U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

INTERAGENCY AUTISM COORDINATING COMMITTEE

CONFERENCE CALL

FRIDAY, DECEMBER 13, 2013

The Full Committee convened via conference call at 12:00 noon to discuss updates to the Strategic Plan, Dr. Thomas Insel, Chair, presiding.

PARTICIPANTS:

THOMAS INSEL, M.D., *Chair*, IACC, National Institute of Mental Health (NIMH)

SUSAN DANIELS, Ph.D., *Executive Secretary*, IACC, Office of Autism Research Coordination (OARC), (NIMH)

IDIL ABDULL, Somali American Autism Foundation

JAMES BALL, Ed.D., JB Autism Consulting, and Autism Society

LINDA BIRNBAUM, Ph.D., National Institute of Environmental Health Sciences (NIEHS)

COLEEN BOYLE, Ph.D., U.S. Centers for Disease Control and Prevention (CDC)

JOSEPHINE BRIGGS, M.D., National Center for Complementary and Alternative Medicine (NCCAM)

JOSE CORDERO, M.D., M.P.H., University of Puerto Rico

JAN CRANDY, Nevada Commission on Autism Spectrum Disorders

PARTICIPANTS (continued):

GERALDINE DAWSON, Ph.D., Duke University Medical Center and Duke Institute of Brain Sciences

TIFFANY FARCHIONE, M.D., U.S. Food and Drug Administration

ALAN GUTTMACHER, M.D., *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD)

LAURA KAVANAGH, M.P.P., Health Resources and Services Administration (HRSA)

WALTER KOROSHETZ, M.D., National Institute of Neurological Disorders and Stroke (NINDS)

CINDY LAWLER, Ph.D., National Institute of Environmental Health Sciences, (NIEHS)

STANLEY NIU, U.S. Department of Defense (DoD) (representing Donna Kimbark, Ph.D.)

LYN REDWOOD, R.N., M.S.N, Coalition for SafeMinds

SCOTT ROBERTSON, Autism Self Advocacy Network (ASAN)

JOHN ROBISON, Author; Scholar in Residence, College of William and Mary

ALISON SINGER, M.B.A., Autism Science Foundation

LAWRENCE WEXLER, Ed.D., U.S. Department of Education (Ed)

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Operator: This is the conference coordinator. Please continue holding. Today's conference will begin momentarily. Thank you. Please continue holding. Today's conference will begin momentarily.

This is the conference coordinator. Please continue holding. Today's conference will begin momentarily. Thank you. Please continue holding.

Operator: Welcome, and thank you for standing by. We would like to inform all participants that they are in a listen-only mode for the duration of today's call. Today's conference is being recorded. If you have any objections, you may disconnect at this time.

Now I'll turn today's meeting over to Dr. Susan Daniels. Thank you. You may begin.

Dr. Susan Daniels: Good afternoon, and welcome to this call of the Interagency Autism Coordinating Committee on Friday,

December 13th. We are looking forward to having a discussion with our Committee members about the IACC's Strategic Plan updates.

I would also like to welcome our listening guests who are on the line. If you're interested at looking at the materials for this meeting, please go to the IACC Web site and look at the Meetings and Events page, and you'll find a link to all the materials that have been provided to the Committee.

To get started on today's call, I'd like to take a roll call to see who's here. So I'll start with the Federal members.

Tom Insel?

Dr. Thomas Insel: Here.

Dr. Daniels: Thanks.

Jim Battey?

Linda Birnbaum?

Dr. Linda Birnbaum: Here.

Dr. Daniels: Thank you.

Coleen Boyle?

Dr. Coleen Boyle: I'm here.

Dr. Daniels: Thanks.

Josie Briggs?

Dr. Josephine Briggs: I'm here.

Dr. Daniels: Thank you.

Tiffany Farchione?

Dr. Tiffany Farchione: Yes.

Dr. Daniels: Thank you.

Alan Guttmacher?

Dr. Alan Guttmacher: Here.

Dr. Daniels: Laura Kavanagh will be joining the conference call a little bit late today.

Stan Niu on behalf of Donna Kimbark?

Mr. Stanley Niu: Yes.

Dr. Daniels: Thank you.

Walter Koroshetz?

Dr. Walter Koroshetz: Yes.

Dr. Daniels: Thanks.

Linda Smith? Or Shantel Meek on behalf of Linda Smith?

Dr. Daniels: Maybe they'll be joining us later.

Larry Wexler on behalf of Michael Yudin?

Dr. Lawrence Wexler: Yes.

Dr. Daniels: Thanks.

And then we will go down the list of public members.

Idil Abdull?

Ms. Idil Abdull: Here.

Dr. Daniels: Thank you.

Jim Ball?

Dr. James Ball: Yes.

Dr. Daniels: And I believe Anshu Batra was not going to be able to join us, or Noah Britton.

Sally Burton-Hoyle?

Matt Carey?

Jose Cordero?

Dr. Jose Cordero: Here.

Dr. Daniels: Jose, are you still there?

Dr. Cordero: Yes, I am here. Can you hear me? Yes.

Dr. Daniels: Thank you.

Jan Crandy?

Ms. Jan Crandy: I am here.

Dr. Daniels: Thank you.

Geri Dawson?

David Mandell?

I think I heard David earlier.

David, are you here? Oh no, he's not. He's joining the conference call a little bit late.

Lyn Redwood?

Ms. Lyn Redwood: Here.

Dr. Daniels: Thank you.

Scott Robertson?

Mr. Scott Robertson: Here.

Dr. Daniels: John Robison?

Alison Singer?

Ms. Alison Singer: I'm here.

Dr. Daniels: Thank you. So we've gone down the list. We have everyone, and I think we have a quorum. Yes. So we are in good shape.

So I would like to give Dr. Insel a chance to orient us a little bit to today's task.

Dr. Insel: Okay. Well, we can do this,

Susan, as a team effort. There's a lot to get through, a short amount of time, and I know everybody at this time of year is very busy. So we'll respect your schedules as much as we can and try to plow through this. We've got a lot to do. And thanks to so many people who have contributed to where we are now to get us a working draft of the update.

Just to remind you, the agreement that we had as a Committee was that this draft was not going to rewrite the Plan. We wouldn’t be adding or taking away objectives, but we would be looking at all of the objectives in the Plan, from its most recent version, and doing the accounting of how well we had -- we being the whole community -- had invested in various objectives. And based on what we heard from experts and public input and other sources, how much progress we've made in the period since the Plan started in 2009.

So the process that we're involved in has required a series of meetings. And in spite of the Government shutdown and many

other challenges, we've been able to pull this off with a lot of help and a lot of patience and commitment from those on the Committee and many who have joined us as experts. So our thanks to all of you who have helped with this.

I think the easiest way to do this, unless there are questions, sort of overview questions, before we dig into it, will be just to go through chapter by chapter and make sure people are comfortable with what's in here, based on what's been drafted.

Let me check in, before we start the process, with whether there are any other questions we need to address in the time we've got here.

Ms. Redwood: Hey, Tom, this is Lyn. I just have a question. Many of these documents I'm seeing for the first time, just in the last couple of hours. In terms of the process for today, there will still be opportunities to comment after today?

Dr. Insel: Well, it's pretty limited, as

the goal is to have this wrapped up by the end of December. It won't actually go to Congress until later. But we need to put a bow on it pretty much by this week, or certainly if there's some -- and there are a couple I can see looking through here -- some loose ends, we can continue to work on those through the next few days.

But I would say we pretty much need to have this done by 1:30. So I don't think we're at a point now where we want to go back and do a major redraft on any part of this. It's been a lot of people who have worked to get us to this point.

Ms. Crandy: Tom, this is Jan Crandy. Granted, I was out of the country for a month, and I know we had the Government shutdown.

I'm in the West. So I really had limited time to read these documents. I went out last night, and I checked my email at 10:00 last night, and there was one email. And all the other documents I looked at this morning

before this meeting.

I feel very ineffective, and I'd have a hard time voting on all this, even for my own committee, which I've missed the first meeting. But there's -- I don't see all the minutes from the November meeting, because I would have felt better -- I didn't even get to review those, because I was not there.

I think that we need more time before we take a vote on this. Thank you.

Dr. Insel: Other thoughts?

Dr. Birnbaum: Tom, this is Linda. I want to second the people. I think when we get the documents, you know, 12 hours before the meeting, I mean, I think that they came in at about 1:24 a.m., so Susan must have been up all night. Most of us haven't had a chance to go through them at all. So I think we need at least until next Wednesday or something like that.

Mr. Robertson: Tom, I want to agree with that also. This is Scott. Is that, like I've been in the process actually of moving myself

physical locations. And, like, go through these documents while trying to move at the same time, like it would have been helpful, I think, to have had more than, earlier than now.

Dr. Insel: I'd love to hear from other people. Dr. Koroshetz: On what our options are. I mean, the question, two people we sent drafts out and we got comments in. So they've seen the first draft. And this is much better with the comments. It's not brand new material.

Did the other people see drafts ahead of time?

Dr. Daniels: Yes. All the planning groups were sent drafts. I think that -- this is Susan. I think some of the people who are commenting were not on the planning groups, and so they didn't see drafts, because the drafts were only circulated in the planning groups for the last few weeks.

So this will be the first time for people who have not been involved deeply in

the planning process to have seen some of these documents.

Dr. Boyle: And this is Coleen. We only saw the one we were involved with. So this is the first time we saw the others.

Ms. Crandy: Exactly. This is Jan Crandy. And that's how I feel, too. I did see my stuff for my committee but not for the other committees. And I did go online to see about if there were November minutes posted from the November meeting, which I missed, and there was not.

Dr. Insel: So let me tell you what we're up against. I mean, part of this is a process that's just taken more time. And I think OARC and the people who work with Susan have done an extraordinary job, Susan especially, to get this out to you in time for this meeting.

But a lot of the documents are still in process, even up until yesterday or last night. It will take us a month to set up a FACA-approved meeting. So it's not as if we could decide to meet next Wednesday or next

week sometime. So this is it until mid-January.

If we decide not to go forward on voting on this version of the Plan, that's a decision the Committee can make. But it does put us in violation of what the statute is, which is that we will have completed an update by the end of December.

You know, we can decide that we can't do it and have that be the stance of the Committee. But there is a risk to not being able to meet the deadline that's in the statute.

Dr. Ball: Tom, this is Jim Ball. Is there any possible way to go through the materials on this phone call, give everybody ample time to look at the documents that were sent out, and then next week at some point have an email vote? Does it have to be an in-person or on the phone?

Dr. Daniels: So this is Susan. According to FACA, the discussions that would be substantive for a process like this really

need to happen in public, in the public eye. So we can't do this by email because we need to make sure that these discussions are transparent to anyone in the public who wants to listen to the discussion.

Dr. Insel: But what if we were -- I think what Jim was saying -- if we would discuss each piece now, but we would not vote today. The vote could take place -- and we've done this before -- we've had electronic votes in Committee.

Dr. Daniels: As far as my understanding of FACA, for something that's this substantive, they don’t recommend doing email votes. We do email votes for things like selecting the summary of advances documents. But this is quite a, you know, a weightier task agreeing on this, because we are supposed to be able to have free discussion before we vote.

So I don't see a way for us to be doing that via email.

Ms. Singer: What if we were to spend the

next 20 minutes as a reading period and read through the materials instead of spending 20 minutes talking about the process?

Ms. Redwood: I don't think there's any way to read through all this in 20 minutes. I mean I have been trying to pour through it.

Ms. Singer: Okay.

Ms. Redwood: I mean, there's, like, chapters and chapters. And there's just a lot.

Tom, I have this question about -- you mentioned we would be in violation of the statue.

Since the Government shutdown is one of the reasons why we're so behind in this process, would that not be justification for a delay in turning this document in for January 14th? I mean, that would be sort of equal amount of time as the Government shutdown. Is the due date December 31st? Or when is the actual due date for this?

Dr. Daniels: So the statute just says that -- each year -- that we must provide an

update to the Strategic Plan. And so our goal was to get something done in calendar year '13, which would be by December 31st.

And because of FACA rules -- it would be possible to put together an emergency meeting for perhaps like December 30th. But I think that most people will be wanting to celebrate the holidays at that point, and I think it would be hard to get us together.

Ms. Redwood: So what are the consequences of violating the statute if there's a -- if there's been a shutdown of the Government that impacts your ability to work?

Dr. Insel: Well, you know, since that's recent, it's easy to use that now as an explanation. But I can tell you, in 2017 or 2016, when people are critical of the Committee, what they would point to is that we failed to meet the deadline, not that -- that particular wrinkle on the year 2013 will be lost pretty quickly.

Mr. Robertson: Tom, is there any way you

can ask for an extension from Congress? Or it doesn't work that way.

Dr. Insel: No, it doesn't work that way. To be fair, what the language says is that an annual update. And so I guess one potential reinterpretation would be to say this is the update, that the year starts when the first Plan was released.

Mr. Robertson: Okay.

Dr. Insel: That's actually not on December 31st. It was -- when was that, Susan, do you remember? The 2009?

Dr. Daniels: That was January of 2010.

Dr. Insel: Well, it was January 2009.

Dr. Daniels: January 2009, sorry.

Dr. Insel: Do we have an actual date within January? Because maybe that would be the way to resolve it.

Dr. Daniels: I think it was January 29th, if I recall.

Dr. Insel: Okay. So what about making the case that this is the annual update from the January 29th release of the Plan? And

that would give us -- and we could use the January 15th meeting then --

[Inaudible comment]

Dr. Insel: -- As an opportunity to vote on it.

Dr. Daniels: January 14th, yes.

Dr. Insel: 14th.

Dr. Daniels: So we do have a Full Committee meeting in person scheduled for January 14th. We could use that meeting to discuss the update at that time. And if you felt like you wanted to put in additional comments in writing ahead of that, we could entertain further edits and so forth beforehand.

Ms. Redwood: I think that would make a lot of members, you know, feel more confident in supporting this if we had a longer opportunity to review.

Dr. Boyle: This is Coleen. I think there -- actually, I read three of them this morning quickly. I think they're in good shape. I was really quite pleased with them,

but I do think it's helpful for the Committee, in terms of the Committee process, to actually have a little -- have more time.

And I would favor that January 14th and actually bring it up for a vote on January 14th.

[Inaudible comment]

Dr. Geraldine Dawson: This is Geri Dawson. Sorry, I've been on the call. I was listen mode for quite a long time. But I think that sounds like a reasonable [Inaudible comment] as well, as long as we're not in violation of statute. Then I think it would make sense to go ahead and vote on it in our January meeting.

Dr. Insel: Is there anybody who's against that plan? And I appreciate this. This is all being sprung on you at a very late date here. But that does give us some additional time to go through the documents.

And then we could use today to go through them, giving everybody an overview. You could sort of look through this, and we

can hear whether there are concerns from today's meeting that may need to be resolved before January.

Ms. Crandy: Works for me.

Dr. Cordero: Yeah. I think it's a good idea if we could use the time today to have a highlight of what are the key issues in each of the chapters, so we can then focus our discussion when we meet on the 14th.

Dr. Daniels: Who was just speaking?

Dr. Cordero: I'm sorry. It's Jose Cordero.

Dr. Insel: Oh.

Dr. Daniels: Oh, hi.

Dr. Insel: All right. Unless I hear any concerns about that, we will go ahead and plan to do that.

So we'll use today to still go through the drafts you have. If you haven't had a chance to look at them, this will be a good chance to walk through it. It may be more of a run than a walk. But hopefully, you'll get a sense of what the main issues are.

And then what would be useful is, I think, if people have concerns, we could hear them, and that gives the drafters a little time to tweak them further, as needed.

So if that's the plan, Susan, I'm going to turn this back to you and you can start to walk us through them chapter by chapter, so we can -- and we probably, given the time that we have, should plan to take more than 10 minutes per chapter, no more than 10 minutes.

Dr. Daniels: So then we'd just be open to hearing from the Committee about what your thoughts are, about the first question, Question 1, on screening and diagnosis.

Those who were on that Planning Group may have some comments about how this draft has turned out, with your comments integrated into the document, if you think there are still things that are missing, or if you have other thoughts or ideas or concerns.

Dr. Insel: I have a question just in glancing through this, before we even get

into the content. It strikes me that some of the questions -- some of the drafters have taken on the task in different ways. So some of these introductions go on for more than a page, and some are just 60 or 70 words or 100 words.

So I'm assuming that there will be a step in which OARC goes through and sort of harmonizes the documents so that each chapter looks pretty much the same.

Dr. Daniels: Yes.

Dr. Insel: And in each case, the introduction covers the same information, and progress follows the same set of numbers. Is that --

Dr. Daniels: Yes. That was the plan for after this call, if we were going to actually vote on content on this call. But OARC was going to go back and do some further editing to get a little bit more consistency.

As you know, when we write by committee, there are some individual differences between the different drafts that we have. But we

may, if we are going to defer some of this -- defer the voting until January, OARC can already do some of that type of editing ahead of time to try to get things a little bit more consistent, without losing the content that you all have put together.

Dr. Insel: And John Robison, who was the drafter for the first question, isn't on the call; is that right?

Dr. Daniels: He's not on the call. Actually, OARC did quite a bit of this work because John had a family emergency during that time, and we needed to get a draft together. So we just based -- we in OARC who did some of this drafting -- just based it on what we heard on the call, so we know that the different thoughts and ideas that were brought up by the Committee and the invited experts and put this together.

And then we put it out for the planning groups for further comments. So those have been integrated in to the best of our ability. But we're open to hearing your

comments and thoughts about anything else that you think should be there, or if you think there's anything that isn't quite reflective of what's happening in the field.

Any comments?

Dr. Dawson: This is Geri Dawson. I will say that we have quite a bit of opportunity of a working group for this question to go over some detail. And we had a lot of verbal exchange and a lot of email exchange.

So I do feel like that, from the working group, that this has been really well vetted.

Now of course the larger group may have new things to add or different perspectives -- so we're really open to that.

Dr. Boyle: Yeah. And this is Coleen. I would second what Geri said. I think the exchanges the last couple of days were it was very helpful. I think there's still a little, just a bit of tweaking language wise, but I actually think it's in good shape.

Ms. Redwood: I haven't had a chance to read it yet. I'm trying to run through it

real quick.

Dr. Dawson: So I will bring up one issue that came up that the Committee may want to just be aware of or weigh in on, which is how much we emphasize in this particular update the need for improved screening and diagnostic tools for adults. And there was a decision made to kind of fold that into some of the other objectives.

But it was something that we felt was really important, and so we want to make sure that that is emphasized in other questions. But we didn't want to duplicate, either.

Dr. Daniels: This is Susan. There is an objective about that in Question 6.

Dr. Dawson: Yeah.

Dr. Daniels: So some of that is there.

Any thoughts from anyone else?

[Inaudible comment]

Dr. Daniels: Sorry. We can't hear you very well.

Ms. Crandy: This is Jan Crandy. My question -- and maybe this is being handled

somewhere else -- but as part of the diagnosis, were we also talking about the comorbidities referring families at the time of diagnosis for further medical workups to address those and look for those? Or is that being addressed in a different question?

Dr. Daniels: The science of comorbidities is addressed in Question 2. But the question of how to handle at the time of diagnosis comorbidities that might come up, I don't believe was discussed on any of our calls or in the workshops. So how do you on the Committee feel about that?

Dr. Insel: Well, there is language on page 4 that says, "Although the focus in the search for biomarkers has been on behavior and genetics, this focus needs to be broadened to include a number of physiologic measures as markers, as well, sleep, EEG, autonomic measures and GI function."

Dr. Dawson: Yeah, exactly. So we did bring that in, just the thought of, that's the extent to that question. We did feel that

that was an important thing to include in it.

Dr. Daniels: So perhaps one of the people that was working on Question 1 might be able to provide us with a sentence or something that we can add in someplace along --

Dr. Dawson: I guess the question is, do you need to add anything besides that sentence, which says, you know, that there's a need for biomarkers that really broaden to focus on things like sleep, and EEG, autonomic, and GI function?

Ms. Redwood: Geri. I would think metabolic and immune function.

Dr. Dawson: Very good; yes. So we should add that. That's good.

Ms. Redwood: And also neurological abnormalities. I mean, a lot of these children may have underlying seizure disorders.

Dr. Dawson: So we have EEG, but we could say neurological instead of EEG?

Ms. Redwood: I think that would be

broader. I mean, I think other kids would [inaudible comment] that, you know, aren't picked up until much later that, you know, would benefit from earlier treatment.

Mr. Robertson: This is Scott. I agree on that, that you want to have a full -- I think a broader on the neurological would be better than restricting it to just EEG.

Dr. Insel: My only suggestion is, with a couple of recent papers, the Ami Klin piece in *Nature*, which probably -- I don't think it's cited here. It probably came out, you know, more recently. It might not have been picked up and the work by Karen Pierce around a very low-cost system that can be put into a pediatrician's office.

I wonder if those ought to be noted of examples of what might be available and could be scaled up, if they are replicated as ways of screening for kids at high risk.

Dr. Dawson: So we do have a sentence in there. It's the paragraph that starts on area on groundbreaking research. And actually, we

did discuss Ami's work, and Ami is on this Committee and weighed in on this particular document. So if there are differences in developmental trajectories of visual attention, the social stimuli have also been identified with a marker of those infant siblings who later develop ASD on visual attention to the eyes -- blah-blah-blah.

So that was really -- and Ami felt comfortable with that. What we didn't want to do is -- we really wanted to build in caveats, which is that this is really exciting, that comes with the next sentence, but that we really need to be able to validate these in other high-risk populations and the general population. And of course, that's the work that's going on now.

Dr. Boyle: Yes and I think Ami was very vocal about that particular point.

Dr. Insel: Yeah. So the question I was thinking about was the Karen Pierce video test that compares eye tracking to faces versus eye tracking to geometric figures.

There's no overlap between the kids who later develop autism and those who don't. I don't know if that's -- because that does seem like something that could be a screening test. It's probably our most valid biomarker in terms of not having any overlap. And that would be for 14-month-olds.

Dr. Dawson: So now I do remember that we, if my memory serves me, I think that was included in last year's, ’cause was that this year's?

Dr. Insel: Well, this is supposed to cover 5 years.

Dr. Dawson: So that's true. Yeah. So maybe we should add that right in that same section?

Dr. Insel: Yes, it does seem to me that that's probably -- it's something like that, which is relatively low cost and could be in any pediatrician's office. Actually, it could be on somebody's laptop. And it could be pushed out to the whole population. It might be a really interesting way of beginning to

do very broad-based screening.

Especially if indeed this has got 100-percent specificity. The sensitivity is low, but the specificity is very, very high.

Dr. Dawson: And I think that the -- and I think that's great. I agree that we should add that.

I think that among the Committee members there was really kind of a sentiment to not oversell, you know, some of these really interesting experimental methods that are exciting and indeed may someday be used as screeners, without having done, you know, the real hard work of the validation studies.

Dr. Insel: Great. Well, I completely agree with that. So maybe there's just a little phrase that says "eye tracking," because it's in the general domain of tests of -- that use -- eye tracking. And then to talk about the need to both replicate and validate use at a much larger population.

I think that is being done. But as I look at all the things that are out there in

terms of screening the general population, that looks like the kind of thing that might have legs. So maybe it's just enough to even have a broad comment and include that as a reference.

Anything else on this chapter, on Question 1?

Dr. Koroshetz: This is Walter. I would just --

Ms. Abdull: This is Idil. This is Idil. I was wondering on the paragraph, second to the last paragraph here, where it says, "Because research has been strictly limited to individuals with more mild disabilities or those who live in communities with greater resources and access to health care," you know, the IACC tells [Inaudible] more focus on the most disabled individuals, including those that are minimally non-verbal as well as [Inaudible]. Would be essential

Dr. Daniels: So I didn't hear where you are in the document, Idil.

Ms. Abdull: It's that paragraph…not the

last paragraph, that second to the last one, in the middle of the paragraph, where it says, “Additionally, because research has strictly limited to individual with more mild disabilities. I just want to make sure that we -- because we're always, the way we try some on how we diagnosis usually keep children who are -- or even adults who are on the more Asperger side or more on the mild, and I would like to, so that we're able to develop tools to diagnose children and adults who are minimally verbal as well as diverse and underserved populations.

Dr. Daniels: What page are you on?

Dr. Koroshetz: I don't see that, either.

Ms. Abdull: Page 2.

Dr. Daniels: Okay. That's not the end of the document. Page 2, the last, middle paragraph?

Ms. Abdull: Page 2, the -- let me see -- the first paragraph maybe on page 2.

Dr. Daniels: The first paragraph on page 2?

Ms. Abdull: I think so. What does it starts with, interpreting the 2013 Strategic Plan Update.” Do you see that one?

Dr. Insel: Are you on Chapter 1?

Dr. Daniels: Yeah. Where are you?

Ms. Abdull: Yeah, I'm on Chapter 1.

Dr. Koroshetz: Question 1?

Ms. Abdull: Yeah, for Question 1.

Dr. Daniels: Page 2 of Question 1?

Ms. Abdull: Yes.

Dr. Daniels: The paragraph that starts, "The 2011/2012 IACC ASD Research Portfolio Analysis," that the first paragraph. The second paragraph is "Of the nine specific objectives . . ." The third paragraph is, "Over the past 5 years . . ."

Ms. Abdull: No. Let me see.

Dr. Boyle: Idil, I think…you are in the introduction.

Ms. Abdull: Did you find it? I have like all my stuff open, it’s like a million of them.

Dr. Boyle: Yes, I think you are in the

introduction.

Ms. Abdull: On the document that you sent, Susan, on the first one, maybe I am on the summary and Introduction, the draft introduction --

Dr. Boyle: Yeah, you're on the second page of the paragraph in the Introduction.

Ms. Abdull: On the Introduction.

Dr. Boyle: Yes.

Ms. Abdull: Yes, page 2 of the Introduction.

Dr. Insel: Right, right, I see, so we'll get to that later. Just hold onto that thought, and we'll come back to that again.

Dr. Daniels: Oh.

Ms. Abdull: All right.

Dr. Insel: Anything else from Question 1, “When should I be concerned?”

If not, we need to move on, because we'll run out of time before we get to the end.

We want to do Question 2. And maybe, Walter, can you do a quick overview of the

issues?

Dr. Koroshetz: Okay. Yes. So I'm interested in people's feedback. We got a lot of feedback from the Group, and great that Sue was able to get a lot of those comments in. So we have a short introduction, just basically stating we've learned a bunch of things, but we're still short in terms of getting interventions, personalized interventions.

And then we go through each of the different subgroups of our Strategic Plan and do updates on each of them. So the paragraphs contain things that have been learned as well as areas that are still not well known.

So I guess the question is if people have particular things that they see are missing or are misrepresented?

For the first subtitle was “Longitudinal and Comprehensive Examination the Biological, Clinical, and Development Profiles”. We talk about what's been learned about maternal exposures. We talk -- here again -- we talk

about the normal, the eye-tracking behavior being something that might be able to detect for very early on, so we've got the brain imaging of structural and functioning that's been used to try and get more objective diagnoses.

Then we switch to the Fever, Metabolism, and Immunity. We talk about the quite a bit that's been learned about immunity, both the good and the bad parts of the immune system in the brain.

And then it mentions that autoantibodies have been found in mothers of some children with ASD. We say, we did say -- I'm not sure if it's still there -- we do say we haven't really learned anything about fever and very little about metabolism.

Then we go on to females, Neurodevelopment in Females. Was brought out as an important finding was the new studies suggest that female gender is basically protecting against autistic behavior, and that affects trouble in diagnosis, because

ASD in females may be missed because the behavioral abnormalities may not be as prominent. But it also indicates that -- some of the studies indicate that for the same kind of genetic disruption, you don't get the same phenotype. You get a much less severe phenotype in females, which brings up the question of some protective -- whether there's some protective factor -- that we could learn about by studying autism in females.

Then we talk about Brain and Tissue Donation. We just give an example of, you know, things you cannot do if you don't have brain tissues to examine. And we talk about the activities that have now started with the BrainNet initiative.

Then we switch to the kind of Genetic Conditions Related to Autism, where the greatest explosion of knowledge is basically understanding what the genes do that have been associated with autism, either in the nonsyndromic fashion or are very causative.

So in the instance of fragile X, tuberous sclerosis, and Rett syndrome -- mentions that major evidence points to a common synaptic deficit.

Many of these conditions -- and that also brings up the question of whether, you know, potentially, whether -- if it's a functional deficit, the synapse, whether it can be treated. And it mentions, there are some treatment trials now ongoing, rapamycin, glutamate receptor antagonists.

Then we talk a little bit about the Co-Occurring Conditions. Much of this, we don’t quite know too much about, but at least it's been brought out into the forefront now -- epilepsy, GI disturbances, sleep disturbances. We say we don't know anything about the biological mechanism underlying the serious problems of elopement, wandering.

Then we go into kind of the progress towards the Question, the Aspirational Goal. We talk again about the immune system knowledge. We talk about the new

opportunities from new technologies that might come out of the BRAIN initiative, induced pluripotent stem cells, connect dome project to learn more about autism.

We stress the fact that we need to know more about the brain circuits, the immune system metabolism, and the microbiome. And then leave with a statement that a coordinated approach really is going to require some kind of system-based analysis of all this data.

That's kind of a short summary.

Dr. Insel: Walter, this is Tom. You know, it's kind of amazing to try to do this in three pages or four pages. I think it's a terrific job.

I have a general question. I don't know how the Group struggled with this, but it seems to me that some of the most important breakthroughs in this area have not had the word "autism" in the title. But they are going to have huge implications. And I don't know how to include that, whether it's worth

-- here I'm thinking about, you know, the development of clarity. And actually, the clarity paper included a brain from a kid with autism, which was kind of intriguing, just the example of the power of the technique.

Or some of what's happening on the IPS cell front, a lot of the work on the brain genomics that show high rates of genomic rearrangement in brain that you don't see in blood.

Did the Group sort of struggle with this? Or was it --

Dr. Koroshetz: Well, we had some of the stuff. So we did bring in the IPS cells. We did bring in, you know, the connect dome. We did bring in the immune system being discovered as sculpting synapses. We did not go to -- we brought in the BRAIN initiative as, you know, tools that might come out. But we didn't get into the clarity.

Dr. Insel: Um-hmm.

Dr. Koroshetz: Genomic rearrangement, we

talked about. We do have a sentence in there about the -- about epigenetics and changes that occur to the genes in the brain over time, that are separate from what you get out of the blood.

Dr. Insel: Okay.

Dr. Koroshetz: So it's really brief messages. But --

Dr. Insel: I just struggle with this. And it's not unique to this chapter. But there are such huge things happening --

[Inaudible comment]

Dr. Koroshetz: When you say explicitly, maybe, that a lot of the science is, you know, not -- has come from other areas that are now going to be really important for autism?

Dr. Insel: Right. Yeah.

Dr. Koroshetz: Okay.

Dr. Insel: Like the microbiome. The first really big paper came out in *Cell* last Friday on this. And that's an example of where this field may go. So I would think

about -- you know, I was just trying to -- that's around the autoantibody issue. But it would certainly be important, I think, to include a very high-profile *Cell* paper on the topic.

And other than that, I think you can capture a lot of territory here. It's really impossible to do justice to all of the work. So I think that's helpful.

Dr. Koroshetz: Yeah. We do a lot of name-dropping. We can't really explain it all. But -- okay.

Dr. Insel: Um-hmm.

Dr. Koroshetz: Okay.

Dr. Insel: Other thoughts or questions for Chapter 2?

Ms. Redwood: This is Lyn. The only thing that, you know, I think we might flesh out a little bit more is under the Co-Occurring Conditions with Autism, that this is supposed to be sort of review over the past 5 years. We might add in that there are a lot of studies in terms of immune. There were 416

that had implicated a relationship between autism and the immune system. Oxidative stress, 116; mitochondria dysfunction, 145.

So you know, I know we mention in here sleep and epilepsy, but I think maybe, you know, another sentence or two that washes out some of these other co-occurring conditions would help reinforce sort of that systems biology approach to understand mechanisms that can result in abnormality and multiple organ system and how trying to piece these together would be important in moving forward. And also parsing out these individual phenotypes.

Dr. Koroshetz: Okay, so…yeah.

Ms. Redwood: And I'm sorry I didn't say anything earlier, Walter, but I just -- you know --

Dr. Koroshetz: Mitochondria, oxidative stress, and immune. Those are the three?

Ms. Redwood: Yeah. And, you know, I know environmental and toxic gets covered in the next section.

Dr. Koroshetz: There is -- somebody did have, they had something in about that.

Ms. Redwood: And has this…Hey Walter is this changed, from the one, I know there was some discussion by email.

Dr. Koroshetz: Yes. So Sue took those suggestions, the things that people wrote in and added them in.

Dr. Daniels: Lyn, in the email exchange that you were having with one of the other members, there was a lot of discussion that there aren't any specific points that you homed in on as wanting to include in the draft. So I wasn't able to take anything from that and insert it, because there wasn't a specific suggestion.

But if you can make a suggestion that's concrete, we can try to see what we can do.

Ms. Redwood: Okay. Great. I wasn't real clear, you know, if we were to make line items, you know, edits, or, you know, global comments. Okay, great. Thanks for that.

Dr. Koroshetz: We have this immune

stuff, Lyn. Remember that's in that paragraph on phenometabolism immunity. We did put stuff in there. But yeah, the oxidative stress and the mitochondria stuff somehow fell out.

Ms. Redwood: Okay.

Dr. Koroshetz: I think we basically were saying, you know, there has definitely been association, but we really don't understand those correlations very well.

Dr. Daniels: There were some comments that were submitted about mitochondria and oxidative stress that may have come from you, Lyn. And they ended up in the table.

Dr. Koroshetz: Yeah. Oh, that's right. Okay. Okay.

Dr. Daniels: So that's where I saw them being suggested, and so that's where we put those.

Ms. Redwood: Okay.

Dr. Koroshetz: That's true. Okay.

Dr. Daniels: But I didn't see any comments about putting that in here.

Dr. Koroshetz: Okay. Yeah. No.

Dr. Daniels: So if you have specific comments, let us know.

Ms. Redwood: Okay.

Dr. Koroshetz: Yeah, that's where it was. Okay.

Ms. Redwood: So yeah, it would be great if this rolled over into this -- the narrative, too.

Dr. Koroshetz: Okay.

Dr. Insel: I think we're going to move on, or we're going to fall dangerously behind. Anything else before we do that?

Dr. Cindy Lawler: So this is Cindy Lawler. So Dr. Wong had forwarded to me some information for inclusion regarding stem cells. And I think his initial thought was that it may fit under Question 3. But actually I think it's a better fit for Question 2. So, Walter, I'm going to forward what he wrote up.

Dr. Koroshetz: Okay. Okay.

Dr. Lawler: It's just a few sentences. And for your consideration to add to Question

2. And I apologize. I should have mentioned that earlier.

Dr. Koroshetz: Good. No problem. That’s fine.

Dr. Daniels: Cindy, can you also copy me on those?

Dr. Lawler: Yes.

Dr. Daniels: Thanks.

Dr. Insel: Cindy, why don't you start us off on Question 3?

Dr. Lawler: Okay. So Question 3, we had some robust discussions, both before the last IACC meeting, you know, at that meeting. Susan's office did a great job capturing some of the outcomes of the discussion. And we had several rounds of furious writing over the last 2 weeks, particularly from myself, Joe Buxbaum, Irva Hertz-Picciotto, and Craig Newschaffer, were the -- those three were the external experts that really helped.

And I think most recently, the draft was circulated, along -- among the larger group, and Question 3. And Susan's team had

incorporated some edits that they had made. For the most part, those were minor ones. I think it's in good shape. The overall assessment was that there's been good overall progress, although there are some areas that need additional attention.

The way that we organized the write-up about progress, really we built on a very nice summary that Joe Buxbaum provided for us on sort of the revolution in understanding of genetic risk, primarily both at the level of the diversity of the kinds of genetic variation that contributes to autism risk, as well as just, you know, the ever-expanding number of genetic loci that are being implicated, a lot of that being driven by improvements in sequencing technology.

I think his estimate is that we can now have, you know, really good -- or can -- in up to 30 percent of individuals with autism, we can identify sort of the major genetic risk.

Some of the deep sequencing efforts, the

whole exome sequencing, has now uncovered an additional several genes, six or seven. And more are expected. We are continuing to understand that when considered collectively, the more than 100 genes fall into a smaller of number defined pathways. And that really does provide lots of opportunities to think about targeted therapeutics.

The next section was environmental risk factors, where we summarized progress. And the first section was gene environment interaction. Under environmental risks, we acknowledged that 5 years ago, we knew very little about autism. Over the subsequent 5 years, even the genetic studies are providing or reinforcing the idea that we're going to have to go beyond genetics for a full understanding, and that includes some of the recent studies from not just twins, but also exercises to try to, you know, understand gene-environment interaction.

Overall, the investment that we've made in environmental risk factor research has

been pretty modest. So it's surprising that we've made as much progress as we have. We have now multiple studies that are pointing to factors.

When you consider environment broadly to include anything beyond genetic predisposition, we now have two or more studies pointing to protective effects of prenatal vitamins, risk from prenatal maternal infections, preterm birth, age of conception, both the mother and the father, short time between pregnancies, and certain prescription medications of maternal medications, as well.

The largest number of studies on chemical exposures have looked at -- showed increased risk of autism associated with air pollution exposure. The findings on prenatal vitamin intake have now -- you know, are pretty strong. They've been sort of replicated or come forth in two pretty large population-based studies.

Dr. Insel: Cindy, I'm sorry to

interrupt, but given the time --

Dr. Lawler: Am I going too -- okay.

Dr. Insel: Maybe rather than going through all this, we should just get, sort of see whether the Committee has any additional comments --

Dr. Lawler: Okay. All right.

Dr. Insel: -- because we're not going to have time for the other questions.

Dr. Lawler: Okay.

Dr. Insel: And just a general comment. This one is about 70-percent longer than the other questions. And so it will need some substantial editing. And I guess the question for me is whether you want to do that or you want OARC to do that for you or the best way forward.

Because we really need to get it down to something that may have less details, but captures the broad -- a broader picture of what's known, what isn't known, and what we've gotten for the investment here.

Dr. Daniels: Maybe we could work

together, Cindy?

Dr. Lawler: Right. So I'm comfortable with OARC taking a first stab at condensing. And I will certainly look over it and provide comments.

Dr. Daniels: Great.

Dr. Insel: Good.

Dr. Lawler: So let's -- I'll just open it up now for comments from the larger group that's on the phone about things that might be missing or perhaps misstated.

Dr. Boyle: This is Coleen. I think you did a great job, Cindy and colleagues.

So one thing I guess I would -- I think is missing, at least from the environmental risk factor and then gene-environment interaction piece, is really more of a focus on autism subclassifications.

I think particularly in epidemiology, we've been focusing on autism per se. I think that, to make advances, we need to be starting to look at the subclassifications, or however we sort of tease that apart. A

sentence in that regard would be helpful.

Dr. Lawler: Okay. Not to mention, briefly, in the second part, that I think more emphasis is -- certainly, we can do that.

Dr. Boyle: Well, I apologize. I write fast; I must admit that.

Dr. Lawler: It was at the very end. So I think the idea that that needs more emphasis is a great comment.

Dr. Boyle: Okay.

Ms. Abdull: Hi, Cindy. This is Idil. I was wondering if -- and I didn't have a chance to read all of these yet -- but in terms of environmental factors, but also genetic, from people who are from different countries or different ethnicities. Is there, do we know, or would that be a risk factor that we could include?

Because there’ve been a couple of studies outside the U.S., not so much here. So what do you think about that?

Dr. Lawler: So I think, you know, being

aware of the sort of need to condense, rather than expand, we certainly can provide a little bit more depth in terms of how the current version talked about the importance of sort of understanding risks in different subgroups, whether that's defined, you know, sort of racial, ethnicity, different subclasses of clinical diagnosis and so on. So we can add a little bit more to make it clear, the different ways we're thinking about that.

Ms. Abdull: Okay.

Dr. Lawler: So I think that could be in line with Coleen's comment.

Ms. Abdull: Okay. Fine.

Ms. Redwood: Cindy, this is Lyn. Also looking at environmental factors, there's a second paragraph that says, "Over the past five years a modest investment" blah-blah-blah, and it says -- and it lists the ones that have been replicated in two studies or more.

Dr. Lawler: Um-hmm.

Ms. Redwood: But then it's sort of a short list. But then you go down in the subsequent paragraphs and sort of get at some of the other things that aren't included, like pesticide exposures.

So I'm wondering whether or not, delete that paragraph that talks about [Inaudible comment]that you have listed that has two more studies, because there's a lot more that aren't included here that have had two or more studies. So maybe a longer list of all the possible, you know, environmental factors that may play a role that have been replicated in two or more studies might be a way to sort of cut some of the other information out, make it shorter?

Because they're included longer below. And reference, you know, that whole list of longer [Inaudible comment] can be put together. You know, they were all items that had been replicated in two or more studies. So that might be a way to edit it down.

Dr. Lawler: Can you provide Susan and I

with -- if there are any particular exposures that you want to make sure are included that aren't maybe on the -- listed on either one of those paragraphs that you want to make sure that --

Ms. Redwood: Yeah. I don't know that there are ones that I included, but just sort of combining them more.

[Inaudible comment]

Dr. Lawler: Okay.

Ms. Redwood: Yeah. Yeah. I think that would help to make -- if we're having to make edits, that would be some suggestions.

Dr. Lawler: Okay.

Dr. Insel: Okay. Anything else from this?

I'll do Question 4, which is the interventions, and we had a great group working on this. So I'm just going to channel all the comments we got from them.

This is just to set this up. Clearly, one of the areas where there's been a lot started, but very little completed, because

clinical trials usually take 4 to 5 years before they're completed and fully analyzed.

So in the course of what's been done since 2008, there isn't going to be very much that would be conclusive. That said, it was amazing how many projects are currently underway -- I think it says here something like 269 projects funded at a cost of $64 million. This is just in 2012. And so there's a lot going on.

The Group that we had was sort of split in the way that they looked at progress. So I think everybody felt that investments had been made to match almost all of the objectives. And the one objective that had not been funded at all got done without any money. So that was kind of neat. It was a workshop that was supported by the Foundation for NIH.

So they felt that there had been a pretty good picture in terms of the financial investments. The question really was what we've gotten out of that.

And partly because it's early and partly because many of the projects are relatively small, it wasn't clear that we have made the kind of progress in two big areas, one being the need for novel interventions that go after core symptoms and that are both safe and effective, across a range of ages and a range of populations.

So that was seen as a long-term and difficult goal but one that was really important to make progress on.

The second big area was how we're doing addressing the current treatments. Because in the Plan, there are these two or even three objectives around providing more rigorous information about the efficacy and safety of the many treatments that are currently in play.

I think the Group felt that that was a more immediate need and probably wasn't being addressed as much as it could be, and there wasn't as much information there as we might like.

They did point out that there had been some pretty good progress on early behavioral intervention. So the summary does capture a bit of that and particularly the excitement of being able to use a biomarker, like EEG, as a surrogate marker for improvements. Although it's still early, that possibility seems to be very promising.

Let's see. I think those are the main issues. The other piece of it was that we talked about the opportunities to not only think about behavioral interventions and pharmacological interventions, but also the promise of new technologies, including devices as social prosthetics or tools for communications assistance.

So that's sort of a third arm of this that people were excited about when we talked about what could be done.

Progress towards the aspirational goal: I think people basically felt this was a work in process, that the question -- and we had some very late back-and-forth by email on

this -- was whether the future would belong to serendipity, just somebody noticing that a person being treated for Crohn's disease who had autism would suddenly get much better on their autistic symptoms. So that’s the way so much progress has been made in this field is by just repurposing or by an accidental clinical insight.

Or whether progress would require just a deeper understanding of the fundamental biology from Questions 2 and 3 before we'd be able to make the kind of progress that was more predictable on Question 4.

And we -- I must say -- I don't think we quite resolved that issue. So the text suggests that we need to keep our -- both -- opportunities open, both be open to serendipity from astute clinicians and open to translating from the basic biology that's emerging.

The last thing here was the focus that it's not all about the core symptoms, but we also need effective interventions for

associated symptoms, recognition that there has indeed been some progress there, including some new guidelines that came out in 2012, which is a great sign of progress. But there's still much more to do.

Thoughts, comments, questions, additions, deletions?

Ms. Abdull: Hi, this is Idil. Dr. Insel, thank you for putting all this together and it’s 4 pages, that’s awesome. I just have a question, and this is more like what Dr. Anshu Batra was talking about, who is in India now, unfortunately, for a conference. But in terms of the last paragraph, I think -- let me see if I'm on the right page here -- on page 4, with the aspirations and building adaptive skills and all that we have now, we need future studies that will focus on treatment for adults, nonverbal, and people from diverse communities.

But if I think back of the early-intervention therapies and treatments that we have now, even though there are children,

they are mostly focused on not up to 18-year-olds. They are only from 2 to 4, really 5-year-olds. So the 6 and 7 to 8, and all the way to adolescents, are usually taken off.

I wonder, you know, if there is a way to say that there is also a need for adolescent intervention, because a lot of these kids are not being diagnosed until 5 or later. And it's important to know what interventions and what treatments can they get at that age.

Dr. Insel: So I don't have the data on this, and Geri Dawson, who's on the phone, may know more about that. I know that for many of the intervention trials that we support, the age range is actually something like 8 to 18 for children and that relatively few of them are in toddlers or very young children, because it's a more difficult population to study.

So in the past, that type that we've gone in just the other direction. We've been trying to encourage more research on younger children.

But, Geri, can you help me here? Do you have a -- I don't know that in the analysis we've done here, we haven't looked at the inclusion ages for subjects in the randomized clinical trials.

Dr. Dawson: I think it depends on the kind of trial that's being conducted. So I think if it's a pharmacological trial that, you know, those are focusing more on adolescents or late-elementary and adults, you know, versus, the early behavioral interventions, obviously, are toddlers, preschool.

But they actually have done quite a bit on cognitive behavioral and other kinds of social skills training approaches in the elementary and adolescent age range.

Dr. Insel: Yeah, that's been my sense from my own portfolio, that actually, if anything, that group is overrepresented.

I'm a little hesitant to put anything in here about this without actually having the data in hand. And that reminds me that, in

that last sentence, we stressed the need for future studies to look at nonverbal individuals. But when we did this study, we did the portfolio analysis, as it says in the middle of page 2, the end of -- let's see -- I'm sorry -- maybe it's page 2 or page 3.

We were surprised to find that, actually, nonverbal children received -- studies of nonverbal children actually received more funding than what had been originally proposed. That is not to say that it shouldn't have worked out that way.

But I do think we want to make sure that any comments we make that have to do with sort of implying where we need to go from here are really informed by what we're currently doing. And I'm not sure that's always been the case.

Ms. Abdull: What I was referring to is for a family, the early-intervention behavioral treatments are usually for younger kids. The early Denver model, that's also for younger kids.

But for behavior therapy, there isn't really some, unless I'm missing, for adolescents or for children that are in their teens. Their social skills and they need medications -- are not really for behavior therapy.

Dr. Insel: Gee, I just don't think that's right. I think a lot of the CBT efforts are really focused on just that group. But again, I'm not the expert on the interventions portfolio, so maybe others can advise.

I am a little reluctant to go either way on changing this, because I don't know the data.

Ms. Abdull: Well, I mean, that's Dr. Dawson is are there like behavior therapies for adolescents? In the early Denver model that you -- go ahead.

Mr. Niu: Hi. This is Stan from DoD. I'd like to give a couple of comments. Yes, we have -- at least from our small portfolio, we have two clinical trials on the -- behavior

trials targeting that age group.

Dr. Dawson: Yeah. I think that in terms of trials for that age group, probably the most well-developed research is on cognitive behavioral approaches for treatment of anxiety and also for the development of social skills.

I think perhaps the area that is missing in that age range for cognitive or other kinds of behavioral approaches is more for individuals who may not have higher intellectual or language ability, although I know when I was at Autism Speaks that we funded a couple of studies that were adapting the existing behavioral programs to -- applicable to people who have lower levels of intellectual and language abilities.

Dr. Insel: There are 175 projects that are listed as interventions. And it may be worth it at some point to go through that whole portfolio to find out what the age ranges are, but I don't think that's going to happen before our next meeting.

Ms. Idil: Right, right.

Ms. Redwood: Hey Tom, this is Lyn. It's great that we've acknowledged in there GI, sleep, and ADHD in terms of having guidelines for substance and treatment.

But we really don't have effective guidelines for assessment for treatments for the immune and] metabolic abnormalities. And those are just some of the strongest. You mentioned serendipity. You know, I recently heard a story about a little girl with autism who also was diagnosed with cancer. During the process of chemotherapy, her immune system shut down, and when that happened, her symptoms of autism all disappeared.

When her immune system came back online, her symptoms of autism slowly reappeared. So I really think that there's more to do there in terms of looking at some of these [Inaudible comment] that aren't, you know, reflected. And it would only take maybe a sentence or two to add in those needs.

Dr. Insel: Yeah, I really thought we had

been there. And if we don't, we will. I thought that -- just looking. But point noted. And I think you're right. We talked about sleep and GI. We actually mention the other issues but don't talk about having guidelines for those. So we can go ahead and point that out.

Ms. Redwood: I didn't see immune or metabolic. Those are the two.

Dr. Insel: Yeah.

Ms. Redwood: Maybe it's in here, but it isn’t…

Dr. Insel: If it isn't, it is an oversight. So let's -- that's really helpful. We'll go ahead and flag that.

Ms. Redwood: Thanks.

Ms. Crandy: Tom?

Dr. Insel: Yeah.

Ms. Crandy: This is Jan Crandy. And maybe it's too early in the research, but I didn't see any instance of assistive technology devices for communication and nonverbal learners. Was there not research on

that? Because that seems like that's -- we had that presentation.

Dr. Insel: Yeah. So we put it in at the last paragraph, because we didn't have RCT -- we didn't have randomized clinical trials on those. But I think the Group felt that this was an area of such promise that we needed to flag it. So it's the last paragraph on page 3 before you get to that section that says “Progress Toward the Aspirational Goal.”

And it ends up being added again in the conclusion of the whole thing as an area that could be transformative for going forward in the realm of intervention.

Ms. Crandy: Okay.

Dr. Insel: I completely agree. That's was not even on the -- that wasn't on our horizon too much in 2008 and has become a really important area.

Ms. Crandy: Thank you.

Dr. Insel: I want to make sure we don't get hung up too much here, because we're going to run out of time. We have 15 minutes

left, and we still have a bunch of stuff to do.

Can we go on to 5 and 6? I don't know if David's with us yet.

Dr. Daniels: David, have you joined us?

He was going to be joining around 12:30 or so. This is Susan. I did work with David and Paul a little bit during the time that they were working on these. So I don't necessarily have their knowledge on this.

David, are you trying to join?

But we can go ahead and take any comments that you might have. David did the write-up for Question 5 and actually pretty well reflected much of what was the discussion on the phone call for Question 5. I added a couple of little notes that were comments that I didn't see a mention of Medicaid coverage in here, but I thought that that was something that had come up before in the Committee that we might want to add a sentence on.

And in the past, we've also provided

updates on military benefits, and that was missing here. So those are areas that if the Committee is interested in that, we can try to fill in.

But does anyone in the group have comments on this chapter? When we sent it out to the Planning Group, we really only got one person from this entire, really large Planning Group who commented, which may have just been reflective of the work that David did in capturing their thoughts in the first draft.

Mr. Robison: This is John --

Ms. Abdull: This is Idil. In terms of the Medicaid do we know if we are going to get the State of the States from John anytime soon? I thought it was going to be in the fall -- it was going to be in the fall of this year.

Dr. Daniels: Yeah. So the latest update we've heard from CMS was that they were planning to release the State of the States in 2014, and they have an open invitation to

them to come to the IACC and do a presentation as soon as they are, you know, in public, in the public with their documents. So we are just waiting for that.

In fact, we were discussing whether January, whether they would have something. But if now we're going to be working on the Strategic Plan, we won't be able to probably host other events during the January meeting.

Ms. Crandy: This is Jan Crandy. You know, under the gaps and barrier's section of this piece, could we add that there, and also add something in there about, there continues to be barriers to insurance coverage; nationwide, few private insurance companies or employee benefit plans are covering it? And federally, like, self-funded plans don't cover autism therapies.

We could put in there, at some level, 34 states have insurance -- insurance reform laws -- in their states. But there still remains lack of coverage for that and Medicaid coverage.

Dr. Daniels: Right. And that may be -- and I'm just speaking for David, assuming that he is fine with this. Then, on the third paragraph on page 2 could just be expanded to try to cover those a little bit more in depth.

[Inaudible comments]

Ms. Singer: Compared to some of the other chapters, there's not as much data in this one. And I think that we talk about, on page 2, that there have been a wealth of studies quantifying the economic and health impacts. And just talking about -- we have updated the economic cost of autism. I think it would be good to include those numbers.

Dr. Daniels: Okay. We can make a note for David there to try to add that in.

Mr. John Robison: John Robison here. I wonder if in that third paragraph that we're talking about expanding, if it wouldn’t be appropriate to say that, you know, we on the IACC have some concern over the range of autism therapies and interventions that are

available under insurance coverage in those states where they're available.

Because that seems to be a very major point of contention, where some states approve only ABA; some are calling for evidence-based practices. But we don't have accepted evidence bases for anything other than ABA. So as a practical matter, that's all that's covered in many states.

And I see a lot of people complaining about that. And I think that we should recognize it in this.

Ms. Crandy: This is Jan Crandy. I also think we should have a mention of the intensity level that is funded by insurance, because typically, if we're looking at the other question we just did, and it says 25 hours or 15 to 20.

I can tell you that those states are covering the 36,000 a year that does not address 25 hours a week.

Mr. Robison: That's a very good point, because if we're saying -- if we're saying on

the one hand that we need that many hours of service, we certainly then can't be saying we've made a great achievement by having insurance that comes to a halt halfway through the year, which is the current situation for many people.

Ms. Abdull: This is Idil. I also want to add that, some many of these states with the private insurance that are covering behavior therapy or even mix maybe that whereby Medicaid is covering, it's only for younger kids. Because that's what we're told, that the evidence is for young children for behavior therapy.

And this would go back to my previous question. People don't always know what the evidence is for behavior therapy for adolescents or children that are 8, 9, and 10. And a lot of these kids are -- many of these 35 states, it's for young kids. Some of them are ending at age 4. Some end -- most of them end at age 5 or 6. And so we need to relook at that and say, what age should

therapy end? And what age – and how much money or how many hours -- does IACC recommend or does research recommend?

Dr. Insel: Yeah. So I think that's right, Idil. I hear the concerns. But this would need to be framed as a scientific question that could be tested or falsified with research. So there are so many issues around services. But these two chapters have got to focus on the science related to all of those needs.

So hopefully, as this gets -- if it gets modified -- that the reframers -- and I'm not sure they're on the call -- will be able to keep that in mind. I think they've done that very well up until now. But I agree with Alison that it helps to have data all the way through here.

Dr. Daniels: So we can communicate with David about that. And I'm sure that he would be able to do a great job in trying to portray some of this for us.

Dr. Insel: So if you have other

questions on these, again, we have to get to Question 7, and then do the intro and conclusion.

Dr. Daniels: And 6. We haven't even done 6 yet.

Dr. Insel: Oh, okay. So we have a lot more to do, and we have 8 minutes left to do it in.

Maybe I can ask people who have specific issues on 5 to send those to Susan, and she can convey them to David.

On 6 --

Dr. Daniels: So Paul Shattuck and one of the people at Drexel, Ann Rue, were with him on this. And David also reviewed Chapter 6 about what does the future hold, particularly for adults.

I don't want to fill up your time listening to me. What kinds of thoughts do you have about this chapter, for those of you who have perused the chapter? Any comments about what's here?

Ms. Crandy: This is Jan Crandy. And I

think this points to the CMS; that we had a public comment about the CMS and the choices. I think we might, for community living, especially for the autism community, there's a lot of contention out there about that, so I want to make sure that we include that.

And I also think that we're -- we need to talk, too, about lower functioning adults, not just higher functioning. And this kind of feels like this chapter leans to higher functioning that are going to be able to be employed. What about those folks that are not going to be?

Dr. Insel: Good. Okay. We should make sure that those get incorporated.

Ms. Abdull: Is it possible to say, I suppose to high and low, I swear to God, I do not like those terms. I wonder if it's possible to say "people with autism across the spectrum," you know, who are verbal or nonverbal or who have other -- I don't know. Just "low" and "high-functioning"; it just doesn't leave a good taste in my mouth.

Dr. Insel: You know, I think that's a really good point. When it comes time to do the editing across all of these, there will be something like that that we will put across the entire Plan. It's really a cross-cutting issue, is how we talk about the heterogeneity of a disorder. And maybe just saying, "across the spectrum," as you say, is a good way. Anything else on 6 that we want to make sure --

Mr. Robison: Yeah, one small point I'd like to make. On page 2, we say this twice, in the last paragraph and the second-to-last paragraph. We refer to "the growing number of adults with autism." I think that that really should be replaced by "our increased awareness of adults with autism." I don't think we really were thinking that there is a tremendous increase in adults. I think we are recognizing our existence. And that would be the correct thing to say.

Dr. Daniels: Okay. We can take note of that.

Dr. Insel: We have the data from the UK -- would suggest that it's precisely that, and that there's no increase in prevalence across adulthood.

Mr. Robison: But, I think it's important to say "increased awareness." We don't want people to start talking about --

Dr. Insel: Okay. We can do that. Anything else?

Ms. Crandy: John, though -- this is Jan Crandy. In line with the significant number of children that will become adults, there is going to be an increase, is there not?

Mr. Robison: No. The increase that we have seen, for example, in the Brugha study suggests that the rate of autism found in schoolchildren today is reflected in the adult population that's surveyed now. It's just that the adults are undiagnosed or diagnosed with something else. Brugha showed that very clearly.

Dr. Insel: So John, we'll go ahead and put that provision in, or we'll have Paul

look at that. Anything else on 6 that was missed or that needs to be modified? And again, given that we have so little time, and many of you haven't had a chance to look at this in detail, we're going to come back to this in January. And you can send comments in the meantime.

Let's go on to Chapter 7. And Alison, you've been very patient. This is a big chapter -- lots of data in this one. Very quickly, do you want to take us through this?

Ms. Singer: Okay. So we went through where we felt we had made progress and where there were additional needs. The areas where we felt we had made good progress against the 16 objectives were in data sharing and workforce expansion and in model systems resources. The areas where we felt we had additional work to do were in documenting the services that were available for individuals in each state and expanding the biobanks and expanding the number of donations, and also expanding the surveillance infrastructure.

So with regard to databases, we noted specifically the IACC portfolio analysis Web tool, which gathers all of the research-related projects into one place. We noted the Interactive Autism Network from Kennedy Krieger, which matches scientists with research subjects and enhances the pace of research. And we noted NDAR, which has really grown from zero to now including about 81 percent of NIH-funded human subjects' research; the data is contributed to NDAR.

We tried to compile most of the data into tables so that we would be able to compare progress from 2009 to the present. In almost all of the cases, there's been good increase, the one exception being the number of brain tissue samples. Brain tissue samples have actually declined over the last 5 years because of that freezer malfunction in Harvard. But we talk about the new project that's underway, particularly the development of the Autism BrainNet to try to increase the donation of brain tissue.

With regard to surveillance, we talked about the Adam Network, which now includes 12 sites, and the fact that data are now available over multiple years. And that Adam has expanded so that we can survey younger children at six of the sites.

In addition, over the last 5 years, Adam has taken on some projects to try to characterize the population of children with ASD, including looking at issues of parental age, medication exposure, participation in juvenile justice systems, exposures to environmental toxins, including air pollution, and various phenotypical characterizations.

The one thing we noted as something that needs to be an area we focus on in the future is that, despite the fact that we are able to track the age of diagnosis, there's really been very little progress in terms of reducing the age of diagnosis.

One thing that we did note was that a greater number of children are being

identified with ASD, but more and more those are children with ASD without intellectual disability. So that's why it doesn't seem to appear that the number is going down, because those children do tend to be identified later.

I will ask Cathy if she has anything to add on surveillance.

Dr. Boyle: I think Cathy is muted here.

Ms. Singer: Okay. Well, if that's the case, then we can open it for questions.

Dr. Insel: This is Tom. I had a couple of quick things. In the table, I think the term "omics" needs to be defined and explained. I'm not sure most people, including myself, know what that refers to.

The second question, under surveillance, I felt this was very CDC focused. But I think there are lots of other things going on in the realm of surveillance, and I wonder whether some of those could be noted as well.

Ms. Singer: Specifically?

Dr. Insel: Well, the Autism Speaks

effort to do population-based epidemiology in South Carolina. The synthesis covers 4 or 5 years. The project in South Korea. There have been a number of things that have been done beyond the Adam Network.

Ms. Singer: Okay. So there is a paragraph at the top of page 5 that I sort of glossed over that talks specifically about the Autism Speaks work. And it talks a little bit about the National Survey of Children's Health.

Those are really the only other two that we put in there. We didn't include the Korean study. We can put that in. And the South Carolina work does expand upon the Adam South Carolina projects, but we can add that, too, as well.

Dr. Insel: John already mentioned the work out of the UK. And they just had a really interesting paper published in the last month on the first real study of incidence, by doing again, I think, a pretty careful year-by-year analysis. I don't know

whether you'd want to include that or not. But it just seems to me that if the topic is surveillance, there's an awful lot happening.

And I guess this is sort of a general point in thinking about this document. I was talking to Susan about this at the very beginning. It does feel to me like the message that we hope to convey here is the effort of both private as well as public funders.

And often, the public-private partnerships, which are becoming some of the best ways to support this, as private funding increases and public funding is largely stalling out or staying -- is not really growing as much as any of us would like. We need to make sure that, as we describe the progress and the opportunities, that we're capturing what's happening in the private efforts, not just Government.

Mr. Robison: Tom, it's John. I think that it might be a good idea to put in, you know, just a sentence, as you just said,

referring to the work they've done in the UK in this section, just because I think that we should take more than one opportunity to reinforce the idea of this increasing awareness of adults on the spectrum.

Because we really need to shift the conversation away from the childhood-disorder model of thinking that so many people, even today, still have.

Dr. Insel: So Alison, would that be okay to add something around either the Brugha study or simply have pointed out that there is this emerging data coming from other countries, based on adults, and the high prevalence seen there?

Ms. Singer: Yeah. No, I think that makes a lot of sense.

And John, if you can send me those studies, I can write them -- I can incorporate them.

Ms. Crandy: This is Jan Crandy. Is it only one study, or it's multiple studies that are indicating this?

Mr. Robison: Right now, the big one I'm aware of is Brugha, which I think got extended this year, didn't it?

Dr. Daniels: Yes.

Dr. Insel: Right. There was a paper out last month.

Mr. Robison: Right. So we have Brugha, and then Brugha 2, if you will.

Dr. Daniels: Alison, if it's easier, OARC can try to send you the documents. Or if you want us to try to draft it and you want to review it.

Ms. Singer: Okay.

Mr. Robison: So can you send it to Alison, then?

Dr. Daniels: Yeah. I figured we probably have easier access to papers than you do.

Mr. Robison: Okay.

Ms. Singer: Okay. So Brugha and Brugha: the Sequel.

Dr. Daniels: So we'll try to draft something based on that and then let you look at it.

Dr. Insel: Alison, I thought you did a terrific job with this. I just -- I really like the way this got laid out in terms of numbers and tables and years. And anybody looking at this can see what's really happened. This chapter, obviously, lends itself to that more than some of the others. But it's really good to have this very data based, very data focused.

Ms. Singer: Well, thank you. I want to thank all the members of the team 7 planning committee. We did a lot of back-and-forth, and it was really a great group effort. So, my thanks to everyone on the Chapter 7 team.

Ms. Abdull: This is Idil. I was hoping -- I noticed this is a little bit longer. Are all the chapters going to be about four pages or so?

And then my other question was if we're going to include studies from abroad, is it possible to speak to the studies from Europe for higher risk or population for immigrants? Immigrant [Inaudible comment] or immigrant

mothers, especially from Africa, having higher African rates?

Dr. Insel: Well, I would say that when it comes to progress, if there's great science or break-through, I don’t care, you know, whether they come from the U.S. or anywhere else. We should have the very best science in here. This is really supposed to capture what progress has been made.

But we have to be mindful that -- and we probably should note -- if most of that is coming from work that was not funded by U.S. funders, which I don't think is the case, but there is some, that's worth making a note of. Because it reminds that there's lots of other work on autism, and some of it is really important for us to know about.

Before we finish, we're already over time. And we do need to get you to take a look at the intro and the conclusion. They're brief.

John, thank you for doing the intro.

And the conclusion is brand new, as it

is now. I mean, it was just modified in the last few hours. So we're not going to have time to go through these in detail now. We wanted to capture some of the cross-cutting themes that had come up at our last meeting when we talked about this, and we thought this was the place to do that.

If there are other issues that you think need to be either of those, it would be helpful for you to let us know.

Mr. Robison: I'd like to offer just two quick things. I really think in future directions, I think that we should have a sentence or two there about our desire to see a more effective system of translation from the lab to community therapy. Because that has really lagged behind the expectations of most in the community. As much as we've made these achievements, we haven't changed things much for most people.

The other thing that I would suggest we say -- you say in that paragraph, "The ASD community is not of one mind," and then you

talk about "passionately opposed to the goals of prevention and cure." I think that what we might say there is -- we might talk about the promise of prevention or cure of autism's most disabling components.

Because I think that there is a general recognition that autistic differences in some people can be beneficial, but for most people, the balance is more tipped towards disability. And for some people, it is tipped totally in disability. We can't get rid of it, but we certainly can work to remediate the ways in which it cripples us.

And if we could say that just by, you know, adding another sentence there, a slight modification of words, I think that would be a less contentious paragraph for the doing.

Ms. Crandy: If everyone can agree on that.

Mr. Robison: Excuse me?

Ms. Crandy: This is Jan. Everyone can agree on that, that we want to ameliorate those symptoms.

Mr. Robison: Oh, I think so! Yeah. I think -- well, certainly, I know that there are people who believe that we shouldn't be doing any of this. But I'd like to think that the commonsense approach is that we would remediate the ways in which autism disables us and causes us suffering. Absolutely, I think.

Ms. Singer: I think that's very well said.

Dr. Koroshetz: We usually use the word "burden of illness" or "burden of disability."

Mr. Robison: But it's not -- yeah – “burden of illness” or “suffering of autism,” I think would be an appropriate thing to say.

Dr. Insel: Yeah, I think "the burden" is kind of a negative connotation for a lot of people. So we'll find -- I like that suggestion a lot. And we'll find some way to reframe that last paragraph, so it's not A versus B, by finding the happy medium.

Mr. Robison: No, I think we really need

to move the conversation in that way so that we can draw everyone into a constructive discussion.

Dr. Insel: Right.

Mr. Robison: And "cure" by itself just doesn't do that. It has the opposite effect.

Dr. Insel: Okay.

Ms. Crandy: Tom, this is Jan. In the Future Directions, can we have something in there about improving these or removing insurance barriers?

Dr. Insel: Not unless it's science. Again, you have to remember this is the Research Plan. So unless there was a way to do an experiment to falsify that idea or to prove it, I don't think it belongs in there.

Ms. Crandy: Well, you had mentioned about the Affordable Care Act. So we could have the science of that – the science…[Inaudible].

Dr. Insel: Yeah, but the hope with the Affordable Care Act was to do, sort of -- these would be policy experiments.

Ms. Crandy: Right.

Dr. Insel: That is, you would look at the way that the policy is implemented, and you'd do a randomized comparison. And within what we'd call a quasi-experimental study to determine which way works best in a particular state.

But this is not the document in which to lobby for changing insurance coverage.

Dr. Daniels: Jan, maybe something that we could say would be something about the goal to get more evidence to support the best therapies for people who need them, or something along those lines. That way it frames it back towards research.

Dr. Insel: Yeah, I think maybe the Future Directions, you know, building on both of your comments, can take a more positive approach to thinking about how to use the science for optimizing service. We'll -- we can play with that. It's very, very helpful to get this feedback.

Ms. Crandy: Okay. Could it be, how to

use the science to improve access?

Dr. Insel: Yeah. Because there's a whole scientific issue around scaling up and ensuring access. We'll play with that last section since many people are only going to read the Introduction and the Conclusion. So we want to get those right.

Any other comments about either of these two pieces? Again, they're pretty fresh off the press. So we haven't even tweaked them. But it would be good if, when you have more time, if you see something here that you think is just not pitched in the right way or could be confusing, let us know.

Susan, I'm going to turn this back to you.

Dr. Daniels: The next steps, then, in this revised process will be that I will send all of these documents out to you in a Word version so that you can make edits, so the whole Committee can have a look at all the drafts. And we'll set a deadline for next week for you to get them back to OARC with

any comments that you have.

And I think the smoothest process would be for OARC to attempt to insert comments and then to get back with the drafters about those. I think that will reduce the burden on the drafters and kind of keep the process moving a little bit more quickly.

And then, with the OARC, I think that between December 24th and December 31st, there probably won't be a lot of heavy activity because some of our folks will be out of the Office. So we will try to get as much done as possible before December 24th. And then we will pick it back up again full speed in January to get ready for the meeting on the 14th.

The original plan was to have, once we had the draft revised, to let the subcommittee chairs have a look for kind of a unifying review of the whole thing, to make sure that they felt that, as a whole, the document was reflecting what the Committee intended. And so, I think we will still shoot

for trying to do that in early January before the meeting on the 14th.

And on the 14th, then, hopefully, we will be moving toward any last discussions that need to happen and really finalizing the draft for publication.

Mr. Robison: Susan, I just want to thank you and Tom, too, for picking up the slack for me when I wasn't able to jump in earlier today and then last week when I had troubles, too. So I want to thank you for that.

Dr. Daniels: You're welcome.

Dr. Insel: Yeah, I hope things are going better. And we're glad to be able to help out.

Any other issues from the Committee? My apologies that you're getting all this so late in the day. It's just been an incredibly busy time.

And as I think all of you know, the shutdown has got, unfortunately, long ripples behind it. And we're still not caught up with everything that should have been done in

early October. So everything has been thrown off by a couple of weeks.

But we'll get there. And we'll plan to put this to bed. It won't have a bow on it for Christmas, but maybe for the Super Bowl.

Mr. Robison: Very good.

Ms. Redwood: Thanks for the flexibility.

Dr. Insel: Sure. And it's given us all a little bit of breathing room. But don't forget about this. We still need your input. So now that you have a little bit more time, take a look.

And in particular, what we want to make sure is that what's here is clear. So if it's something that you're not sure of what it means, it's probably true that other people will not know exactly what it means. So flag that so we can get the language to be as user-friendly as possible.

And you do need to understand that we'll be editing this. OARC -- they will be editing this extensively. So it will be harmonized throughout the whole document.

Ms. Redwood: Susan, will you also be sending action items from this call?

Dr. Daniels: Action items?

Ms. Redwood: Yeah. Will there be certain things whom, certain people that you will ask this or make this? I didn't know if you had a list of those.

Dr. Daniels: I don't have a list of every specific comment that was made on this call. But I will be sending out the drafts to you in Word and requesting that, by next Wednesday, you get back to me with any comments you have so that our group can start working on filling in some of these issues.

We did take note of a lot of the issues and can start working already, based on what was said. But if you have anything additional. So don't feel like you have to repeat what you've said on the phone already. We can pick those up. But anything that would be different from what we've heard on the phone today, please send it to us.

[Inaudible comments]

Ms. Redwood: There were just a few specific requests. And that's what I didn't know -- if you'd copied those down in your notes. If you could share your notes.

Dr. Daniels: I don't have any typewritten notes to share with you. I have my scribbles on my draft here, but I don't think I can make PDFs out of all of that and send it around.

Ms. Abdull: [Inaudible] Tom, I have a question. You said to not repeat things we've said. And so for the studies that were done outside the country where some of the immigrants have higher risk of ASD, should I send those studies to you? Or you've taken note, then I don't need to send that?

Dr. Daniels: I think that we can probably get it. But if you're aware of things and you have them at your fingertips, go ahead and send them. But I think that we're aware of some of those studies.

Ms. Abdull: Okay.

Dr. Daniels: So I do have -- basically,

I have the notes on what you've said today. And anything that you've already mentioned, we can start addressing, and we can be in touch with you if we have questions.

But if there's anything different or you needed to submit some actual information -- for example, Lyn, you said that you had some sort of specific language you wanted to add to one of the chapters?

Ms. Abdull: Yes, for the draft Introduction at the beginning. I was so excited about that. Now I forgot.

Dr. Daniels: So if you have specific language, go ahead and send it to us.

Ms. Abdull: Basically, I just wanted to add -- if it would be possible to add –- and I do not have notes in front of me; I am driving my son to his next therapy. But to say that those that are most severe, they are still more on the severe side of the disability, including racially ethnic underserved communities because underserved communities is not just racial. It could be

the rural areas. It could be a lot of different reasons, socioeconomics and also minimally verbal. But I will look at it again and send it out, you know, more clear way.

Dr. Daniels: Underserved does include rural and basically any community that's not served as well as the other communities.

Ms. Abdull: Right, right. I saw that. I saw the underserved, but sometimes if we are not specific enough, then research doesn't really target those areas I notice. But if it's possible just to add the word "racially" and "minimally verbal" for those -- that would be great. But I will send it to you.

Dr. Daniels: Yeah. If you have something that specific, please send it.

Ms. Abdull: Okay.

Dr. Daniels: So I will send out an email to all of you to ask you to send comments in, but many of the comments you have already made on the phone today we can start addressing. So, well, thank you all for your hard work on this call. We appreciate it.

Dr. Insel: Happy holidays to everybody. We will talk to you again in January.

(Whereupon, the Interagency Autism Coordinating Committee Conference Call was adjourned.)