm going to change gears here. We have a couple of questions that sort of touch on indexing more directly. That was a nice segue into those actually. So I think we'll go to Alex for these.

Marina is asking about annual MeSH processing for 2025 and when that might occur. Alex, **can you maybe give a brief explanation of what annual mesh processing is for those who don't know? And if you have any insight on to when we might be expecting that?**

ALEX: Sure. So annual MeSH processing is when we annually take the MeSH vocabulary for the next year. So they've been making the vocabulary for 2025 all during 2024. And so we're going to take that 2025 vocabulary and update all of our systems to start using the 2025 vocabulary. And when we do that, we go into PubMed and if the, for example, preferred term for any terms have changed, we update that term string. So if something like "fireman" has become "fire people," then we would go in and update that. And this is common with like genes and things like that. So often there are other kinds of updates as well that we'll make and that all usually happens in early December. So I don't have an exact date this year for when YEP [year-end processing, now annual MeSH processing] will be completed. I can tell you that we are actually already starting that process like behind the scenes right now. So it's just that it takes a variable amount of time depending on what sort of technical problems we run into as we do that on the backend. But it's generally released in early December.

MIKE: And I think that highlights an interesting sort of collaboration effect here that we have going on at NLM, which is, you know, right now, obviously we have Alex who works on the indexing stuff very closely. We have Amanda and Marie and Jessica who are all very sort of tied into the how PubMed works and making the PubMed interface works. There's a third group that we don't have a panelist for today, but that's also sort of reflected in this process, this annual MeSH processing, this changeover process. And that's the folks who actually work on revising and improving and updating the MeSH vocabulary itself. Until the MeSH vocabulary is created and it's updated, you know, that has to happen first and be all checked out before we can do any of the changes to the indexing and then before they can be reflected in PubMed. And so I think that that's like one of the things that I think folks don't always appreciate who are looking at PubMed from the outside, from the user perspective is that there's a lot of different moving parts from a lot of different groups and a lot of different teams with different expertise on the NLM side, all sort of working together to make this stuff happen.

And I think connected to that, there's another question from Elaine. This will also be for Alex, I think. And I can also maybe shine a little bit of extra light on this. **Elaine was doing a deep dive into MeSH for a meeting and noticed a list of MeSH descriptors changed for 2024. But when they**

looked at the actual descriptors, they couldn't ascertain what the changes actually were. Can you help?

ALEX: I mean probably if I got a list or something. So at YEP [annual MeSH processing], what we will do is release a series of reports on the data downloads page that explicitly say every change that's been made to the vocabulary. And those are just divided into some categories because we know that some people are only interested in certain kinds of changes, but you can download all of them. You can download just some of them and it will say exactly what's changed about those terminologies.

So things that could change could be, like I said, the preferred term could change. So a term might have many synonyms, but we only select one to be the term that sort of represents that concept as the main thing. The treeing of the term could change. So it might sort of change its position in a vocabulary or have sort of like children added underneath it or parent terms. And then some even like more esoteric things that could change or like registry numbers could be added, meaning like sort of identifiers associated with chemicals especially, or organisms from other databases that would get added as additional identifiers into the record. So there's a lot of different kinds of changes that could take place, but you can see them all in those downloads that we release each year.

MIKE: Excellent. And I want to add two things on to that. So Alex said a couple of times, Yep, which is short for year end processing, which is what we used to call annual mesh processing (AMP). It's sort of ingrained in our brains and in our mouths. So if you hear YEP or AMP, either one is the same. We're referring to the same process. It's just you know which year we're talking about.

And another thing that I'll mention is that every year, usually around January or February, the PubMed training team, myself included, Catherine's involved in this as well, do a couple of different trainings on what's new with MeSH, Basically, what has changed as part of the annual changeover and how that might affect searching. One of them is essentially like a highlight, like a "Here's what's going on. What questions do you have?" And then the other one is more of an in-depth MeSH searching class. If you check back, we have the recordings of previous iterations of those classes are available. Maybe Catherine can find the links for those. I'm not sure where they are off the top of my head, but I'm sure she can get them the links in there. And also keep an eye out on the NLM Technical Bulletin for the 2025 version of that, which will probably be coming in, my guess is, early February of this year. And that is a great way to sort of see what's going on, what's new, and also ask any questions that you have.

All right, let's take a look and see what other questions we have. Sorry, I scrolled down too far and now I have to scroll back up. Sorry, you all asked some great questions and I'm trying to catch up here.

OK, so this is a question from Eric and I think, Alex, you said you might have some insight into this. **When working on systematic review search strategies, I never know when to use the field tag for major MeSH heading [mj]. I have read the PubMed User Guide for clarification but would like to understand in greater detail when a regular mesh term is applied [mh] and when it becomes a major MeSH heading [mj].** Alex, I think this is actually a great question for you to take a crack at. You are muted to us.

ALEX: Sorry. We have historically used major [mj] to designate the things that are the main topics of the article. So when indexing was done by hand, the indexer would designate typically 3-5 terms from the article as those major topics, meaning those are usually the terms that you would find in the title. Like if you were going to, in one sentence, say what the article was about, that's what you would designate as a major topic is those things that are the main points.

With automated indexing, we have instead used a kind of a score that the algorithm gives to each term about how certain it is that the term should be on the article. And so very high scoring terms where the algorithm is very certain that the term should be there are usually designated as those major topics now. This is not super accurate, I'm going to just say that upfront. And we actually, after year end processing [annual MeSH processing] this year. So after the annual MeSH processing in late December, early January, we'll be releasing a new version of MTIX that's been trained to more intelligently apply major topic. So that should improve starting early next year. But I will say that right now what is being designated as major topic are the things that the algorithm is most certain should be on there, which is often not actually the major topic. Sometimes it is. But the other things that it tends to include are things like organisms or it tries to do check tags and we suppress that because it's very certain of when it should use those terms. So terms that are very common. Also, the algorithm tends to want to make those MeSH major topics right now. So I hope that answers your question about what we've done in the past.

So if you're looking at anything that's older than a couple of years and it's been manually indexed, it's going to refer to those things that are the main point. If you're looking at things that are newer and they've been automatically indexed, it may capture the main point, but it may also be sort of capturing some extraneous stuff.

MIKE: Thanks. And I think that actually ties in really nicely, or sort of the systematic review part of that ties in really nicely to **a question that we had submitted in advance that was asking sort of some specific help for search strategies for systematic reviews. And I think that major topics were a part of that.**

So, you know, obviously Alex could give an indexing perspective answer there. And while we have a lot of experts on our call today, I don't think any of us are particular experts in conducting systematic reviews. There's a lot of specialized knowledge, as I think you'll all know that goes into that in particular search techniques. And it's just not a particular area of specialty for any of us here today.

However, the Network of the National Library of Medicine has recently offered a few new trainings and resources on systematic reviews. First, there's a new guide that provides some information and insight on which NLM products are useful to support systematic reviews and how to get the most out of those products. And then in addition to the guide, the network offered a five part webinar series entitled Piercing Together Systematic Reviews featuring Margaret J. Foster. And that series just wrapped up late last month, but recordings of all of those sessions are available online. And Catherine will drop the link to both the guide and to the page where you can access the access the recordings of the webinars today in the chat as well.

So if you have systematic review questions, those are great sort of places to start. All right, let me take a look at what else we have here. We have a question from Eric and I think Marie might want to

take this one. **Can you explain why some records do not have an abstract? Does this correlate with any indexing statuses? If a record has no abstract, will an abstract sometimes to be added at a later date? I ask because I've seen "has abstract" as a search term in some systematic review search strategies and it would be good to know how that would affect the replicability of the search or exclude records that are temporarily missing an abstract which would become available at a later date.**

MARIE: So I think the availability of an abstract is more dependent on the type of article. For example, if it's an editorial that likely will not have an abstract, primary research typically does, and we require that any article that has a published abstract, the abstract be supplied to PubMed and the abstract would be supplied upon deposit. The abstract is available when the article's published. We require that if the article is published with an abstract, they provide that to us. And I'm not, you know, never say never, but it is not typical or standard practice for an abstract to appear or be supplied to us later. So that is not necessarily something I would consider a huge variable in replicating a search that maybe it would have an abstract supplied to us later.

MIKE: Excellent. All right. And I think there was maybe another related question to that, but I'm actually going to switch tracks a little bit. This will be for Amanda. Karen is asking **is there a PDF of the [PubMed] User Guide?**

AMANDA: We do not maintain a PDF of the User Guide, but you can print a PDF of the User Guide from most web browsers. The reason we don't offer a PDF is that the User Guide is updated frequently. It's a living document. It's a very large document and we make changes and updates to it anytime something changes in PubMed, as well as anytime we think that we can provide more clarity on how something works. So if you do print a PDF of the User Guide to use, we recommend checking the web version frequently for updates. You can see the last time the user guide was updated at the very top of the page under the PubMed User Guide title. It'll say "Last update." Currently the last update was made on October 21, 2024.

MIKE: Excellent. And Frank has a question that I think might be also good because it ties into our filters discussion from earlier. **How can you tell if an article with an abstract is free or requires payment?** I assume that's access the full text.

AMANDA: Sure. There are filters you can use in PubMed, so Article Availability filters in the sidebar will help you with this. The full text filter indicates that there is some sort of link to the full text available on the abstract. It does not necessarily mean that that full text is free, but you can use the free full text filter to find only articles where we have a link indicating that a free version of the article is available. A lot of times this is going to take you to PubMed Central, which is NLM's free full text database. But publishers can also indicate when a journal is Open Access or a specific article is freely available.

MIKE: And there's another question sort of about that full text filter. And I'm not sure if you have an answer to this, if not, we can find something out. But **does the full text filter indicate that like, as you said, it indicates that there's no publisher or PMC link available, but might that status change? Is it possible that we would get a full text link or a free full text link later?**

AMANDA: Yeah. So citations get included in that full text filter if and when they have a full text link available. And it does sometimes happen that a citation might later gain that full text link and it would be added to it at a later date.

And I think one example of this might be PubMed Central articles that are under an embargo. Those are not available in PubMed Central until the embargo has been lifted. But those citations are available in PubMed.

MIKE: Excellent. All right, I'm looking through the questions that we have submitted so far. I think we've gotten to most of them. If we missed your question and you want to go ahead and ask it again in the chat, we can take a look at that. Or if you have not yet asked your question, please, or if you have a new question, please go ahead and ask that. One thing that I did notice, and Amanda, maybe you can take a crack at this one. **Frank is wondering if it is possible to limit articles to Canadian authors.**

AMANDA: I think that the best way that that you could kind of go about that is by searching in the affiliation data for Canadian authors, Canadian institutions, so specifically within the affiliation field. And also I'll put a plug in again for proximity. Proximity searching is really helpful for affiliation searching because you don't have to have an exact match for a phrase. That's where I would recommend starting for that type of search. And if you have any questions come up from it, feel free to write to the Help Desk and we can dig into a more specific use case with you.

MIKE: Excellent. Yeah, I think that trying to dig into stuff like authorship nationality, I know is something that people have done a lot of work on and it can sometimes be tricky, but yeah, the affiliation field is always a good place to start.

Let's see, we have a new question, that just came in from Eric. **My understanding is that each of the filters has an underlying search string. For example, systematic[sb], the systematic review subset. If this is true, are all of the filters available at a single website? I have something in mind similar to the CADTH Search Filters Database.** I'm not familiar with that. But anyway, any comment on that?

AMANDA: Yes, there is a section of the PubMed User Guide for the filter search strategies. (Oops, I just sent that to the host. I will send the link to everybody.) Filter search strategies. So you can find the description of the underlying search strategy for PubMed search filters in the User Guide. And then if you have questions about a specific one, feel free to write to us as always.

MIKE: Excellent. All right, we have a question in from Alfred. I think this is going to be for Alex. Alfred is asking **MeSH classification is applied only for the articles indexed in MEDLINE, right? So I think actually the best way to answer this is tell us, what gets indexed for MEDLINE?**

ALEX: OK, so articles that are in MEDLINE get full indexing, but the kind of exception here is publication types because articles that are in PMC and, I'm not sure about preprints, but other articles, non-MEDLINE articles may have publication types. So you can still use those filters to find articles from kind of the entire PubMed set. But for anything else, for the, you know, Female, Male or any other filters that are MeSH-based besides the publication types, those will only be applied to the MEDLINE articles.

MIKE: Thank you very much for that. I would say that this is a good opportunity for me to plug, if you're interested and have not yet taken the How PubMed Works series of classes, it's available both on-demand and offered somewhat regularly. I think we just had a set series in October and the next one will probably be in the spring. Those classes get into a lot of details on this stuff, including how stuff ends up in PubMed, what stuff ends up in PubMed, and what stuff gets indexed, how indexing works, how MeSH works. So if you are interested in learning more of the nitty gritty about how PubMed actually works, we have a great class for that. And Catherine, just put a link in the chat.

All right, let's take a look at these questions here. This one might be specific. Let me see. I think Alex is probably going to be for you. OK. **So the Human filter is tough to define. How is it distinguished? Does Other animals depend on use of indexing?** I guess sort of there's some more specifics here, but like the general sense is like how do we determine, or how does the algorithm determine, what articles are about humans and what are about other animals, right?

ALEX: So the standard for indexing is that humans is indexed when there are human patients, human cell lines or human genes being transfected into other animals or other organisms, I should say. And so something that is an article about a human gene that's being transfected into mice or bacteria will get indexed with humans because it's still related to human genetics. Otherwise though it's mainly going to be articles that are about human patients. Human cell lines also, like I said, do get indexed with human. And then it when you use the animals filter it is for non-human animals. So humans are animals but we exclude them from that filter for practical purposes.

MIKE: Gotcha. Another question about indexing. This one's from Lori. **When the algorithm is updated, I assume this is referring to the annual MeSH processing that we were talking about before, do all previous records get revised?** We may have lost Alex for a second.

ALEX: Sorry, didn't realize I was going to be back on.

Yeah, so all previous records in MEDLINE do get revised. What we do is, like I said, we will make updates to the existing indexing. We do not typically retroactively add new indexing. So for new terminology, that new terminology starts being used the year that it is introduced. The we make only occasional exceptions for publication types where we sometimes will go back and try to sort of re-index existing citations with a new publication type, which we did for the introduction of systematic review many years ago, for example. But those are very rare exceptions. Otherwise, we make updates to the existing indexing on all citations, but we do not retroactively add new headings to old citations.

MIKE: Gotcha. All right. I think we have a little bit of time left, so any last questions, this would be a great time to get them in.

We have one from Eric here about, **is there any advantage using a hyphen [-] when searching a phrase instead of wrapping the phrase in double quotes [""]? In general, I am trying to turn off the automatic term mapping and often include things not in the phrase index?**

AMANDA: So I think from what you're saying, the hyphen [-] is probably a good option for you. Using a hyphen forces a phrase search in PubMed. So even if you're searching for something that's not in the phrase index, the hyphen prevents automatic term mapping from taking place. So it is important

to note that if you do that and you search for something that's not in the phrase index with a hyphen, you're going to get 0 results. But that can be helpful if you have a large search strategy and you want to make sure that only your search terms are used and that there's no automatic term mapping taking place, the hyphen can be really good for that.

The one thing I will mention, this is documented in the User Guide, is that hyphenated phrases that match a MeSH term or an entry term will include those terms in the translation as well when you use a hyphen. So if you don't want that, then use double quotes [""] and a hyphen and that will prevent it. I'm going to drop a link into the chat about searching for a phrase. Phrase searching is a particularly complex topic, I think. If you're looking for terms that are not in the phrase index and you want that exact term not in the phrase index, we recommend trying a proximity search in the [tiab] field with an n value of 0. That can be a really great way to kind of get around the phrase index issue you might encounter. But as always, if you review this section of the help guide and you still have more questions after it, please write to us. We get a lot of questions about phrase searching and we're happy to help.

MIKE: Yeah. And as Amanda said, we know that this is a topic that has a lot of interest for some very dedicated searchers. And, you know, we're in the process of exploring what other sort of training options and educational options we can offer to help make things clearer to even more people. Obviously the User Guide is always available and we're always available via the Help Desk, but we know that this is a particular topic of interest that can be a little thorny. So we're trying our best to help folks out with that.

All right. I think we seem to be coming to the end of the questions. I'm going to vamp for a little while longer in case anybody is still writing a question. If we missed your question, please put it in chat again. I think we got all of them that I can see. So I will just talk for another minute or two and see if anybody else wants to add any further questions. We're coming up on the end of time. So I think that, you know, we've gotten through a bunch of particularly interesting topics here, including some topics that I don't think have come up in Office Hours before. So it's been fun to sort of get into this stuff in a little bit of a different way.

All right, I think that that's probably going to do it. I don't see any more questions coming in. I want to once again thank all of our panelists and of course Amanda for that great presentation. And I want to thank all of you for attending today and bringing such fantastic questions.