

**NWX-OD DIRS (US)**

**Moderator: Francis Collins**

**July 20, 2015**

**4:00 pm CT**

Coordinator: Thank you for standing by. At this time, all participants are in a listen-only mode. After the presentation, we will conduct a question and answer session. If you would like to ask a question you may press star 1. You will be prompted to record your first and last name.

Today's conference is being recorded. If you have any objections you may disconnect at this time. Your host for today's conference is Dr. Collins. Thank you. You may begin.

Dr. Francis Collins: Well good afternoon everybody and welcome to this call of the ACD and appreciation to ACD members for getting on the call at 5:00 on a Monday afternoon in the summertime.

We have a very important topic to discuss which is the latest version of the NIH strategic plan which we discussed previously in our meeting on June 11th and which Dr. Tabak is going to walk you through the newest version of and seek your input.

We actually think that as a result of your input, this has gotten into a much better place. But we hope you're going to agree with that. And we're quite sure this is a group that's not shy. And so we'll probably find out soon exactly whether that prediction is going to come true.

First, let me be sure I know who's on the phone. I think I heard a bit of a roll call but let me run through it one more time. Huda Akil?

Dr. Huda Akil: Yes.

Dr. Francis Collins: Russ Altman?

Dr. Russ Altman: Yes.

Dr. Francis Collins: Cori Bargmann?

Dr. Cori Bargmann: Hi Francis.

Dr. Francis Collins: Hey. I know Mary Sue Coleman could not join. Lisa Cooper? I think we're expecting her. Eric Goosby? I know Eric was going to join a little late. He'll probably sign on here shortly. Helen Hobbs?

Dr. Helen Hobbs: Yes.

Dr. Francis Collins: Harlan Krumholz?

Dr. Harlan Krumholz: Yes.

Dr. Francis Collins: Cato Laurencin? Rick Lifton was not expected but just in case - no?

Man: (Unintelligible).

Dr. Francis Collins: Ian Lipkin - was not expected either. Peter MacLeish?

Dr. Peter MacLeish: Present.

Dr. Francis Collins: Great. Elba Serrano? I'm not sure whether we're going to hear from her. Monsef Slaoui? We're expecting him but maybe he hasn't come on yet. Mike Welsh?

Dr. Mike Welsh: Yes.

Dr. Francis Collins: Hey Mike. And Chris Wilson? Okay. Well just in terms of logistics, this was published in the Federal Register on July 8th because we do that for ACD meetings. The tele-briefing is open to the public so there are listen only lines available.

But obviously you ACD members are in a different category, where we can hear and want to hear from you.

The ACD site contains a public dial-in number as well as the presentation that Larry Tabak is going to go through, which I hope all of you have in front of you, because it's been sent out. The call of course, is audio, but the visuals will be important.

And again, for the public those are on the ACD site. But for the rest of you, I hope you have them in front of you that were sent to you. The call is being recorded. It will be transcribed so please identify yourself when you make comments so that we're sure we knew who said what.

And at this point, I'm going to turn this over to my able Principal Deputy Director who has been taking the lead now for several months in this effort, to put together an NIH strategic plan that will well represent the broad range of things which NIH is all about.

Not in any way preempting the fact that the 27 institutes and centers have their strategic plans which we will want to point to, but providing a higher level view across all of NIH. How is this all coordinated in a way to get the maximum benefit from the taxpayers' dollars?

So Larry, can I hand it over to you?

Dr. Larry Tabak: Okay. Thanks Francis. And good afternoon everybody. Thank you all for joining us. So I - again, I do hope you have the slide set in front of you. So on slide 2 you'll see we'll begin this by talking about briefly, the original framework. And so slide 3 displays that original framework.

And you will no doubt recall, because it's certainly burned in my brain, that this was really based upon traditional organ based disease paradigms. And if you go now to slide 4 this summarizes the feedback that we received from you on June 11th.

Clearly the original draft framework did not resonate with you. None of you were bashful about that point. You emphasized that the document needed to be shorter.

And you felt that the preceding framework which constituted a 4x4 matrix would be definition, result in a document that would be far too long and

unwieldy. You felt that the document needed to be inspirational and forward looking.

You indicated very strongly, that you wanted the document to incorporate and emphasize cross cutting themes. And that in fact, the previous framework emphasized too much organ based tradition.

And then finally, you asserted that we needed to emphasize the flexibility and nimbleness that - that we need to employ going forward. Slide 5 lists what I think the ACD did appear to resonate with and that is what the plan should be and what it should not be.

So again, I think we were - we heard agreement that the plan should clearly articulate the highest priorities of the NIH overall. That the plan should describe how NIH would achieve these priorities.

I think there was agreement that the plan needed to be a living document that no doubt would require refinement throughout its lifecycle of five years. But then there was also agreement about what the plan should not be.

And so it should not describe all the many important things that NIH does or will do in the future.

And finally, the strategic plan should not address priorities of the individual institutes and centers since as you all know each IC has their own strategic plan that we can reference in the executive summary of the overall - overarching NIH strategic plan.

So with some trepidation, I will now go to slide 7 which is the new draft framework. And I will break this down by preamble, some of the cross cutting areas of opportunity. And then finally, some of the unifying principles.

So slide 8 displays the preamble which is sort of the overarching introductory sets of material. And I think some of these things are - are quite obvious. An articulation of the mission of NIH.

You know, a brief, concise discussion of how we really are in a - a moment of unique opportunity in biomedical research.

Provide a, you know, a concise summary of the current NIH research landscape indicating that we have a continuum from basic through applied research effort that we have both extramural and intramural component.

The fact, as I've already mentioned, each institute and center has their own strategic plan. By way of example, we have a number of cross cutting activities, the common fund being one of them.

It certainly would not be the only example of that type that we would provide in that section of the preamble. And then finally, an articulation of the constraints that confront the community in the face of loss of purchasing power.

Slide 9 displays the areas of opportunity that apply across biomedicine. And if you'll recall, the original framework displayed three discreet boxes. And at least some of the disquiet that the ACD displayed related I think to that sort of discreet framework.

Here, what we're attempting to show is a continuum of opportunities that range from fundamental science through health promotion and disease prevention efforts to treatments and cures.

And so those who are far more artistic than I am, might be able to come up with a, you know, a better rendition of this. But it's meant to show a gradient such that things, you know, typically although not exclusively, emerge from fundamental discovery.

And then - and then, you know, move to these other areas of opportunity. Within each area of opportunity you see several high level points that will be made.

So under fundamental science, the notion of course, the basic science is the foundation for progress that the consequences of basic science discovery are many times unpredictable. And the fact that the leaps in technology often catalyze major advances.

And we have listed under that last bullet point, some examples. Again, these are just illustrative. Some may or may not, you know, make it into the final document. But just to give you a flavor for some of these things. Similarly, for health promotion and disease prevention, a number of sub bullets.

How - why it is important to study healthy individuals; the importance of advances in early diagnosis and detection; the need for evidence based elimination of health disparities.

Again, by way of example and only example, we list things like the PMI cohort effort, tobacco opioid addiction, the influenza vaccine. Again, there are

many, many more that could be selected under this opportunity area. But you - hopefully, you know, you get the point.

Finally, under treatments and cures, the notion that we are at a time of unprecedented opportunities on the basis of our ever-increasing - increase in molecular knowledge, the fact is that that has led to a breakdown in traditional disease boundaries.

The fact that breakthroughs need partnerships that often come from unexpected places. And then again - and again, an articulation of some examples, and we've just shown you these - this list for - for illustrative purposes.

So on slide 10, you will see that our intention is that for each area of opportunity we will have a succinct description of emergent opportunities.

And what NIH needs to do to realize the opportunity, will also highlight specific examples of recent breakthroughs - something that we're calling research spotlights at the moment. And so if you go to slide 11 you'll see that we've - we've highlighted single cell biology.

Slide 12 shows you what a research spotlight might look like. Again, that doesn't mean that single cell biology will be in the final document. It's just there for illustrative purposes.

But as you can see, this particular research spotlight and all of these we would envision, would be accompanied by some sort of graphical representation that tells a story. This from a recent paper and cell, which describes a highly parallel single celled transcriptomics approach.

And the fact that this analysis in mouse retinal tissue, revealed transcriptually, distinct cell populations along with molecular markers of each cell type.

So this is the type of thing, again just by way of example, we would highlight obviously the citation of the publication and/or the Web site at NIH that may tell you more about the particular discovery or - and then finally, the Web site of the relevant institute or center.

Slide 13 displays what we are referring to as unifying principles which inform objectives that would need to be accomplished to achieve the preceding goals, which are articulated as areas of opportunity. And so as you can see, there are two such unifying principles.

One, how we set NIH priorities; the other, how we are going to enhance stewardship. And there are individual bullet points under each of these unifying principles. And I think, you know, these are self-evident and I needn't belabor them.

But certainly, I think certainly the Congress is very interested in NIH unambiguously describing how we set our priorities. And indeed, both they and the public, you know, want assurance that we are taking our stewardship responsibilities with the greatest degree of seriousness.

And so this is also an opportunity to - to lay out what these various approaches are going forward. Slide 14 just simply indicates that for each of the unifying principles, we'll have a description of the current status and/or emergent opportunities.

And again, what we as an agency would need to do to achieve the opportunity. And then finally, we then highlight specific examples of recent

breakthroughs. I'm calling these stewardship spotlights. We can come up with better names perhaps.

So slide 15 just gives you an example of what this might look like. This is a shot of the Web site of (Dee Poughkeepsie)'s suite of programs that are designed to enhance the diversity of the NIH funded workforce. There's a brief description and then a link to the relevant Web site.

So slide 16 is a timeline which I would like to draw your attention to. So we are on July 20th, having this phone call with the ACD members. We would need to, in order to hit a series of additional deadlines, publish a request for information very shortly after this call.

Obviously any comments that you all have to share with us will be, you know, considered and incorporated as we go forward. But the RFI I think, would more or less display the framework as you have heard me describe it this afternoon.

In early to mid-August we will be conducting a series of webinars. If there are substantive comments that the ACD provides to us this afternoon, we will surely be able to incorporate those, you know, recommendations in time for the webinars, so we will be able to update things.

Through mid-August to September we will be analyzing feedback both from the RFI as well as the feedback that we obtained from the webinars.

We'll then take advantage of the many institute and center national advisory councils that meet in during that time period, where either I will present to different councils or we will provide a slide set for the IC director, to do this, you know, on behalf of our effort.

That will allow us to gain a great deal of additional feedback, all of which will be incorporated through the October/November period. And then following that we will of course brief the department. After that, the members of the relevant Hill staff.

We will give you a draft strategic plan by November 23rd. So that will be the Thanksgiving present to all of you. I don't want any turkey jokes please.

And that will give you sufficient time to review, to offer comment before we actually formally present this to you at the ACD meeting either on the 10th or the 11th, with the goal of sending this to the Congress by December - and I truly hope that doesn't mean that nobody heard what I just said for the last several minutes.

So with that, I will stop and turn it back to the operator so that we can engage the members in...

Dr. Francis Collins: I don't think the operator actually needs to intervene. I think that we can probably hear everybody. Let me - before we jump in though, be sure I know who has joined us since we last took the roll. Any ACD members who I did not hear from when I called the roll, who joined subsequently?

Dr. Lisa Cooper: This is Lisa Cooper.

Dr. Francis Collins: Great. Did Eric Goosby sign on? I knew he was going to be late. I guess he's really late. Anybody else who I haven't called? Okay. Terrific. And again, Larry thank you. And I should say, this plan that you've just heard presented, by Larry, has been discussed with the institute directors.

And they had a fair amount of input into what you're seeing. And I think it's fair to say we're quite positive about this model and appreciative of the ACD input that we had in June, which resulted as you can see, in quite a substantial change in the framework. So let me open it up to questions and comments.

Dr. Russ Altman: This is Russ. I have a comment. Russ Altman.

Dr. Francis Collins: Yeah?

Dr. Russ Altman: Okay. Thank you very much. Larry, this is great. Thank you for your work. And I really like the new format, schema that you presented. I have two kinds of questions or things to consider.

The first thing is I really like your examples of fundamental science and you showed that one example with single cell biology with a - you called it a deep dive or something. You called it - with the nice graphic - the research spotlight.

My question is how are you going to handle the balance between just some examples versus actually committing to a core set of things or if you even want to, a core set of things which you really do expect to be cross cutting and supported across the NIH as specifically named priorities?

I could imagine on the one hand that there's too many examples. On the other hand, if you just pick examples, the reader might be left wondering what gets an example on this list and what becomes a cross cutting theme and what doesn't. So that's my first question.

And I can hold my second question for a minute.

Dr. Larry Tabak: Right. So that's an important point Russ. So the - the - so it turns out that a number of those examples are in fact, examples of cross cutting activities. So for example, the brain initiative which you and the other ACD members are well aware of, is cross cutting.

Microbiome single cell biology, are both common fund origin, you know, originated in the common fund in many ways. And so those are very much cross cutting and so forth. So I think you're quite right as we have many, many examples as you - as you - as you know doubt appreciate.

And so what makes the final list would - would, you know, that's a good filter to put things through. And it - and it is true that those are examples of cross cutting things.

Dr. Francis Collins: But Russ this is Francis. I think we do have to be careful that we don't try to make the examples cover more than they should, as examples.

I mean we - and the preamble has to make it really clear and every place in this document has to make it clear that this is not intended to summarize everything that NIH is doing that we think is important.

Larry's already asked all the institutes to make suggestions of research spotlights that they think might fit in these various places. And some of those are captured here, some have not. We just recently got that list.

I think what we would try to do is to have a pretty good balance here, so it's not all about, you know, one institute's business. But there are things coming from the various parts of this enterprise. But again, repeatedly saying that these examples are just that. They are not intended to be comprehensive.

The themes on the other hand, which are not attached to particular projects or particular diseases, such things as saying it's important to study healthy individuals or unprecedented opportunities for treatments and cures now exist on the basis of molecular knowledge.

Those themes are intended to be much broader and to capture more but not all of the portfolio. Does that help?

Dr. Russ Altman: Yeah, it does. But - and I think you're - the key thing that you just said for me, is that the preamble on the first three bullets - basic science as a foundation; consequences of basic science; leaps in technology, has to be really carefully worded so that they understand that.

Because really this is a plan. And so when you have a plan and then you list five examples, the default will be okay, that's the plan. Microbiome single cell biology.

So I just - I'll encourage you to just - when you're actually writing that up, make sure that that preamble says that there are - there are many directions we're going in. They all need to satisfy these criteria.

And we're going to show you some so you can understand in a little bit more depth, what we're talking about. But it is tricky because this is a plan. And therefore, some things are supposed to be in and other things are supposed to be out.

So I'd just encourage you to think about that. I don't know how to solve that because the (unintelligible) clearly in when they're listed.

Dr. Francis Collins: Yeah. One way we thought about just making that point visually, is to have the examples be in call out boxes, because oftentimes people are used to seeing those as sort of illustrations...

Man: Yeah. Yeah.

Dr. Francis Collins: ...but they're not intended to be comprehensive. And I think we might very well use that ruse.

Dr. Russ Altman: Great. And then my second question, and then I'll be quiet, is I got a little bit of a red flag when you showed the example at the end - let me just jump to it. The stewardship spotlights. Because that started to sound now like a strategic plan but like an annual report.

And so Larry, could you just tell us about the ecosystem of paperwork and reports that this exists in? To what extent do we also have to kind of be tutorial to the reader about all the great things that we're already doing?

Because I could imagine a document might look very different if it has the dual purpose of bringing somebody up to speed about the great things that NIH is doing, as a launching point for the strategic plan versus saying we assume you know how great the last 110 years have been.

Let's tell you what the next five to ten are going to be about. So can you just comment on - on how you're thinking about that?

Dr. Larry Tabak: Yeah. So there will be a balance Russ, for sure. Although I think we'd rather error on the side of looking forward over the next five years than to do a retrospective.

And - and so in that regard, I think what we would do is we would emphasize under enhancing stewardship, some of the new approaches, new things that we are trying to accomplish in that space.

Dr. Francis Collins: Yeah. Yeah. Let me also mention, because we - we've of course had this discussion with you all in June, about who is the primary audience for this document? And because the Congress has asked for it, the Congress is our primary audience.

But we want this to appeal to many other audiences as well. I can tell you they are very hot to see this segment about enhancing stewardship.

And part of their confidence in NIH's trustworthiness as an institution that they would like to see enjoy a return to some of the resources that we've lost, is predicated upon our in fact living up to that expectation of stewardship.

This has played very well in many conversations with members and in hearings. And I know they're going to be looking for a segment of this sort, where we basically document that we are aware of those responsibilities and we're going to take them seriously.

Dr. Larry Tabak: Francis, you know, has, you know, charged all of his staff to work intensely on these various elements. But it's sort of the best kept secret in some ways. And so we're just going to illuminate, you know, some of the things that we've been working on for the purposes that Francis has indicated.

Dr. Russ Altman: Thank you.

Dr. Francis Collins: Thanks Russ.

Dr. Huda Akil: So hi, this is Huda Akil.

Dr. Francis Collins: Yeah. Hi Huda.

Dr. Huda Akil: So first, I wanted to say how much I appreciate how responsive you all have been. It's really remarkable to give feedback and see that, you know, the next revision incorporates not just the details but the actual like spirit and philosophy, and is willing to do such a major reframing. I'm very impressed.

So with that in mind, I think I only have a couple of general thoughts. One is again, I agree that the preamble is very, you know, important. And my question is this is about strategy, so it seems to me that it's important to tell me as the reader, how the strategy is going to be unique or different from business as usual.

What is it that we have learned and where are we are in this moment in this moment in time, that makes our strategy somewhat different? For example, you have provided one idea which is the importance of not just studying illness but studying health.

I think that is an example of a strategic approach to understanding disorders that is worth emphasizing as a kind of a broad deep different approach.

So to me, without kind of belaboring the example, it would be good to articulate what we have learned some of the challenges that we have faced and how that informed new strategic approaches to the way we're going to move forward, not so much as a plan point by point.

And that speaks to the example. But as a philosophy of how the institute is going to approach problems.

Dr. Francis Collins: I think that's really helpful Huda. And actually this would fit nicely in the preamble under that second bullet of sort of unique moment of exceptional opportunities. Why is it exceptional and what are we doing differently now as a result? And you mentioned health as a topic of study, not just illness.

But you could add several other things there, particularly, you know, the advent of the recognition of the importance of interdisciplinary research where often at the interfaces between disciplines really exciting things happen.

And the recognition that technology really is a major driver of advances which maybe we didn't necessarily appreciate quite so much before. Topics of that sort which have changed the landscape in which we are now through this plan, trying not just to grudgingly admit to but take advantage of.

Dr. Huda Akil: And also while we're citing things, sort of the very intimate interactions between the biology and the environment and by environment whatever we mean, including social, global poverty, all of that.

You know, however way you can bring that sort of realization, whether you're talking about epigenetics or what, you know, whatever level it wants to be discussed. I think that's another type of realization.

Dr. Francis Collins: Got it.

Dr. Larry Tabak: Good.

Dr. Francis Collins: Thanks Huda.

Harlan Krumholz: This is Harlan, I just wanted to make - first of all, I'll also just echo the comments about appreciation for the responsiveness. I'm just trying to look, you know, I'm - at - so I'm sighing a little bit.

When I look at the draft framework I'm trying to understand these categories - fundamental science; self-promotion and disease prevention; treatment and cures and they don't seem to be parallel to me. And I'm just trying to understand why you decided to go this route for example.

Because so fundamental science and then you've got, you know, then there's sort of applied science. And there's, you know, there - and where does - what - fundamental science feeds into both of these others.

But then there's sort of this big other piece about clinical research, clinical science, applied work, the work that Lisa and I do and others. And I'm just trying to see when those of us look at this, where will we think that we fit? Because it won't be obvious to us that this is about us at all.

And I'm just only saying that it doesn't have to be about me or Lisa, but it - for the people in the research community for doing this kind of work; when we look at this we - we don't necessarily feel that it includes us. And maybe that's purposeful. And that would be fine if that's your intent.

But if the intent is to have a broader tent of investigators then there needs to be sort of an expression within the framework that makes clear that we're trying to do this. And the second piece of it that I'm really interested in that I think is missing, is again, the sort of big data stuff.

Because I see that as another important tool, especially with electronic health records and everything, all the work you're doing with precision medicine,

you know, as sort of feeding into here. And I don't see that as sort of as a natural fit.

Now you could say we can't do the health promotions disease prevention or the treatments and cures without paying attention of all of these other factors. Some of what Huda was intimating about.

But again, you know, the question is whether or not you want people, when they see this, to feel is this about just fundamental science and then how that feeds into these other areas?

Or are you trying to express a broader vision of the kind of science that might be called out in this particular - these particular initiatives and in this strategic push? So it's just a matter of being purposeful. If that's your intent then okay.

If it's not your intent then at least from my perspective, it falls short of being able to make some people feel that this is about them too.

Dr. Francis Collins: So Harlan, I appreciate your frankness about this and actually I'm - I'm a bit surprised that it doesn't come across. But obviously you're in a position to comment that it's not clear.

I would have thought within both health promotion and disease prevention category and treatments and cures that none of that happens without clinical studies, clinical trials. But we don't say it.

So maybe - again, let me say the bullets that appear under each of these three categories in the blue box, are not what you might say are fully baked. We've gone through a couple of iterations of them and they clearly are lacking something here in this space, because it doesn't resonate with you.

Certainly the big data, your point's very well taken. It's implicit but it's not explicit the way this is written. Now obviously when we take this document into a multi-page thing instead of an outline, we have a great opportunity to do that.

And I'm - I'm actually quite glad that you brought up the fact that what is what I thought in my mind obvious, doesn't come across as obvious to an expert in the field.

Harlan Krumholz: Well and let me tell you how I - I mean one way of managing it, at least from my perspective, and again it just depends on what your purpose is. And I know you have dropped in the disparities and so forth into the middle part. But what I'm thinking of is more about the message.

And within the fundamental science side it's more about methodologic approaches. And so then that - that would include, you know, big data analytics.

It also includes innovations around experimental approaches to testing particular interventions, adaptive trials and so forth, as well as novel approaches to observational studies.

I mean what you want to do is promote the next generation of methods that are going to feed into the application in the second two columns.

And I think you can just broad - if you just broaden your view a little bit, about what those innovative methodologies are, they stretch from very molecularly oriented mechanistic studies to again, novel, innovative methods that are doing things along the spectrum of human study.

Then I think you're basically seeing the first column as being more broadly inclusive of a wide range of methods in the second two - in the service of the second two columns. Everything is being done. And some are more distal and some are more proximate.

Some we don't have any idea how they might feed into the two but we're making investments because we're hoping that we will learn something that will ultimately feed in. Some will be more proximate.

But that the first column is basically saying hey, we're interested in innovative methodology across the entire spectrum. Bring it on. You know, tell us what the next generation is going to help us learn faster, better, cheaper.

And then the second two are sort of - and these are thematically the two columns that we're doing it in service of. But anyway, I don't want to go on and on and on.

But this is sort of - I think in my view this is what you want to do to fix it, as opposed to saying, you know, number one is just about people in the lab.

Man: Yeah.

Harlan Krumholz: Not people in dry labs, not people working (unintelligible), not people working with humans. And I think that that - anyway, if you wanted to, that could be a way to address it.

Dr. Francis Collins: Harlan that's really helpful. And I think your point is very well taken. Larry and I are nodding at each other about how we could take care of this and make it more comprehensive and explicit. I appreciate it.

Dr. Mike Welsh: This is - this is Mike Welsh. I'm wondering if we need three columns. Are two sufficient? And I think part of the problem with columns two and three, are that you try to become too granular there. If you look at the first column, yeah everything sounds good.

If you look at the last two, suddenly you start to think well, it - this is not mentioned, that's not mentioned. And the third thing is not mentioned. And is it talking about what I'm doing? If you - can you cut down the three - the second and third column into one - fundamental science and applied science?

Or perhaps some better name. Because I think the - if it's too granular people start looking - hey, does this cover me?

Dr. Francis Collins: Yeah. Your point's taken. And, you know, Mike we did have an iteration where we tried to do it in two. Larry and I kicked this around for a day or two. I had trouble making it quite as punchy.

I really liked the idea of being able to highlight things like health promotion which we're often accused of ignoring, but also having the word cure in there. And it seemed like it was more readily able to make those cases in the three column.

But I take your point that there's a negative to that too. I don't know what other people think about that.

Dr. Huda Akil: So - hi, this is Huda. About this point, one thought I had is you could flip them. So in a way, the cure - the treatment and cure is you still have the disease and so you understand that you cure it. But in a way, a higher level of knowledge is to prevent it.

Dr. Francis Collins: I see. Flip the second and the third column and the other...

Dr. Huda Akil: And it lets you then understand epidemiological factors, social factors, longitudinal factors. And it walks you back into some of the Harlan domain of things.

Dr. Francis Collins: Yeah. Of course...

((Crosstalk))

Dr. Huda Akil: ...for more granular to more typical medicine, to a more inclusive social science public health epidemiology, etc.

Dr. Francis Collins: Part of our problem I think is that we're trying to do this in a one dimensional view. And if we...

Dr. Huda Akil: Right.

Dr. Francis Collins: ...were allowing...

Dr. Huda Akil: Yeah. No. I understand. But it was just - it's just one thought about if you're - if you're trying to grade it from molecule to - all the way to, you know, social - to humanity, the drugs are in the middle, not all the way at the end. So that's just one thought.

Dr. Francis Collins: I hear you. Yeah. Well maybe really serious though, to think about whether this diagram should be such that fundamental science feeds into both of those.

Dr. Huda Akil: Yeah. That's the other way.

Dr. Francis Collins: Yeah. Okay. This is helpful. Other comments?

Dr. Cori Bargmann: Yeah. This is Cori. I'm not sure whether I'm not - whether something is written in a way that I don't understand or if - if it actually means something different from what I think.

So when I look on page 13 - enhancing stewardship - and the first item under there is strengthen and sustain a diverse workforce. Then on page 15 there - the stewardship spotlight is about - very specifically about diversity of the workforce.

Now to me, stewardship at NIH is - is not just diversity in that sense but it's actually about - it's about training. It's about the pipeline. It's about MDPHDs as we've talked about at the ACD.

And just that phrase, a diverse workforce, is kind of clicking my brain into a very specific meaning about - about sort of gender/racial diversity where I think isn't NIH's real stewardship job to support the training and development of outstanding scientists, of many different kinds?

So I'm - I'm kind of - that's what I'm asking. It's like, am I not understanding this part, or is it just sort of like making me think of the wrong thing?

Dr. Larry Tabak: So this is Larry. We - so whenever I - and I failed to do it and I apologize. Whenever I mention the term diversity I typically say with a qualifier that we are speaking about diversity in the broadest possible sense. So this is not just about racial or ethnic diversity.

It's about, you know, putting together a workforce that is competent and outstanding in a whole range of domains. So - so I take your point. Of course this is just one example of such stewardship. We could have just as easily highlighted the MSTP program for example. And maybe...

Dr. Francis Collins: Maybe we would.

Dr. Larry Tabak: ...to avoid precisely, you know, the point that you are raising to be perhaps a little too narrow about this, we want to highlight both something that, you know, is trying to diversify racial, ethnic, geographic, you know, etc., etc. nature of our workforce.

But also something like MSTP which is, you know, a different type of - of, you know, diversity. I...

Dr. Cori Bargmann: So if I could make a suggestion then, I actually - I'm fine with the spotlight but then I would only - the one thing I would change is under enhancing stewardship, I would change the phrasing to strengthen and sustain an outstanding biomedical workforce.

Man: Through diversity.

Dr. Cori Bargmann: Yeah, well it's, you know, it's - diversity is one aspect of it. But what I'm responding to - just, you know, just to be clear, what I'm - what I'm picking up on here is what I hear when I talk to people in their 30s, which is, you know, funding is going down.

We will never have the opportunities that you had. We will never live up to our potential. You know, jobs are harder to get. Grants are harder to get. We're being trained. We're getting PhDs and there are no jobs there for us.

I'm actually talking about something - I'm talking about the whole - when people talk about sustainability of the scientific workforce, I'm not talking about bringing in a small group of people. I'm talking about a generation of people who right now are feeling very destabilized.

And I - that's why I was asking are you addressing that? Are you thinking about that as well? Which, you know, things like the new innovator program is an example of that.

Man: Yeah, right.

Dr. Cori Bargmann: Or is that something different? Because - because I think Congress has been concerned about that, right? I mean I think there was one of the members of the House of Representatives actually wrote a piece about how few young investigators were being funded by NIH. Right?

Dr. Francis Collins: Yep. That was Andy Harris. No. I think Cori, your point...

Dr. Cori Bargmann: Yeah.

Dr. Francis Collins: ...is well taken. We're maybe trying to say too many things in six words here.

Dr. Cori Bargmann: Yeah.

Dr. Francis Collins: Because I think we're totally with you that what was intended here was to strengthen and sustain an outstanding workforce including the fact that we want it to also represent our country in a better way than it does now. But that's the only point.

So yeah, we're trying to accomplish too much with a short bullet here. And we could maybe even divide this up into two bullets. And it would be...

Dr. Cori Bargmann: Yeah.

Dr. Francis Collins: ...clearer.

Dr. Cori Bargmann: Yeah.

Dr. Francis Collins: I don't want to lose the diversity emphasis though. I think that's got to be upfront. But it doesn't...

Dr. Cori Bargmann: Yeah.

Dr. Francis Collins: ...need to be misunderstood as the only thing about the workforce that we're concerned about.

Dr. Cori Bargmann: Exactly. Yeah. That - that - I'd be thrilled with that.

Dr. Larry Tabak: Good points. Thanks.

Dr. Francis Collins: Got it.

Dr. Peter MacLeish: Well said Cori.

Dr. Francis Collins: Thanks Peter. Other comments?

Dr. Cato Laurencin: Hey (Mike), Cato Laurencin. First, thanks so much for the efforts you made in terms of, you know, listening to us and - and - and bringing this back

to us. I think this is really greatly improved and I - I want to thank you for, you know, for bringing us back together like this.

And I think that we've got a nice framework. Just a couple of comments - one is the fact that I - I mean I just - as I said probably at the meeting, I think we have a chance of, you know, really making some lemonade here and that we could - in creating a really inspirational document that people can sort of look at, grab hold of and say hey, this is what NIH is doing.

And so I don't - I don't know if looking at the end or the beginning, I think it's really important at the end if there's a sense of inspiration that a document may give in terms of what the hope is for the future.

And I don't know whether it's, you know, 100 treatments, preventions and cures as something as - as a - as a - as a mantra for it or something like that, to think about in terms of what the strategic plan should say.

But something that's sort of inspiring to people that, you know, even the everyday person can look at and say hey, this is what NIH is doing, would be great.

The second is that I think that looking at, you know, most strategic plans need to have some metrics to sort of say at the end of the rainbow are you successful? And that, you know, it may be ten years or 15 years.

But it should be something that says hey, in ten years we think this is where we're going to be. And it should be based upon some logical, you know, inferences that have taken place in terms of where you were ten years ago and what you've been able to accomplish in the last ten years.

So I'm not sure whether that's part of the - that's the feeling that whenever I see a strategic plan I look at what the - what the metrics are and where the timeline - what the timeline is to sort of say are you on task or not and whatever metrics are there based upon, you know, based upon data that you have in the past that says you can actually accomplish it.

The third thing is I think that racial and ethnic diversity is very key to this country. That if we don't address it and we don't think about it this then we will be - then we will, you know, that no strategic plan will be successful.

So I do believe that we should probably have two bullets in there because I think that while in the fullest form it's racial and ethnic diversity in its sole form is important, I think that it's something that talks about, you know, looking at the workforce and looking at, you know, young people and how we're going to be able to engage them in terms of being able to have a research career is important.

And at the same time, I think it's just as important, even more important that racial and ethnic diversity be - be stressed. So maybe even two bullets that actually look at that, are there.

And then finally, I think that it's going to be tough to sort of, you know, visualize this to a certain extent because there are a lot of different areas.

And the National Science Foundation has these sort of three plain graph systems that they require for their - for big plans and big grants that have - that are ten year projects that are there.

And I, you know, welcome people to look at those sort of three plain graphs and sort of take a look at, you know, sort of basic science interfaces with, you

know, with applied science and sort of look at ways in which can, you know, visualize this in three dimensions, in terms of how we portray how they interface between, you know, different areas, different projects, programs, cross cutting programs, etc.

And use some visual cues that will be maybe helpful for us to - in terms of talking about what the vision is for the strategic plan.

Dr. Larry Tabak: Thanks Cato. Let me just address one of the four comments that you made and that's related to metrics. This is a real double edged sword. So there are certain elements to the draft framework that could potentially lend themselves to metrics - things related to stewardship for example.

But there are other elements that I think we would be putting ourselves in a very precarious state if we began to, you know, setup metrics to cure some disease or condition.

I just think there's too much unknown as - as you certainly well know when you're, you know, going down that road. And so, you know, I think we're - where metrics make sense, I think we could, you know, take a crack at providing some.

You know, so things related to workforce, you know, I mean there are certain things that we could, you know, perhaps address, you know, with benchmarks. But when it comes to, you know, looking at treatments and cures, I'm loathe to laying out, you know, benchmarks for us to work against.

And, you know, in a document of this type.

Dr. Cato Laurencin: I guess where I'd say treatment, preventions and cures, obviously to see the word cures, is very difficult and often is a hackneyed phrase.

So in the area of treatment and preventions I think even with the 21st Cures Act, you know, we sort of - I think that's been pushed forward as something where the American people are looking for these new - we need to have as work - we need to have a science workforce that's able to create these new treatments and these new prevention strategies.

I think that's part of the reason why we're receiving the funding. And I - I'd like to think that a strategic plan could be something that people could see listen, if we were adequately funded, if we have a - if we have the tools that we'll be able to produce this.

And we'll not - these are (unintelligible), these are from the metrics that we've seen in the last ten to 15 years or 20 years, in terms of what we've been able to do at NIH in terms of making it happen. So obviously it's up to you at the end. But I would - I sort of like metrics in terms of plans.

And I'll just put that out as - and it might have to be in the cures, but so I'd put it in the generic treatment, preventions and cures.

But I think in terms of prevention strategies, treatment strategies, I think that - I think it's reasonable and realistic that we think about, you know, what we're doing to be doing over the next ten years and how we're going to be spending the taxpayers', you know, money to make these things happen.

That's just my thought.

Dr. Francis Collins: Thanks Cato. Other comments?

Dr. Peter MacLeish: Yeah. In the way of metrics, I just looked at a study where - which shows that Pennsylvania, Massachusetts, New York, California, they get something like \$215.00 NIH per citizen. And everybody else gets about \$60.00 per citizen.

That should change someday so that, you know, there's - there is a more diverse sort of portfolio in these places. So I mean that's a metric that could be looked at. I'm not sure it's easy to move right away. But these sorts of things are all there.

Dr. Francis Collins: Yeah. That'll freak everybody out who's concerned about whether we are actually paying attention to peer review. But I know what you're saying Peter. And obviously, the idea program is moving in the direction of trying to achieve more of that equal distribution, albeit not without controversy.

Other comments? So I think we have not heard from Helen or Lisa if you had anything to share with us, because we're probably going to sign off here shortly.

Dr. Helen Hobbs: Right.

Dr. Lisa Cooper: This is Lisa. I was just going to say I apologize, but I have not been able to see the document (unintelligible). So I'm going to have to do my comments when I get to my computer.

Dr. Larry Tabak: Okay. So Lisa, the last slide has my email address. And so please feel free to send those comments to me directly. Okay?

Dr. Lisa Cooper: Will do.

Dr. Larry Tabak: Great.

Dr. Lisa Cooper: Will do. Probably like this evening sometime.

Dr. Larry Tabak: Oh, well that's great. Anytime this week if you have a chance, would be wonderful.

Dr. Francis Collins: Great.

Dr. Lisa Cooper: Okay.

Dr. Helen Hobbs: And this is Helen. And I have to say that I was really pleased with the new draft. I think it really did achieve a lot of the things that I thought was lacking in the first draft. I do think it's inspirational. I do think it's forward looking. It incorporates cross cutting themes.

And I like that it emphasizes flexibility and nimbleness. So I have to say I - I'm - I think some of the comments that the other - of the other individuals were really - were good. And I'm supportive of some of the changes. But I really don't have anything substantive to add. And kudos to you Larry.

You took some tough feedback and you really turned it around.

Dr. Larry Tabak: Well this has been a team sport.

Dr. Francis Collins: Yeah.

Dr. Larry Tabak: And we really appreciate the feedback. And we've got a lot of folks here working hard at this, including Dr. Collins. So...

Dr. Francis Collins: You all have helped us a lot here. Now Larry, do you want these folks to potentially volunteer to take part in these webinars?

Dr. Larry Tabak: Yeah.

Dr. Francis Collins: Do you seek to socialize this further?

Dr. Larry Tabak: Right. So that's the next little piece. You're not quite free of me yet. So there are webinars being planned and we can send you the specific dates that we have in mind.

And the idea would be that if some of you have the bandwidth to - to sort of serve as co-moderators with me, I would, you know, just sort of set it up, you know, real quickly, perhaps allow my partner to...

Dr. Francis Collins: Somebody has just gone on hold.

Dr. Larry Tabak: Somebody to, you know, one of you to articulate, you know, sort of the framework. I think - and then help us, you know, in terms of feedback. That would be very helpful. Of course we will, you know, provide talking points for anybody who is able to join us in this capacity.

So we'll be sending out an ask to all of you with - with potential dates. And, you know, if you're able to, you know, help us with this that would be great. I thoroughly appreciate that this is vacation time for many. But if, you know, if you are around and can spare a couple of hours in August that would be great.

Dr. Peter MacLeish: But Larry, this is a co-moderator role, right? Co? Co?

Dr. Larry Tabak: Right. No, I will not allow you to solo. I will be there with you.

Dr. Francis Collins: Okay. All right. Well thank you everybody for giving us an hour on the end of this Monday afternoon. Your comments, again, very thoughtful and I think we will improve this next version as a result. And I'm sure we will continue to do so until we get to this December milestone.

And I must say I'm feeling encouraged based on today's conversation that we're on a better track now and I hope the rest of the community agrees. Again, I'm quite sure that whatever we end up with will be received with benefit of enthusiasm by 100% of the people who see it.

But if we can get as close as possible to something that really well represents in an inspirational way ONHI is all about then we'll feel pretty good about it. And thank you for your help in getting us there. So have a great few weeks of what the summer still has to hold and we'll maybe be talking to you as part of these Webinars. Thanks everybody.

((Crosstalk))

Coordinator: Thank you, this concludes today's conference. Participants, you may disconnect at this time.

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