Transcript

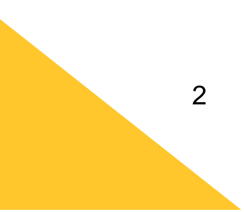
HEALTH INFORMATION TECHNOLOGY ADVISORY COMMITTEE (HITAC) ANNUAL REPORT WORKGROUP MEETING

June 6, 2023, 3 – 4:30 PM ET

VIRTUAL

Speakers

Name	Organization	Role
Medell Briggs-Malonson	**UCLA Health**	**Co-Chair**
Aaron Miri	**Baptist Health**	**Co-Chair**
Hans Buitendijk	Oracle Health	Member
Hannah Galvin	Cambridge Health Alliance	Member
Jim Jirjis	HCA Healthcare	Member
Eliel Oliveira	Dell Medical School, University of Texas at Austin	Member
Michael Berry	Office of the National Coordinator for Health Information Technology	Designated Federal Officer
Michelle Murray	Office of the National Coordinator for Health Information Technology	Staff Lead



Call to Order/Roll Call (00:00:00)

Michael Berry

Hello, everyone, and thank you for joining the FY '23 HITAC Annual Report Workgroup. I am pleased to welcome our cochairs, Medell Briggs-Malonson and Aaron Miri, along with workgroup members Eliel Oliveira and Hans Buitendijk, and we are expecting Hannah Galvin to be joining us today. Another workgroup member, Jim Jirjis, is traveling today and will not be able to join us. Public comments are welcome, which can be typed in the Zoom chat or can be made verbally during the public comment period later in our meeting. I would like to turn it over to Medell and Aaron for their opening remarks.

Opening Remarks and Introductions (00:00:38)

Medell Briggs-Malonson

Thank you so much, Mike. Hi, everyone. It is such a pleasure to be back all together in order to start planning our annual report work meeting, and specifically, we want to extend a warm welcome to our new report group members, both Hannah and Hans. We look forward to all of your insights, and we know that we are going to really receive a large amount of value from all of your different contributions. This year, we are going to do things very much the same, but we have some new methods and a new perspective of how we can actually help to support the construction of the annual report group as well. Aaron, I will turn it on over to you as well for any opening comments.

Aaron Miri

I appreciate that, Medell. Welcome, everybody. So, it is another glorious year and another glorious report to expect that by the end of this all, with good feedback and good input. As always, a standing rule is that we are very, very keen on collecting and soliciting all feedback, making sure that every bit of feedback is heard, assessed, and analyzed. Even if it is not relevant for this year's report, it may be put in a parking lot, so we will be continuously referring back to that and ensuring that the comments and feedback of the entire HITAC is heard, respected, considered, and incorporated in some way or another, so the feedback of this group is critical in helping to shape that outcome, dialogue, and discussion.

I also expect a very robust discussion next week at the full HITAC meeting in D.C., in which, excitingly, we will all be together, and we will be able to start kicking this back off and getting folks thinking about it, especially for the new members that have joined. Last but not least, this report is critically important as part of our reporting authority back to Congress and the administration as to what we are working on, what we are considering, and, more importantly, what is on the horizon and what we need to be thinking about, and it does shape policymakers' minds and helps inform decision outcomes. So, I look forward to the discussion, and it should be a great year. Medell, I will turn it back over to you.

Discussion of Workgroup Plans (00:02:33)

Medell Briggs-Malonson

Thank you so much, Aaron. Why don't we proceed on into all of our deck in front of us? Next slide. So, first, I will go over today's agenda. We are going to move directly into the discussion of our workgroup plans, and as Aaron mentioned, there is a clear charter that we have that we also have to uphold every single year when we are developing this annual report, so we are going to go over some of the high-level overview of that, then we are going to dive into the discussion of potential topics for the HITAC annual report for fiscal

year ’23. There are so many different things occurring this year, so we know there are going to be very, very interesting and important topics for us to discuss and consider for incorporation into the annual report. And then, before we end today, of course, we always allow time for the public to comment, so we welcome your thoughts and feedback because this workgroup is also here for the public. Next slide.

A little bit about our Annual Report Workgroup membership and the ONC staff: Thank you so much, Mike, for going through our various different members, including our two new members that are joining us, but also our ONC staff who supports us every single time that the committee meets, but also when we are away from our standard meetings and you have them listed here, so we want to always thank our ONC staff for all of their support of the Annual Report Workgroup. Next slide. All right, Aaron, I will turn it over to you to dive into discussion of the workgroup plans.

Aaron Miri

Absolutely, so let’s go ahead to the next slide. So, this is our calendar of events here. It is hard to believe we are already starting at 2024. Time is flying by. So, obviously, we are good on this month’s report and then will report out at HITAC in July. Of course, the rest is scheduled throughout the year. We always try to wrap up a report around Christmastime or New Year’s to give to HITAC for approval somewhere in the January-February timeframe, and of course, transmittal sometime in the springtime, February or March. All things considered, it will be a busy year with lots of topics and lots of things going on, and it is exciting, with the new HTI-1 rules and everything that is coming out, how that will shape into feedback, and this report will be critical. Next slide.

As I mentioned, we will be reporting out to the full committee how things go along. You will see Medell and me press the committee as the spring comes along into summertime, fall, and next spring for feedback, and making sure we get feedback from HITAC. I ask all the members of this committee to please encourage your colleagues to speak up and say something. It is amazing how we get a plethora of comments at the 11th hour, and we want to have all the time in the world to consider that feedback and do the research appropriately. The ONC team and Excel team do an amazing job of going deep on each topic, so if there is a HITAC member with a pressing item that is top of mind, it is critical that we engage with them. Next slide.

So, the work plan is as such: We are going to develop a potential topic list, focus on that, and present it to HITAC in our June meeting. That is today’s discussion. We will talk about a crosswalk document, which is what is developed over the summertime and presented to HITAC in September. Then, the workgroup continues to develop the crosswalk document during the fall and presents those updates to HITAC. As referenced, the crosswalk is those topic areas as aligns to security, interoperability, and all the topic areas, and all the topics beneath that that we want to investigate. The workgroup will review the final draft report in November or December and present it to HITAC in January for approval. The HITAC votes sometime in the February timeframe for approval, and of course, onward, it goes to the HHS secretary and to Congress as well as posting onto HealthIT.gov in March ’24. Also, for those of you in the provider space, I encourage you to use the HITAC annual report with your boards of directors. I do it all the time to keep the board up to date on what is coming down the pike. There is so much noise out there, but the HITAC annual report is a great way to sort the noise from the hype and the reality of what is happening on the ground. Next slide.

All right, discussion of potential topics with HITAC annual report. Next slide. All right, I think we need to go to the draft list here. Really, we are going to go through this list now together as a team, questions or comments about the draft list, other items that are missing, and, of course, your questions and comments, so this is going to take a little bit of time, but again, a lot of these come from items that stem from last year, items we have heard recently, and, of course, items that are top of mind. This is not exhaustive, this is just a starting point, and it will be refined over time, so if you do not see a topic on here immediately jumping out to you, say something, and we will add it to here. We also want to give time to the ONC team and Excel to do the research on it and figure out what the meat on the bone is.

Medell Briggs-Malonson
Before we go on, Aaron, just to add another piece, and especially for the awareness of the workgroup, during one of our pre-meetings, one thing that we discussed was how we could continue to optimize this annual report, not only for education, but also for impact. And so, as we are thinking about the potential topics for consideration, we really also want you all to think of which areas that we as HITAC should be reporting out on in order to continue to raise the awareness of our country, but also to help guide on what is forthcoming because, not only right now within the workgroup, but of course with the full HITAC, we have so many experts in so many different domains, and our voice and our perspective is incredibly important, not only helping to support ONC, but also helping to support all of the rest of the various different agencies and stakeholders throughout not only our federal agencies, but also throughout the country, because so many of us use this report, even back locally in our home institutions.

So, while we want to reflect the thoughts and the great work that the full HITAC is doing, we also want to think progressively of making sure that we are thinking of what is coming down the road and how we can ensure that we use this report in order to help to prepare all of our various different organizations in the country on what really needs to be considered when it comes to health information technology. So, I just wanted to frame that, and that was one of the things that was mentioned, a little bit of a tweak of how we are going to be putting together this annual report for this year.

Aaron Miri
Well said, Medell. All I can say is ditto on that.

Discussion of Potential Topics for the HITAC Annual Report for FY23 (00:09:28)

Medell Briggs-Malonson
So, as Aaron mentioned, these are some of the initial topics that have come from the full HITAC that are listed, but we really want to open it up to the workgroup to see which additional topics we should include, and maybe what I will do, Aaron, is run through this slide, and I know there is another slide that has even more areas for consideration. So, for the very first one, protection of sensitive health data, this was suggested both by Deven McGraw and Hannah Galvin, and is really under the target area of privacy and security, and the issue that came up that we should really consider is that there should be increased discussion of sharing and segmentation of sensitive data, including a focus on the implications of *Dobbs v. Jackson Women's Health Organization* on the cross-border sharing of pregnancy-related data, and I would probably say reproductive health in general, and the potential harm to patients and providers, and this has really come across not only because of this court case, but when thinking about all the various different implications of interoperability and data sharing with reproductive health.

The second topic, after which we will open it up for discussion, is safety and impact of mobile health apps, and this was suggested by Eliel, so thank you for this. We are really discussing and diving deeper into the federal government and how the federal government could potentially identify an existing framework to create a new one to review the safety of mobile health apps, including vetting and certifying those health apps in order to ensure they are clinically valid and safe, and we did have some robust discussions during last year's Annual Report Workgroup to speak about exactly this. This has been something that has been on the forefront in terms of the thoughts for both HITAC and ONC, and especially how ONC can partner with other agencies, such as the FDA, who is also very deep into this work.

And then, the last area is bias concern, so, algorithms and clinical decision support tools. We know this is a huge area of discussion, especially with HTI-1 right now, and really looking at our DSIs, or decision support interventions, and the description of this topic, which was brought up by Steven Lane, is lowered barriers for access to the use of artificial-intelligence-driven predictive models of healthcare may require increased federal guardrails, and I think we can all think about how we can expand this when we are thinking about data concerns within our DSIs in order to ensure that we are also mitigating any forms of bias, racism, or discrimination, but we are also making sure it is fully accessible to everyone, not just based off of geography, but also ability, status, and the various different forms of organization, so a lot can be done there. So, we want to pause and open it up to the workgroup in order to see if there are any thoughts about these three and any additional items that we need to add. Hans, we see your hand.

Hans Buitendijk

Yes, Medell, thank you. I have a couple thoughts on particularly the first and the third, that I am not sure whether that means additional topics or not. For example, looking at protection of sensitive health data, there are a couple of different dimensions to it. One is that there are privacy rules and policies established by jurisdictions that may conflict or need to be sorted out as data is moving around, depending on where the patient is with respect to those jurisdictions, of which this is one example where that comes into play.

So, the question is do we want to specifically look at this example, or do we also want to look at the larger challenge of what kind of guidance, suggestions, or work we should address to generally manage privacy rules and variations across jurisdictions, because in a number of different areas, there is a challenge on how to do that. How should we interpret it? For what data do we need to figure out whether we can share it or not? We have a couple of examples, like this one, to add. There is a similar kind of question with the advice/concerns algorithms, etc. We have general challenges with AI and natural language with machine learning, etc., where there are the transparency concerns around that, the impact of which this is one as well, where that is a great example of how to address that part. So, it is a question of how we generalize some aspects and how we specialize in this specific examples. How do we want to reflect that in an annual report?

Medell Briggs-Malonson

Go ahead, Aaron, and then I will jump in.

Aaron Miri

I think that is a great point. Hans, I think there are a lot of dimensions here that need to be addressed. The specific request that came back that we noted was around women's health and sensitive data to that effect, and those kinds of components. I think you bring a larger question up to bear. There could be two parts to

the issue, the grander one and then a subset, so I want to be respectful of this piece, and we can double-click this with Hannah to walk through the dimensions of it, but I think this is a great point, looking at it broadly. I will say, though, the report workgroup has been keen on making sure that we do not bite off more than we can chew and making sure that we break this into pieces that are manageable that do answer the larger question, or rather, attempt to answer the larger question, so I think it is a great point, Hans, and I appreciate you bringing it up. Medell, do you want to add to it?

Medell Briggs-Malonson
That is what I was going to mention as well, and I would love to hear Hannah's piece, but one of the things that we are also thinking about for the annual report is how we can make sure that this report is really hitting on key, relevant, and impactful topics of the current ecosystem, but also what is to come, and we know that this is a great concern, especially around reproductive health, throughout our entire country right now because it does have such significant implications on the delivery of healthcare and the overall justice principles as well, and so, I also agree that this is very important for us to weigh in on in some of those recommendations, and I totally agree with you about the broad piece of privacy, but I also think that this is something that is highly relevant and contemporary that we really do need to address in detail, and Hannah, this is your recommendation, so I would love to hear from that as well.

Hannah Galvin
Thanks, Medell. I did not want to jump over Eliel, though, who had his hand raised before me, so should I let Eliel go first and then comment? Thanks.

Medell Briggs-Malonson
Yes, thanks, Hannah. Hi, Eliel.

Eliel Oliveira
I am driving.

Medell Briggs-Malonson
Okay, go ahead. You have the floor.

Eliel Oliveira
Okay, thank you, and I think it is a bit complementary to what Hans was talking about. Before he started, I was already going to suggest something along the lines of privacy across different data sources, and from my perspective, related to the concept of health data utility that continues to get traction nationally, I think this relates to social-determinant-of-health data, where, in my case, and what I am sure many of you are hearing, we are trying to now combine data from, say, incarceration, education sources, so on and so forth, and OCR has provided some advice and even guidance and direction on a few of those use cases, but it is a stew of very raw pieces for us to define what situations and decisions can be made about data sharing or not.

Again, it is a bit of what Hans was saying, but maybe with that slated **[inaudible] [00:18:08]**, given the fact that it is even part of the USCDI now, I think we maybe want to think about the policies around and enforcement of data sharing along SDOH. That is just to reinforce, but another topic that I wanted to suggest, which is going to come up from the HTI Task Force we have right now anyways, is the need for

standards and pilots for management of patient choices or consent for the use of their data. I think ONC has provided some support to task a couple of things there, but the more we think about it, we see how complex it is, and there is likely a need for prioritization on what we do first because it can get very granular, but if we have not talked about that yet, it is likely a good, important for us to address in terms of patient consent and patient decisions on how to use their data.

Aaron Miri
Yes. We have talked about granular choice, and this goes back even to the Blue Button topics in the prior Health Policy Committee and Standards Committee all the way through that Dr. DeSalvo was really kicking off with Lucia Savage back in the day, going way back and putting my original hat on, so we have been talking about granular consent for some time. I think it is a great point maybe for the ONC team to see if there is a way to tie together some of the work that was done in those tiger teams back in the day all the way through as we carry forward, and as that now applies here when it comes to the public domain. So, I think it is a great point, Eliel, looking at the aggregate, even jail health and everything else, all the way down to the synthesis of this specificity. Good points. Medell?

Medell Briggs-Malonson
I agree as well, and Eliel and Hans, you both bring in really important pieces, and what I was thinking about from hearing both of your comments is that I absolutely do think we may have a larger topic, and maybe we have subtopics underneath this, and because we do have so much additional sensitive data that we are bringing into systems and we know that that could be very beneficial, if it is not used appropriately and not done with consent and transparency, to your point, Eliel, we know that it can cause harm, and it can also cause a disruption of trust between those that are generating the data and those that are collecting and potentially using the data, so I think both of you are bringing in a really good point about recommendations of how to protect and appropriately utilize sensitive data, and then, of course, partnering it, exactly as you mentioned, Aaron, I would love to hear a little bit about how we have done that before, but really looking at that consent and that transparency back to the patients themselves who are generating this data, and the data belongs to them anyway. So, I think those are all really good points.

Aaron Miri
Great points, well said. Hannah, you have been so patient.

Hannah Galvin
Thanks. Well, you all have made such excellent points, and I really agree with them all. I am going to try to go back a little bit to Hans's point first. First of all, actually, let me say that at a high level, I think some of these suggestions were made perhaps before the HTI-1 NPRM came out as well, both No. 1 and No. 3, or actually, I do not know about No. 3, but I am making an assumption there. And so, in our thinking about the potential topics for consideration, we may just want to take into account that there is now a proposed rule that is addressing some pieces of these that may not have been considered when the recommendations were made here. In terms of the protection of sensitive health data, to Hans's point, there are so many pieces in this. There is a policy and legal piece, and this question of harmonization of state law, and one of my questions would be do we make recommendations to other federal agencies, since ONC would not be over that piece, although I believe Dr. DeSalvo, at some point, was starting to spearhead a group around harmonization of state laws as well, so this may be the place to start to recommend an interdepartmental organizational group around some of that work.

To Eliel's remarks, first around consent, consent management and granular consent has to interplay with granular segmentation. You need the ability to granularly segment the data, you need a semantic conceptual model to define what we mean by sensitive data, and then you need a granular consent piece to drive a patient's preferences around what data they will share or not share, and with whom, and that applies to sharing data in the TPO space as well as thinking about data for research or actual third-party apps' AI/machine learning down the road as well, so I think that is a key part of this, and there are some groups, such as Stewards of Change Institute, which has brought together groups to talk about this, and there are certainly groups that are putting together granular consent tools, and ONC has done a lot of the earlier work on this, and it would be great to pull that up for background.

And then, finally, my last comment is around the focus on women's health. Again, I think this was made prior to the HHS/OCR notice of proposed rulemaking as well specifically related to *Dobbs* and concern around reproductive health. There certainly is a concern around reproductive health in light of the *Dobbs* decision and prior to that. There are a number of state laws that protect reproductive health specifically for adolescents, and so, that is sort of a legislative lever for some of this work as well. As Eliel brought up, social determinants are another use case, and Shift, the Task Force that I lead, has been working with the Gravity Project around a social determinants use case for granular segmentation.

We also have an adult behavioral health use case that we actually think is a little bit simpler to start with than either a reproductive health use case or a social determinants use case, the reason being a lack of harmonization around state laws, and so, those are three use cases, and then there is sort of a final use case around shared data in the chart that impacts reproductive health, and also, in general, longitudinal medical records and social determinants of health in a shared record as well, so I think there are a number of vetted high-priority clinical use cases that could be considered here.

Aaron Miri
Great points, Hannah. I appreciate that. Medell, anything you want to add to that?

Medell Briggs-Malonson
No, that was wonderful, and I appreciate all the expanse of clinical case models, and we need to consider that, and what are some priorities in this space that we want to pick out and highlight within the annual report, so we will be able to dive into it. Eliel, we see your hand, and then we do want to get through some of the other topics in order to get comments as well, but we are already on the first topic, which already shows we are going to have a great, great year thinking of all the topics to include. Eliel?

Eliel Oliveira
Thank you, Medell. Just a quick point on the consent, and I know we are going to dive into that later, and Aaron had some great points there about how this has been around and about granularity and all that, but one thing for this group to discuss here is almost like a new strategic point of consent, in my view, where we have talked about this for a while, I think we know the importance, but there is not anything technically feasible implemented, and if we had a fast way to decide, like Hannah was saying on the SDOH side on consent, and identify what are some key use cases that we can address and create that structure to know the patient's decisions and wishes, and then grow from that, something that can scale for everything else. I just wanted to throw that out to the group to consider as we talk about that, but that is it, not another topic.

Aaron Miri
Good point. Hannah, I do want to answer your question about referring to other agencies. We have done that, historically. We have had listening sessions, and we have invited joint collaborative discussions, and so, that is something we have done with previous report workgroups, and of course, the full HITAC. It does require some discussion, but in Aaron's words, the air traffic control component of the ONC does a great job of pulling the right people together to have those talks, and we have had the OCR and others come talk to us before, and they do a great job of it, so I think that is something we can definitely recommend to have them help us with. So, I wanted to answer that, since you asked the question.

Hannah Galvin
Thank you.

Aaron Miri
Yes, ma'am. All right, Medell, if you are good with this, go to the next topic.

Medell Briggs-Malonson
Safety and impact of mobile apps. Eliel, this was one of the topics that we ended up tabling from last year to this year, and once again, looking at federal government and thinking about the frameworks in order to assess the safety of our mobile apps, and also in partnership with some of the other agencies, so we just wanted to open this up to the workgroup in order to see if this is still a topic that we want to consider for incorporation into our annual report this year, and if so, are there any other expansions that we want to make sure to add onto it as well? Any thoughts?

Aaron Miri
It is quiet. Everybody got their comments out with the first one.

Hannah Galvin
I think this is very important, and I think that we should consider all of the potential topics that come up here and then prioritize them, but I think this certainly is a very important topic, and others have been providing guidance on this as well.

Aaron Miri
It is almost like we need a version of the SAFER guides for health IT.

Hannah Galvin
Exactly.

Aaron Miri
That is where my mind goes. We need some sort of guardrails like that.

Hannah Galvin
I think the AMA has provided some guidance to their providers, for instance, on how to recommend a safe mobile health app, and so, I think there is a lot of work being done nationally in this space. How do we pull some of that together and release some very specific guidelines? I think that would be very helpful.

Aaron Miri
Good point.

Medell Briggs-Malonson
We will definitely prioritize all the topics prior to the final draft of the report, so we will definitely do that too, Hannah. Eliel?

Eliel Oliveira
Thanks, Medell. I was waiting a little bit before making any comments to see if anybody was going to say this needs a goal, but since it seems like we are on board here, this is an important topic. I wanted to add an expansion to it which is related to digital divide, and what I mean by that is in some of the work we did here from the medical school with support from ONC and the LEAP Project in 2019-2019 was a lot about the CURES Act, patients' access to their health data, and being able to share with others. What we learned through that process is that underserved communities really do not have a lot of capability to access their data and to be able to do something with that, so I think as we are talking about these mobile apps and ecosystems, we also want to think a bit about what would be an ecosystem that would work here for underserved populations because the incentive in the marketplace is for apps that generate some financial benefit, and that is not necessarily what is going to solve challenges for underserved populations.

So, I would be happy to share that with the group. The White House Office of Technology explained a little bit about that point specifically and an RFI that they had last year, but I think it is also important to consider that those who are most in need are not necessarily going to have access as they become available.

Medell Briggs-Malonson
Eliel, I agree with you 100%, and I would actually add an additional aspect on top of that in terms of inclusivity in design of the mobile apps, and when I say "inclusivity," I am not only talk about language concordance and building that into the apps, but also adjusting and thinking of ability status. Outside of some of the digital divide pieces of it, there is also the accessibility issue of ability status of individuals, so there is language accessibility in general, but there is also, of course, thinking about how we design these apps in order to ensure that we are centering those we are serving with those apps, so I think while there has been a lot in the space, especially from the FDA, about safety, we also have to think about the safety and utility so that we do not worsen some of the inequities that we currently have because these apps are working for one group of patients or people, but not for many others. So, I do agree with that, and I think we can bring these together and put an even greater spin on it, which complements the work that is actually going on nationwide. Hans did have his hand up, but then I think it went down.

Hans Buitendijk
It did go down because I was potentially going to other areas, so I was going to wait for that.

Medell Briggs-Malonson
Okay, very good. Hannah?

Hannah Galvin

I also was going to go to other areas, so I can wait until after Hans. Maybe I can just bring up here one of the barriers related to the digital divide and one of the reasons for the digital divide, which is a lack of adequate access to broadband internet by many populations in this country, and I wonder if that is a separate potential topic for consideration under our equity by design goal and target area. There are many cities and communities in this country that still cannot access broadband internet where much of the population still cannot access broadband internet, which has significant limitations on quality-of-care health status and the ability to utilize any of these technologies, so I would like to propose that as another potential topic.

Medell Briggs-Malonson

You will see in the next set of slides, Hannah, that we actually do have a piece of that for the landscape, because to your point about the digital divide, there is the broadband, but also accessibility of wifi, but there is also even the digital divide with digital literacy. There are so many aspects of the digital divide, like how we start building out the infrastructure of broadband, but most importantly, we do know everybody has phones. That is something that we do know across our country, as well as globally, that digital tools exist, but there are aspects of these digital tools, such as broadband, which may be more variable, especially in our most underresourced communities, but we are still in a digital-first type of country and world, where people still have phones, but they are using mobile and not using broadband, so how do we change the way we are developing our health information technology structure so we are not basing our innovations in our apps and portals on broadband, but actually using more 5G and more of our mobile capabilities and systems? So, yes, that is definitely within the landscape that we are going to get to next, and those are all very important points.

Hannah Galvin

Great, I am looking forward to it. One additional point I will make is that many individuals who are using their phones and their cell service for data may have limited cell service plans and need to be very careful about their data usage, which limits their access as well.

Medell Briggs-Malonson

I agree in every way.

Hannah Galvin

Great.

Medell Briggs-Malonson

So, Hans, should we go back to you for the next topic?

Hans Buitendijk

If that is okay. The main comment I was going to make is I was looking for the HTI comments, and a number of those would be good topics for the Annual Report Workgroup. Is that going to be one of the things that ONC staff is going to go through and then start to add them to the list, and then we can run through it, or is there another step that we would want to go through to review them before that happens? I think there is a handful, five or six, that sit across the different tabs where the workgroup was called out.

Medell Briggs-Malonson
So, that is something that was brought up as well, and what our ONC staff is going to do is take a look at all the different recommendations from the HTI Task Force in order to try to propose some of those that may be very applicable to the annual report, so yes, they are going to help us sort through that because there is so much great information that is coming out of the HTI Task Force right now in terms of the work, so yes. Hopefully we can bring those back, and then we can also put them into our prioritization matrix in order to see which ones we want to include for sure, but I think we all have a feeling that some of the ideas from the HTI Task Force in all of our recommendations will be very front and center in the annual report this year.

Hans Buitendijk
Yes, it will be a good source for inspiration.

Aaron Miri
Yes, and the ONC team did message us after our last meeting, Hans. They are collecting all of that and working through it, so we are going to give them a hot minute to sort through the ideas and the comments, but they are definitely on top of it.

Hans Buitendijk
Thank you.

Aaron Miri
Yes, sir.

Medell Briggs-Malonson
All right, should we go to the last one, bias concerns, algorithms, and clinical decision support tools? This is directly related to HTI-1, the DSIs, and some of the conversations we have had, but any thoughts about this as a topic or how we should potentially roll it into some of the other topics?

Aaron Miri
Go ahead.

Hannah Galvin
Please, Hans, you had your hand up.

Hans Buitendijk
By a fraction of a second. Either way, it is fine. This is a good topic in context of today's questions about how to apply AI and what the concerns are, but generally, with analytics research, what is good use of the data and not-so-good use of the data, as well as to what extent source systems that provide that content have opportunities to improve on the quality of the data that can help ensure that better analytics can be done and the challenges in that space. Frequently, we see that data can be collected, but is not collected, or it is collected, but not quite at the level of granularity or quality that is needed to have a worthwhile outcome or analysis that is informative, so think it is an up-and-down-the-chain challenge on how the different pieces are put together, so the outcome is reliable, transparent, actionable, and applicable.

That is the larger challenge: Again, how do we weave that into it to look along that chain? Particular examples are going to be very helpful to step through and understand that. Having an overall perspective on how it should fit together is then critical as well to make sure that whatever that specific topic was is not going to lead to an implementation by HIT, that it works for that, but is stuck for other things that have similar concerns. That is where you will frequently see my comments coming from. Do we have an approach that fits together where a variety of concerns can be addressed, not only the specific one that has been discussed on its own?

Medell Briggs-Malonson
Absolutely, thank you for that, Hans. Hannah, and then, Aaron, I know you were coming on and off, so I saw your hand too.

Hannah Galvin
Thanks. I agree that this is really important. I am interested to see the comments we are going to talk about tomorrow or maybe Thursday that will be coming from the subgroups for the HTI group around this. I think there is some good literature out there from AMEA and others who have some guidelines and recommendations around this, so I do think this is a useful topic for consideration. I think I am still getting a hang of the reporting workgroup, how much we are taking from what some of the other groups did, and how much work this group is doing de novo to understand, but I expect there to be a lot of good recommendations that are coming out of the group discussion later this week to start with this, but perhaps you can guide us.

Aaron Miri
No, you are spot on, Hannah. You are exactly right. In a lot of these topics, we do try not to recreate the wheel, and we try to lean hard into what other subgroup committees are talking about, and even when something comes up out of the blue, like COVID-19, knock on wood, we try to adjust appropriately to match the relevancy and currency of what is happening, so I think those are great points, and that is one of the magic things that ONC does, is they know how to somehow translate all that work into some concise, really easy-to-follow report, so that is Michelle and team that do that work, so I am sure they will rise and shine again, as they have done every year, but those are good points.

Medell Briggs-Malonson
Hannah, one other last piece to that is that again, the point of the annual report is to highlight the great work, the recommendations, and the thought leadership of HITAC, so that is why those trends and themes come directly into the annual report, and based off of what HITAC feels are some of the most important items to put forward to the rest of the landscape. That is really what our charge is, to really identify those topics that we know have great significance and potential impact and that we want to communicate out to all.

Hannah Galvin
Thanks for that context.

Medell Briggs-Malonson
Aaron, you were going to say something as well before.

Aaron Miri

I was really just going to illuminate that. We have been talking about a lot of biased algorithms for at least the past three workgroups, so there is some good data and some good research items that were done prior that we can build upon as well, Hannah, besides the HTI-1 and other stuff that is going on. You are exactly right. So, I think as we pull this forward, what I love about HITAC and the annual reports, which we talked about in the very first HITAC, is that it shows how forward-thinking this HITAC is, and we were anticipating a lot of these challenges, like this, digiceuticals, or other items years ago, as was the Policy Committee and Standards Committee in the tag routines way back in the day, but now, as it comes to fruition, everyone is like, "Oh my goodness, AI, AI bias!" We have been talking about this for years. We know there is a problem, and we have to address it.

So, I think it is a great point for us to pull forward, and another topic I have always brought up, too, is to make sure the work of the committees of the past does not just sit on a shelf, that we brush it up and pull it forward, because those are brilliant people, and let's bring those ideas forward and say, "Is the time now right to do some of the things that they were talking about even before Dr. DeSalvo? Is the time now right to do those kinds of things?" So, it is a great point, and this ONC team does a great job of pulling those things off a shelf and saying, "Hey, have you thought about this? Have you thought about that?" Hannah, if you know of other items, like the cybersecurity tiger team back in the day, or the API Task Force, or the Argonaut Project stuff that we did back in the day, all those nuggets feed into these columns. Let's pull those forward as reminders for the ONC. They love that. All right, next page.

All right, there are some good ones here. Improving health IT infrastructure for health equity and social-determinants-of-health data. Since this is a TBD, I will start summarizing this, and then we can all dive into it. So, I think we have alluded to it today, and this is really for Michelle and team, as I know they are taking copious notes behind the scenes, regarding the equitable ability to capture those social determinants about us that make up the total comprehensive landscape of the patients that we serve, from food deserts, to patient-reported outcomes, to all the pieces that we have talked about at USCDI. There may not be defined variables and data fields yet, but they are on the roadmap, and all those pieces that make up truly who we are in a very equitable way, and more importantly, for the ability of folks, regardless of socioeconomic status, where they come from, gender, all the pieces, to be able to report in and have access to that data. So, that is a very 100,000-foot view of what this is with social determinant data, but I look to this committee to opine and add. Please, pile onto that.

Medell Briggs-Malonson

If I may jump in and start to add some additional pieces, in addition to what you said, Aaron, which was so important, we cannot achieve health equity and justice without ensuring that we are supporting all of the various other socially based infrastructures that we need in order to drive health equity and justice, and what I mean by that is that while we are thinking about the health IT infrastructure to look at health equity and social drivers, one of the things I would love for us to start thinking of is how we continue to support our community-based organizations that are oftentimes responsible for helping to address those social needs on both an individual as well as a population level. We talked about the closed-loop referrals before, but how do we continue to support that workforce, that health IT infrastructure, and, oftentimes, those much smaller organizations? But then, it also goes back directly to public health, which is the next one, but again, this is all related because in order to drive and improve health equity, we also have to think about supporting

and having those interoperable structures with our public health entities as well, and also across the entire continuum of provider care.

And so, I think all of those pieces are very important, and the only last piece I would add that I really would love for our annual report to focus in on, which is something we are doing with HTI and many others, is that we need to continue to incorporate the voice of our patients and their caregivers, meaning their families and loved ones, so part of also improving our health IT infrastructure for this domain should be also thinking about the interoperability of data that is being generated by our patients and ensuring that they are also very accessible to it in order to ensure that they have full visibility and transparency and can also make decisions in their overall health and health outcomes. So, those are just a few more elements I would add onto the landscape of this first section in general. Eliel, we see your hand, too.

Eliel Oliveira

I will add a couple of thoughts here, Medell and Aaron. One is on the infrastructure side. So, we all know about the EHRs, the certification programs, and how we guarantee the data can be exchanged, and all that, but now we are talking about a completely different world of organizations that are using disparate systems that have to communicate with the EHR or clinical providers to then highlight what is taking place with those referrals, and I think that might be an area of landscape analysis, to see what systems they would use, even if there is a system, like some of the CDOs, which are pretty small, and if there is not a system, what do we do about it? Again, we need that visibility to understand what is going on with those referrals. This is me talking a little bit about my presentation that I will have next week at our face-to-face meeting, but that is one aspect, that infrastructure that somehow needs to exist to then allow for this communication and interoperability.

The second aspect of this, and again, you are going to see this in my presentation next week, is the harmonization of data. We have the USCDI, and you all know about the standards that came out of the Gravity Project, but through our work here, we are finding that data harmonization for assessments of needs is going to become a big problem down the road if we do not address it early on, and I usually compare to labs because, as you all know, if you have a large health system that does the labs in-house, they can call the labs anything they want, use whatever metric, and when we try to use that for research or other purposes like COVID warning systems or surveillance, then you cannot harmonize that unless you have some deep pockets to do that manually.

So, maybe try to prevent what happened to labs with needs assessment. Even though there are some standards there, small organizations are coming up with whatever they need to get answers that they need, and trying to force them to use a standard format might be a tough thing because they have already integrated their workflows. So, anyways, that is a lot to say, but those two things are important to me in terms of using that landscape analysis of what we do about those two aspects.

Medell Briggs-Malonson

Fantastic, absolutely. We look forward to your presentation next week as well. Thank you for the preview. Hannah?

Hannah Galvin

I agree with Eliel. I think the baseline concern here is how CBOs and other pieces of the healthcare system are collecting structured data. They have not been incentivized to implement certified electronic health record technology in the way that many providers and healthcare organizations have, and I think it does not justify to social determinants data or health risk assessment needs data, but as we consider things like privacy and consent as above, we run into these barriers with really large swaths of the system where a lot of patients get significant services from the exchange of data, not to mention school health systems where there are large pieces of **[inaudible] [00:53:29]** that have been left out of Meaningful Use and have not been incentivized to implement certified technology for structured data. And so, I would say I would be in favor of potentially using social determinants data as an initial use case, but it is really the infrastructure across the nontraditional provider organization support structures to be able to support the continuum of care.

Medell Briggs-Malonson

Yes, there are so many incredibly important topics there, Hannah, and this goes to your comment and Eliel's. Now that we have regulatory requirements, even, for screening for social drivers of health without having, again, that infrastructure and helping our community-based organizations, are we going to almost hobble them, and in addition, is it a disservice to our patient population? So, these are all the things that we absolutely need to think of, as well as that data infrastructure to do this work appropriately to really drive the overall health and healthcare outcomes and social outcomes that we all hope that this drive. All fantastic points. Is there anything else that you think we should add to this piece?

Hans, you are saying adding a social-driver-of-health analysis, and notice I am using the term "social drivers." I am saying that to the ONC team. There is a reason for the term "drivers" versus "determinants," and that would be a strong recommendation, that we change some of the language to "drivers" versus "determinants" because of how dynamic these items are versus determinants, which tend to be more fixed and almost not mutable. So, a lot of us use the term "drivers" because it is dynamic. You can modify and change them as opposed to determinants, which seem fatalistic and fixed. So, that is just a recommendation there for us to change that. Any other recommendations for this very first one?

Hans Buitendijk

The suggestion I made that perhaps an applicable target area is that there might be a public health component to that as well, even though there is a main requester of such data increasingly to get a full complement of data to understand context.

Medell Briggs-Malonson

Correct. Love that. So, Aaron and the workgroup, I have to transition because there is a data equity symposium that I am also taking part in right now, so I am going to transition you into the wonderful, highly capable hands of Aaron, and I will see you all in D.C. next week as well. Bye, everyone.

Aaron Miri

Thank you, Medell. Have a good one.

Medell Briggs-Malonson

Thank you.

Aaron Miri

You are welcome. All right, let's truck on through, team. So, the next one we are going to do is ELR, ECR, and syndromic surveillance, optimizing public health exchange and infrastructure. I will say that the previous Annual Report Workgroups have had robust discussion around this. Mr. Steven Lane did a great job of organizing these topics, especially in 2020 and '21, the height of COVID. We have learned a lot since then, so I look forward to taking this to the next level, but I look forward to your feedback and comments here around how we do this in a robust way from what we have learned. Hans, you are up first.

Hans Buitendijk

Yes, I think this is a great topic, as are all of the other ones, where, over time, we are learning more and trying to figure out what else we need to do, and there is still a lot to be done there. From that perspective, I think "includes" is a good starting word there because it is not only ELR or ECR and syndromic surveillance. There is also immunizations and vital statistics, and it is also the feedback loop. We provide data to public health, but what does public health provide back to provide improved context? At this point in time, Helios has one of their tracks aligned and optimized, which includes these three, but other ones as well, to figure out how those data flow can be enhanced. Is everybody able to share, and are we sharing the right data through the right channels?

So, I think it is a good topic, but I would not limit it to ELR, ECR, and syndromic surveillance. They are a good example of some areas. In the past, from an EHRA/EHR perspective, I have brought up that these data flows are seemingly overlapping and not optimized for what needs to occur. At the same point in time, there are variances that we need to acknowledge and understand that it still needs to address individually as well. We have not figured it out yet, and I think it is a great topic to dive deeper into and see what else we still need to do to enhance on that because we are not there.

Aaron Miri

Good points, good points. What else, team? Okay, any other feedback on this? I think Hans had a good point.

Eliel Oliveira

Just a thought here, Aaron. I completely agree how important this is, especially with what we have with COVID. So, I would love to pose the question as we discuss this going forward. Are we ready now for another pandemic and the surveillance systems being deployed? So, keeping that question in our heads may help us see how we can bridge an additional gap so that we do not find ourselves… It does not need to be a global issue. I think we have disasters and emergencies going on all over the place, and the solution to some of these surveillance systems could be quite helpful in so many situations.

Medell Briggs-Malonson

There could be international support and how we do this syndromic surveillance on an international scale, as we have learned data sharing internationally with a lot of the pandemic happenings and learnings about how we actually do contact tracing and things like that, and what we learn there. There are a lot of pieces there. Hannah, your hand is raised.

Hannah Galvin

I think one of the newer technologies that has come up during the pandemic is wastewater data and how we incorporate that into public health data as opposed to our previous means for surveillance, so I think incorporating that would be important.

Aaron Miri

That is a great point, and I would say all biomarker data, right? That is a big, important point right now, what to do with biomarker data. I know here in Florida, there was even a bill considered to really banish that, and it was paused, thankfully, because of the fear of the unknown of what could happen, which is a fair and valid concern. So, how do we regulate that? Hence wastewater, hence other things, so, great points. Obviously, that is something to double-click and dig into that one. Next one: Supporting interoperability standards priority uses.

Now, this is one that has been there for quite some time, since, I think, the dawn of the Annual Report Workgroup, and we continue to learn more about interoperability standards. I do want to note that this has been a standing agenda item, so HTI-1 and others will obviously contribute to this, as well as recent efforts with the USCDI Task Force and others, but are there specific topics we should double-click on when it comes to interoperability? Eliel, I think this speaks to some of the stuff you were talking about earlier around SDOH, systems talking to each other, and what the new world looks like, but I think we should really talk about what the forward edge is here. Of course Hans has his hand raised on this one, his favorite topic. Hans, you may be muted.

Hans Buitendijk

Sorry. I appreciate that, and yes, sometimes interoperability comes to the top of my list, but I actually wanted to build on the comment that Eliel made around SDOH, and that comes back in general here. We talk a lot about how we can share data, we can solve a particular operational need, and from a workflow perspective, we can get quick access, but the quality, consistency, and completeness of the data that is needed in order to create value out of that continuously as the data moves around is still a very hard topic. Are we all using the same vocabularies? Perhaps, but I am using it slightly different than somebody else's, and therefore it still becomes incomparable or hard to compare. So, the things there are that interoperability is not only a technical issue, but a practice issue. It is an understanding of what data is important not only to me, but to others to reuse secondary data use of that data with the least amount of burden by the source that is natural to do, and to me, that needs to be part of interoperability as well. We are sharing lots and lots of data, increasingly more.

What we also see is that we are sharing so much that easily, putting my AHRQ hat on, we are seeing that our clients are frequently getting 80-95% of the data back that they already had. How do you filter that out? It is not an interoperability technical component, but it is data quality and content. How can we right-size? How can we do that? So, to me, somewhere, we need to figure out how we can enhance on that so we have right-sized data, the right data, comparable data, and complete data, and we always know it is not going to be 100%. People are not going to answer certain questions, period. That will happen, but what can we do there? That might be an interesting topic to look at. What can we suggest on where to focus? How can we advance that, now that we have the pipelines open?

Aaron Miri

Great points, Hans. Any other topics? Eliel?

Eliel Oliveira

I will add one thought here, given the landscape analysis, maybe the possibility of us working towards selecting a couple of important interoperability use cases, priority use cases. The one that comes to mind here that I will mention to folks is the fact that, five or six years ago, if you went to a pharmacy and you had a prescription, you needed to bring that little piece of paper, and somebody was going to take it and tell you to come back, but suddenly, you do not need to do that anymore. The doctor basically asks you your pharmacy preference, you tell them it is on the corner, and it is going to be there. You are driving home, and they text you that it is ready to go and you can come pick it up. That is one use case that is very complex, of course, to get all these EHRs and pharmacies to get that done, but I just feel like looking at this, it has been a topic that has been around, as you said, Aaron. If we just pick one or two major… But which ones are those? Maybe the landscape analysis could help us define which ones we could attack and focus on, so that is my thought here on a way to involve this.

Aaron Miri

Good point. Landscape analysis never hurts. I do know that we have some work done there too, so maybe we should true up our existing landscape analysis of what that looks like and what is emerging. I know there is a bunch of interoperability standards work that is going on at other agencies, CMS and others coming to mind, so what can we true up there as well as we look at things? I want to say it was in 2018 or 2019 that Dr. Rucker led seminar groups around prior auth with CMS, and that began a conversation about data exchange, data flow, and what we do there, so there has been a lot of work done over the years on those pieces. Other comments or thoughts? Hannah, any thoughts from you?

Hannah Galvin

I do not think I have anything new to contribute here, thanks.

Aaron Miri

No problem. Last but not least on this list is increasing access and accessibility of telehealth services, again, another one that has been on our list for a hot minute, but is still very, very important, especially if you are talking about the domains of equity and others. Hannah, your hand is raised. Go for it.

Hannah Galvin

So, with the end of the PHE, there is a legal piece to this and understanding the various state…well, what CMS is going to cover from an insurance perspective, what states are then going to support, and what state Medicaid programs may cover. So, I guess it is not as much a legal piece, but a payer piece that drives the accessibility of telehealth services, and so, I think understanding that and whether or not a floor could be put in place, though I think there has been a proposed floor already around what should or should not be covered, could be a piece to this. Then, there is the broadband access, as we talked about before. There are many pieces that are part of the digital divide, such as digital literacy and broadband access to devices here, so I would think about us looking at both of those angles. This is very much a moving picture and a moving target right now as we understand the various requirements in the wake of the end of the PHE, so I think there is a lot of good and meaty discussion here.

Aaron Miri

Good points. Eliel, your thoughts?

Eliel Oliveira
What I was going to add here, and based on the previous discussion that we had about equity and individuals having mobile apps, access, and all that, I think what is related a little bit is we now have quite a bit of resources to expand telehealth in rural areas and so forth, but I do not think what I have seen is support for individuals that are underserved and already high-need to actually get that data access on their mobile devices. I am saying this is our experience here, where we are trying to do certain things with mobile apps with patients in real settings, and they are still saying to us, "Well, this is great, I would love to participate in this project, but I cannot use the app because when I get a few extra minutes of credits, I need to call my doctor, I need to call my mom, and then I run out of credits again," so I think we still have something to fix in terms of telehealth specifically, but more in terms of access to just the cell service of individuals. I think we covered the organizations under the telehealth funding that is out there, but not underserved populations.

Aaron Miri
Agreed, very good points. Hannah?

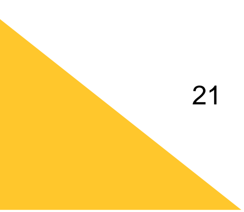
Hannah Galvin
Just to add to that, there is an FTC program that sponsors access to broadband, if not the cell service, but I believe you have to have a Social Security number to apply to that, the application is a little bit complicated, and for those who may not speak English as their primary language, it may be difficult to fill that out, so I think that potentially working with the FTC as another agency to understand how to make that more accessible might be one area. The other thing I would like to point out is the barriers for those who do not speak English as a primary language. In a lot of these mobile telehealth apps, even if you are speaking to a provider who speaks your language or you get an interpreter on the line who speaks your language, the app itself is in English, so there may be barriers in navigating that app for people who do not speak English as their primary language, so while there are these many other barriers in some communities, there is a real barrier around actual English literacy as well as digital literacy.

Aaron Miri
As well as ADA compliance and everything else. Great points.

Hannah Galvin
Yes, 100%.

Aaron Miri
Great points, great points. I think that is very, very. Other pieces or feedback here? Other comments? Okay. So, as you see, we are running close to time here This is a nice, robust discussion we have started. Go ahead.

Hans Buitendijk
Aaron, I have one other question here. Most of the time with telehealth, we are talking about inside the U.S., and there is some amount, perhaps not a large amount, of cross-border. What are the implications there and what would we have to look at to address some of the challenges there? I am not sure whether



it is sufficiently large enough of an issue, but I do note an example that I think in your state, a law was recently passed where data should reside.

Aaron Miri
Yes.

Hans Buitendijk
How does that relate to telehealth or a patient moving around outside the country where data is being accessed or not? Does that encompass that or not? So, I think there are some generally questions starting to increasingly pop up as I travel to Europe, and I am accessing from there back to my provider here. It is a small area, but it is something to consider here as well.

Aaron Miri
That is absolutely right, with all the complications with GDPR and other pieces as it feeds into the big, tangled web of stuff. Great points, great points. All right, other feedback, items, or questions from the team? All right, Mike, I know we are running close here. Do we feel comfortable opening up for public comment?

Public Comment (01:13:28)

Michael Berry
Sure, I am happy to do so. We are going to open up our call for any public comments. If you are on Zoom and would like to make a comment, please use the hand raise function located on the Zoom toolbar at the bottom of your screen. If you are on the phone only, press *9 to raise your hand, and once called upon, press *6 to mute and unmute your line. So, let's pause for one moment to see if any members of the public raise their hand. I am not seeing any hands raised, Aaron, so I will turn it back to you to close us out.

Aaron Miri
Perfect, thank you.

Michael Berry
Sorry, Aaron, we do have a hand raised.

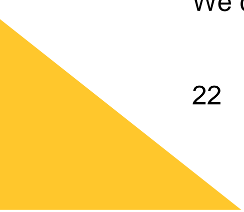
Aaron Miri
Oh, perfect!

Michael Berry
Linda Huber, you have three minutes. Go ahead.

Linda Huber
Thanks, can you hear me?

Aaron Miri
We can.

Michael Berry
We can, thank you.



Linda Huber
Amazing, hi. Thanks so much. I am glad to get to be the one public comment today. This is an interesting call to listen to. I am a PhD student researching interoperability and I just wanted to hear what you all are working on with this project. I heard a couple themes across some of the topics you all raised that I wanted to bring together just in terms of…I think there was something discussed earlier about support for the community-based organizations that are behind SDOH, behind some of that data that we are trying to connect to the main healthcare-type things we have already built, and the theme of just ensuring there is actually enough funding and support for those organizations to even do this day-to-day data work that is required, and it also connects to the theme we are hearing across the industry right now about provider burnout and lack of support for just the people doing care work on an everyday basis, and I am curious if you all are thinking about the human infrastructure in terms of data work. That may be a theme now that it feels like some of these data infrastructures are really in place, some of the technical standards are in place, what attention might be paid to the human infrastructure or the data workers, whether they be providers, nurses, or community-based organizations and places like that. That is my comment. Thanks again.

Aaron Miri
Great feedback, Linda. Thank you so much for that. I will say that there are some great grants in the ONC related to worker upskilling. They put their money where their mouth is, and I really appreciate the administrations, plural. They have been doing that even in previous administrations, always funding the next generation of students, so I will put a plug in for the ONC, as they have some great grants to upskill, but to your point, there is still a lot of work to be done. Great comments there. All right, anybody else, Mike?

Michael Berry
No, I am not seeing anyone else, Aaron.

Next Steps and Adjourn (01:16:28)

Aaron Miri
All right. So, I just have a couple quick administrative things, and then we will wrap this party up. We obviously have an Annual Report Workgroup meeting next week, shortly followed by the HITAC meeting. Be there or be square, so we can all discuss and really get this going. The Excel team and ONC team will take this topic list crosswalk and begin to put it together as something to synthesize, but the in-person meetings are always fun because we can brainstorm and whiteboard together really quickly and ideate on the fly, so that will be next week after our HITAC meeting, and there will be good discussion there too. Any last follow-up questions or comments from you guys? Hans, your hand is raised. Go for it, sir.

Hans Buitendijk
You indicated that after the HITAC meeting next week, there is going to be more time on it. I am just checking my calendar, and I am not sure… Oh, there it is. So, that is the additional half hour.

Aaron Miri
Yes. You are invited to the party, Hans. You are there. We expect you at the party, my friend. We are doing it just for you.

Hans Buitendijk
I will make sure my train does not leave too early.

Aaron Miri
There you go, perfect. Awesome. All right, guys, if that is all, I will close this meeting out. Thank you very much for the great discussion today, and I will see you next week. I look forward to it. Travel safely.

Eliel Oliveira
Thanks, everybody.