U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
ADVISORY COMMITTEE ON HERITABLE DISORDERS AND GENETIC DISEASES IN NEWBORNS AND CHILDREN

Fourth Meeting
Thursday, April 21, 2005

Rotunda Room, 8th Floor
Ronald Reagan Building and International Trade Center
1300 Pennsylvania Avenue, N.W.
Washington, D.C.

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C O N T E N T S

P R O C E E D I N G S (9:10 a.m.)

DR. HOWELL: Ladies and gentlemen, let me welcome you to the fourth meeting of the Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children. We still, I might point out, are looking for a wonderful, easy way to name this committee, which remains complicated, and most of the monikers that have come forth were not appropriate for polite company. So we're still looking for ideas. So if you have one, please let us hear.

Let me thank the members of the committee for their very hard work, and also the HRSA staff that's been working very hard behind the scenes since we met last, and particularly Peter and Michele to my right for their excellent work.

The first thing on the agenda today is a minutes approval. Unfortunately or fortunately, the minutes that were in the binder of the members was not the final version that had been signed and sent forth. They were very, very similar, and I know people have read them carefully, but the thing is we will not approve the minutes until the official ones arrive, and they surely are on their way.

In the book of the members is the new charter for this group that was signed on February 3rd by Secretary of HHS. The charter is very similar to the original charter. There are a couple of important changes that I will simply mention. It's great that Jennifer Howse and Steve Edwards are now voting members, which is a nice change and so forth, and we appreciate that. There are certain other aspects to the charter about some organizations and representation that will require HRSA to look at and consider and come up with some ideas and policies about how to implement some of those changes. Again, those are decisions that will be made within HRSA, and they will have to think about that.

Since our last meeting, Secretary Leavitt has indeed been appointed and confirmed. I think you're all aware of that, but he is the person to whom we respond and to whom the report was sent. If you look at the agenda, it's very clear that we're going to spend a good bit of time on the ACMG report. The final report now has been in the public arena for some time. It's been on the HRSA website. I know that all the members have read it with great care, all 300-plus pages of the document, and I'm confident that many of the people in the audience have also read the report and so forth.

During the course of this meeting, we're going to have public comment today and tomorrow. We've historically had it on only one day, but you will notice that there are two days for public comment. In order to make public comment, one needs to sign up at the front desk, and if someone is here and wants to make a public comment, remember that you need to do that.

The second thing is that if you are interested in actually sending a formal comment about the ACMG report that would be appended to the material that goes forth to the Secretary, you need to either send that as an email or a letter, and those should be addressed to Dr. Puryear at HRSA. So if you want to make a formal comment, et cetera, to have that go forth.

You will notice also on the agenda today that there are subcommittee meetings. At the last meeting you'll recall that there were three subcommittees that were established, and those subcommittees have been working away on their areas of responsibility. Those subcommittee meetings are open to the public, as are the rest of the meetings. So if there's one area that's of great interest to anybody in the audience, you should feel free to go to those subcommittee meetings and so forth.

The original agenda, which I think many of you did not get, had some changes tomorrow, but the agenda as it is currently in your book today, the Guidelines for Newborn Screening and Follow-up, that order has been modified somewhat such that Drs. Vogt and Tuerck will start off with the newborn screening follow-up activities and quality assurance, and that will be followed by Brad Therrell's report on the performance evaluation and assessment system.

I think that those are all of my general comments, and we will come back to the minutes as soon as the individual members of the committee have had those and have had a chance to look at them, and we'll ask your comments about approval.

The major activities today are focused on the report. We would like to have that discussed. Dr. van Dyck will make some opening comments about that, but the plan that we have is that members of the committee will ask questions and comment about the report, and Dr. Watson, who has been responsible for overseeing the preparation of this report, has been able to modify his schedule in California to be with us today, and he will be able to answer some of the questions that other members will have from that.

Are there any other comments before we get under way?

(No response.)

DR. HOWELL: If not, why don't we move to the first item, which is the report.

DR. VAN DYCK: Thank you, Rod.

Good morning, everybody. It's a pleasure to talk about the report briefly this morning.

Just to make sure everybody is in the same place, the American College of Medical Genetics was specifically asked to develop recommendations to address five different areas for HRSA under a contract, and those five areas were to look at a recommendation for a uniform condition panel, including implementation methodology; model policies and procedures for state newborn screening programs, with consideration of a national model; a third, model minimum standards for state newborn screening programs, with consideration of national oversight; four, a model decision matrix for consideration of state screening program expansion; and five, the value of a national process for quality assurance and oversight.

HRSA did accept a final copy of the American College of Medical Genetics report, which is now in the public domain for public comment. The public comments are available for 60 days. The final comments must be received by May 7th, May 8th. Comments must be received by May 8th. The ACMG report is available, if you want to download it, at mchb.hrsa.gov/screening. Be prepared to wait a while for the download because it is a large document, but it is broken up into sections, and you can download sections.

Public comments — and this is important — may be received at a special fax number in the Maternal and Child Health Bureau, and that fax number is 301-443-8604, or you can send the comments by email, and the email address is screening@hrsa.hhs.gov. These are the only ways that your public comments will be accepted. You can send them by fax, send them by email, and you can send them by mail.

So if you want to send by the postal service, the address is the Maternal and Child Health Bureau at 5600 Fishers Lane. I'll go through this twice quickly. If you want the address, you can come up afterwards. Maternal and Children Health Bureau, 5600 Fishers Lane, Parklawn Building, Room 18A-19 in Rockville, Maryland, 20857.

We are soliciting and encouraging public comment. If you have anything you want to say about the report, please submit the public comments. It's very important to us to receive a wide range of comments and to hear from everybody.

Rod, I think, unless there are specific questions about the process, I think that's what I'd like to say.

DR. HOWELL: Thank you very much, Peter.

We're now open for the committee to comment about the report and have any questions about the report.

Dr. Howse?

DR. HOWSE: Can you hear me?

DR. HOWELL: Yes.

DR. HOWSE: Thank you, Dr. van Dyck and Dr. Howell. I actually just wanted to raise a question about what happens after May the 8th, which is the date by which all the public comments are, as I understand it, required to be received, to be considered.

Just, I guess, a couple of questions. One is will HRSA make available, downloaded please, in convenient print-out form copies of the comments to all the committee so we can look at the whole array of comments that have been received from the public? I realize it will be a magnum opus, but it's a very important magnum opus to us.

Secondly, could you explain to us and help us understand, so we know how to be helpful, what is the HRSA process for the review of these comments and the digestion of the comments? What's the internal process that you all have in mind?

Thirdly, what's the next step with respect to communicating the comments to the Secretary's office as was promised, Dr. Howell, in your letter to the Secretary, that these comments would be appropriately reviewed and passed along? I just thought it might be useful if we could understand the whole process so that the committee knows how to place itself and how to be helpful in the whole thing. Thank you.

DR. VAN DYCK: Well, I can answer the parts I can answer, and that is the comments will be public and so will be available. They probably will not be available in a downloaded form because so many are being written, but they're available on paper as well. Now, we'll have to look at whether we can scan them all and get them in the process, and it just depends. This is a massive workload, but I can report on that the next time. But the comments will be available to the public. So that's number one.

Two, the process. The process is that the Department will review the comments and will make recommendations to the Secretary, and that's as far as I know what the process will be. It will be up to the Secretary to decide what to do with the comments and the report.

Third, the comments are certainly, as in Dr. Howell's letter to the Secretary, wishing to comment on the public comments, the committee is welcome and I think it's advisable and important for the committee to comment on the public comments as well, and they will be available to the committee to do that.

DR. HOWELL: It would certainly seem to me — two things. One is that the committee members should have access to all the report; and secondly, we should then discuss those in this setting and then make comments and/or recommendations that would go forth to the Secretary from this committee. I would think that would be essential, because, number one, we said we were going to do it, and I think we should look at those and so forth, look at all of them and make comments about them. I would imagine, having not seen the comments except for the handful that people have sent me as a courtesy along the way, it would strike me that many of the comments are going to be in a similar vein as far as things that would be very important to do in the future in newborn screening and things of that nature.

So I would imagine, although it's going to be voluminous, it's going to be fairly readily digested and commented on, would be my guess. I may be wrong.

Anybody have any comments about what you would like to do with all of this stuff and how you'd like to handle it and comment about it?

DR. RINALDO: Can we have an idea how many comments have come in so far?

DR. VAN DYCK: I'm not sure they've been counted. The comments just come.

DR. RINALDO: Dozens? Hundreds?

DR. VAN DYCK: Michele, do you have some gross idea?

DR. LLOYD-PURYEAR: Dozens. Close to 100.

DR. HOWELL: So it's not an overwhelming number at this point.

DR. HOWSE: Could I just be a little more persistent on the availability of a compilation of these comments to each member of the committee? I mean, rather than us chasing down what's been faxed and what's on the website, et cetera, can we just ask that you all, when the comment period is over, you assemble the comments, you print them out for us, you send them to us in a chunky folder or a less chunky folder, depending on how many show up, and then we've all got the same thing that we are looking at so that, Dr. Howell, to your point, the committee members are assured that we're all reading the same thing, we're all looking at the same comments, and then we also have the valuable comments, Dr. van Dyck, that you and your team and whoever else on HHS is going to weigh in on these comments, we could have those as well, so that when this committee reviews, we know what we're talking about?

DR. VAN DYCK: Yes, that's no problem.

DR. HOWSE: That would be great.

DR. VAN DYCK: That's no problem.

DR. HOWSE: I'm not clear about the timetable for the next steps. When do you pass along — when does the Secretary get the final letter from Dr. Howell? I don't know whether you do a separate one either from HRSA. But when does the Secretary have what he has about the report and about whatever the public wants to say about the report? So that at least it's all in and it can be considered, then. What's our role? When are we going to have something at the Secretary's desk so that at least we've discharged our responsibility to look at comments, review comments, and get the final take? I'm just not clear about that timetable.

DR. VAN DYCK: Well, you're talking about two different processes. One is the committee's process, and the committee has direct access to the Secretary. So whenever you get — whenever we get, I should say, as the committee our comments finished, then they're sent to the Secretary. So that's a matter of committee business and is up to the committee as a process.

The other process is the internal Department process of reviewing the comments and forming some document that goes forward, and I don't know what the time period for that will be. Clearly, it's an important process and we'll move as quickly as we can.

DR. HOWELL: Our next meeting is in July, and certainly we should be able to get the material from HRSA and review it and discuss it and come up with some conclusions at the July meeting. Is that fair?

I think it would be helpful to also have a little understanding about how the federal agencies will weigh in on this document, because the federal agencies will also weigh in on this document in some way, as I understand it. Is that correct, Peter?

DR. VAN DYCK: Well, the federal agencies can certainly comment during the public comment period, but there will be an internal Department process where the agencies are officially asked to comment and weigh in on both the report and the public comments.

DR. HOWELL: Do you think that's workable, Jennifer, as far as the time frame? In other words, to get the material to us in May, that will allow a considerable period of time before we meet in July to review it so that we should be able to come up with a document.

DR. HOWSE: I think that's up to the committee members to comment. I mean, that seems appropriate, and I think Peter has been very clear that that's a committee process and we have to be responsible for setting our internal deadlines. But I can't speak for the committee about what they do for fun reading.

DR. TELFAIR: Dr. Howell, first of all, I want to just say that I appreciate the work that has gone into that report. It's pretty extensive.

The suggestion or thought that I have about how this committee could work with the report in terms of just making it a little bit more realistic in terms of timing and work is that there are three committees, subcommittees, and I don't know whether or not there's ability to triage some of the comments into those groupings for the committee in some way, for the subcommittees in some way, so that the subcommittees can take responsibility, at least for their part, and then come together with a larger report, even though that still leaves the option open for everybody to look at it as well. I'm just trying to think of how to expedite the work, make it a little bit more digestible, and coming up with a way that's more relevant to what we can do in terms of passing that on to the bureau.

DR. HOWELL: Did everybody hear Dr. Telfair's comments? I guess it depends on the nature of the comments about whether or not they might logically fit into one of the subcommittees. I don't have a clue about how that's going to fall out.

DR. TELFAIR: I understand that, and that's why I was saying maybe we can consider a triaging way of getting it done. I mean, all the comments will be reviewed as they come in, and if they fit into one of the categories or one of the purviews of one of the subcommittees, we could do that, knowing that there may be some overlap, and we can just make that a judgment call. All I'm saying is for the ability of the committee to actually get us some substantive comments back or some substantive input and come up with a mini-report or whatever. It would be a little bit more realistic to divvy the work up, instead of having everybody on the committee be responsible for — and we can all discuss it. It doesn't eliminate the option for discussion. It just makes it a little bit more digestible, I think.

DR. HOWELL: Well, that's interesting.

Amy has a comment.

DR. BROWER: I appreciate that. I think for me, for my own education, I'd like to read all of the comments and consider them all and not have them subdivided into the committees. I think that if we're worried about the workload or anything, we could consider having a conference call of this committee prior to the July meeting so that we come to the July meeting with some understanding of those public comments and of people's initial impressions of those.

DR. HOWELL: So your suggestion would be for everybody to look at everything and then have a conference call maybe to comment about them. The ones that I've seen — and again, I've not seen the documents because HRSA gets those, but that people have sent me as a courtesy or something — have been very similar. I mean, they basically said the same thing, and those that have had particular issues have had the same issues, not surprisingly, the same as many of the issues in the report.

Any further thoughts about the public comment?

(No response.)

DR. HOWELL: But the bottom line, we will get it soon, after May the 8th, and we will get them all, and I sense that there's an interest in the group of seeing them all. Is that right? I see nodding of heads. So perhaps we'll have a conference call, and it's possible that if there are specific issues that fall within one of the subcommittees, we can ask the subcommittee at the conference call to please think about a response to that.

Coleen?

DR. BOYLE: I guess I'm a little unclear about today's agenda, then, because will we be discussing this again in the July meeting? I feel like we're doing duplicate work without all of the information. Obviously, the public comments are an important consideration for our comments today. So it's just more of a comment than anything else. I feel like we don't have the whole package yet. That's all.

DR. HOWELL: Well, we don't have the public comment, but I think that the purpose today is to discuss the ACMG report. The public comment period is not over, so we can't get them until it's over. That's just a timing issue.

DR. BOYLE: I realize that, but the report is a final report. So we're not changing the report. It's already been delivered to HRSA. So in a way, we're sort of putting together our own thoughts about what we're sending forward to the Secretary. Part of that compilation is obviously the public comment piece. So again, I feel like maybe we're doing our July-related meeting.

DR. HOWELL: What comments do we have from the group about the report as it is here? In other words, we've got the final report from the ACMG, and we've been waiting for a long time. People have read it and so forth. What thoughts have you about it?

DR. VAN DYCK: Rod, can I just clarify Coleen's comment a little bit?

DR. HOWELL: Yes.

DR. VAN DYCK: I thought the purpose of today's meeting and discussion on the report was to comment within the public comment period on the report from the committee.

DR. HOWELL: Yes.

DR. VAN DYCK: And that the July meeting, then, would be to make additional comments related to the public comments that you would then have that would supplement your comments that you submit today.

DR. HOWELL: We're going to later comment on the comments I guess it's fair to say.

(Laughter.)

DR. HOWELL: Today we're commenting on the report and so forth, et cetera. I think we can say we think these comments are wonderful or we think they're out to lunch or whatever the group happens to think about it.

What about the report? We've been talking about this report forever, and you now have it. Jennifer, what do you think about the report? You've obviously thought a lot about it.

DR. HOWSE: We're on record, sir, with what we think.

DR. HOWELL: Steve?

DR. EDWARDS: I want to raise a question not so much about what I think about it as to some of the comments that have been raised by an organization that I represent, because I think that unless we can dispel this question, that we can't really move on to any further substance, and that question is this, and that is related to the scientific validity of the study. So I think we need to lay that out. We've got Mike Watson here today to help us with that. We've got a bunch of people around this table who are all more scientists than I am. But I think unless we're clear on the scientific validity of the material that's been presented to us, this basic foundation of the work that we're doing, that unless we're all totally clear and in agreement on that, then it's hard to move ahead, and that is one of the considerations that I have heard.

So it may be, Mike, like asking you to prove you don't beat your wife, but I wonder if we could go through, and I would appreciate discussion from colleagues at the table, too, who are scientists, because I think that that's the foundation of what we're discussing. Unless we have true belief and consensus on that, then it's hard to go any further. Is that too much to ask?

DR. HOWELL: I don't think so. I think one of the questions has been focused on the methodology of the report and some comments about the methodology and how that evolved, the substance behind that and so forth, and I think that's a perfectly valid question for Mike. Joe and you and Coleen have some additional questions that would ride on top of that?

DR. TELFAIR: Yes, actually, I did, a little bit more about the final decision-making process and the algorithm that went into that, because that was not as clear to me as the initial algorithm in terms of the decision-making. But when the final tabulation was done, that was not as clear in the report. So I, too, have similar questions, and that would be really helpful if that was explained.

DR. HOWELL: Coleen, would you like to amplify that?

DR. BOYLE: Well, I guess I feel like I'm on record with my concerns about the report, and they remain. I guess I feel similar to Joseph, that it was very difficult in rereading this version of the report. Again, I want to applaud the authors in terms of the development of the report. I think this represents an enormous amount of effort, and it was a very challenging project. But I still think, based on what's in the report, what we had asked for back in September was a clearer development of the methods and the results and the discussion around that, and I feel like it's still very unclear to me how the final product was arrived at.

DR. HOWELL: Maybe Dr. Watson could come up and sit at the table and respond. I think that for many people who are moderately close to this report, the decision that went into it and the evolution went on for a very long time, and a tremendous discussion about how do you make decisions about extraordinarily rare conditions, some of which have a lot of material to allude to, some that have little and so forth. Mike has certainly spent a very large amount of time with a group of very smart people answering, working on these questions.

DR. WATSON: I'm not sure I have a specific question yet. I mean, it's quite general, and I'm not sure exactly what kind of response to start with. I suppose I can — I guess as I think back over the course of the deliberations of the expert group, one of the things that was strongly taken into consideration was the fact that we were, to a large extent, at least in many of the new disorders that were being evaluated, we had to rely on expert opinion. We acknowledged that expert opinion is not the highest quality of evidence base that one can work from, but at the end I think it was felt by those who were experts in the diseases that were recommended that the message was so clear that we had to accept the likelihood that the observations were correct in the expert literature.

Where there was higher levels of evidence available, either because there were clinical trials around therapeutics or in more common conditions like hyperbilirubinemia and such, there are certainly a

large number of very strong evidence reports, the Cochrane reports and others in some of the more common conditions. But I presume that the question is about many of the rarer disorders that are included in our list.

DR. BOYLE: I feel like I'm sort of on the spot here, because I feel like maybe I'm the one dissenter on this report, and I feel like I have expressed my opinions. I guess what I'm talking about more is in terms of the actual methodology we used. We all acknowledge that the methodology was on the committee, so there was the expert opinion methodology. My problem with the report is that it's somewhat disguised, and I don't want to say this in a negative way, but it's sort of disguised as being a systematic review.

There is a whole science around systematic reviews and how to conduct a systematic review. Unfortunately, Denise isn't here, who is sort of an expert in that area. I agree with many of the rare conditions, there is no literature, and that's acknowledged. But I felt like the way the report was done, we started with the expert review, and then as sort of an end process we brought in the scientific literature as a sort of a complement to that expert review. In a systematic review, you would do just the opposite. You would start with the science and then fill in the gaps, what information you don't have, with expert review.

Again, I feel like the merging of those two pieces or those two lines of evidence in the report is a little bit muddy. It's not quite clear how those two were brought together and the final decisions were made. Part of it is just acknowledging, and I think you tried to do that in the Limitations section, acknowledge the gaps in the literature. The other thing you could have acknowledged in the gaps in the literature is, again, there's a science base about expert review and the challenges of using expert review information only, and that really wasn't brought in in terms of the biases that are introduced through that methodology.

To me it's those kinds of things. I feel like I have written comments, or we have written comments as an agency that we'll share with you. But that's really more the issue with the report, and the clarity of the process.

DR. WATSON: I'm still not quite — I mean, there's a lot of questions there, and I think one of the presumptions is that I've actually been at all the meetings and have heard your comments, and I haven't. Whatever comments have been submitted from you and other organizations I've never seen. So I suppose I have to wing it.

I think a lot of the way that we approached developing the evidence and the approach to the survey was somewhat driven by two of the international groups that presented to us. Rodney Pollitt, who had done one of the first health technology assessment reports, argued rather strongly against being overly bogged down in the criteria and those sorts of things, acknowledged that there was a significant component that rarely gets recognized in these sorts of evidence-based processes, and that was that there's a value aspect to newborn screening conditions that is realized by the public that doesn't necessarily get acknowledged in the approaches taken in some of the more common evidence-based approaches to analyzing the literature.

We wanted to give, and in fact our contract required that we actually give strong credence to the opinions of the public, the consumers, scientists from state health laboratories, a wide range of people. Given that fairly direct charge to us in the contract, we chose to start by soliciting that broad perspective from the wide range of people so that we would be able to factor it into our decision-making from the start. I will admit that I was uncomfortable by starting with the survey because we acknowledged that there were certainly components of it that are objective and that ultimately one could not use a survey to determine the incidence of a disease, that you had to ultimately fold in that evidence base and confirm anything that was presumed from the surveys to have been reflected, and justify it based on the evidence base itself, and we did that secondarily.

I'm not sure what would have happened had we flipped the order of those two processes around by first developing the evidence base which, for most of the conditions in question, is largely expert opinion based. So we acknowledged that we would be beginning with a relatively weak level of evidence quality based on the types of studies that develop that evidence, and then overlay the views of all those other constituencies. I'm not sure we'd have ended up in an entirely different place.

DR. HOWELL: Dr. Rinaldo has some comments because he was involved in a lot of these efforts early on.

DR. RINALDO: Coleen, I would like you to clarify something, because as you bring up the issue about the muddy methodology, now I think it's for me necessary to understand. Are you questioning the end product? Because this was a process to generate specific recommendations for new overarching principles and the recommended panel.

Now, I would like to understand, is your problem with the process that led to actually a correct product, or you have a problem with the final product? And if so, specifically. Because we're looking at specific criteria and specific conditions. So perhaps we can take any specific issue that you have a concern and try to analyze what happened there and perhaps what is wrong, because I think this discussion, as far as it remains on a very general level, it really is strictly subjective. It's either you like it or you don't. But I think the real question is, is it right or wrong?

So perhaps you can elaborate a little bit and give us specifics.

DR. BOYLE: I guess in terms of the final product, understanding how one arrived at the final product is understanding the process and the evidence that went into that. So although I can't say I have exceptions with the final product, again my expertise is in epidemiology, and part of that understanding of the final product is understanding how that evidence was derived. That's more my issue.

Another one sort of following from that as a committee work, I would like us to arrive at a process, because obviously we'll be considering other conditions that would be amenable for newborn screening. I would like us to arrive at a process that we all feel comfortable with in terms of how to evaluate these conditions as they come up.

DR. RINALDO: If I can respond, the process is actually clearly outlined in here. So again, what I'm trying to get is something tangible that I can analyze or review and try to really debate the pros and cons. So there is a flow chart that specifically addresses the issue of how we will deal with additional conditions that certainly will come up and should come up. So I really think to have a productive discussion, we need to have something specific to talk about. So give us a few examples.

DR. WATSON: I would actually expand on that a little bit and say that one of the fundamental difficulties in this whole process was that a committee of 20 people with a wide range of background and expertise, not all of whom really — and frankly, I'm not an expert in more than a handful of the conditions ultimately in our list or that we reviewed, and we had to rely, because we acknowledged it on the front end that it's expert opinion. We ultimately did have to rely heavily upon experts in providing the information on which we based the evidence, on telling us whether or not they felt the evidence was strong or weak. For 78 diseases ultimately analyzed, it would have been extremely difficult or costly or something to bring all of those experts to our meetings.

There were two or three experts for every single disease on the back end of the evidence base, and a different set of experts on the front end in the survey process. We acknowledged that the survey does include a wide range of opinion, but we also state in the report that we sorted out experts within all of that survey to determine that they were consistent with all of the final results of the broad group that participated in that part. There is some overlap between the experts in those two parts of the report, but I think as an ongoing process, I actually think it's going to be much easier than what we had, because you

can focus on a handful of diseases at a time and bring together a core group of experts who can deal with those conditions.

That was very much more difficult for us because we had 78 conditions and a couple of hundred experts around the world who provided the evidence and validated our evidence base for us. I think that probably underlies a lot of the difficulty, the fact that we had to and we did rely upon a lot of people outside of our committee because we, I think, acknowledged that if you're left with expert opinion — I mean, I think what evidence-based medicine likes to be able to do is to develop an evidence base that hopefully has lots of those well-controlled studies that somebody that doesn't understand the diseases can step back from it and say, okay, these are all very wonderful studies, and on that basis alone I can accept this answer.

When you have to go with expert opinion, you're not in the position for everybody to step back and really react that way to the final result. I'm not sure that it's even possible to get out of that problem. Of the few comments I've seen, I know that the Committee on Genetics at the AAP acknowledged right off the bat that expert opinion is certainly a valid type of evidence, and it is what we have to work from. We would welcome national collaborative studies that allowed for aggregated data and all of the kind of information we'd like to see collected in an organized way. But we don't have it.

DR. RINALDO: Does it exist?

DR. WATSON: Well, it could exist if we had a children's oncology group model through which we aggregated all patients into a structure that was funded by which we could actually understand this wide range of patient outcomes that are possible. A lot of things we don't really have until we move to large-scale population studies. That's one of the banes of our existence in genetics, that we're always going from that which we have, which always starts with the most biased view of a disease based on those people who came to you, usually the most severe versions of anything. Gradually you work back through families, and you find it's a little bit broader than you thought it was. Then you move into targeted phenotypes and you begin to get a broader sense of the condition.

But in our world, it's not until you really get to that population level that you begin to really understand the full breadth of the condition. I think FDA has recognized this in much of what it's been doing with rare diseases, and CMS is moving in the exact same direction. If you look at the way FDA has dealt with therapeutics for rare diseases, they've acknowledged that a clinical trial with 50 patients is compelling enough to say let's approve this as a Phase III clinical trial. However, now they start to really push the back end, which is Phase IV surveillance, to make sure everything that you thought was the case remains the case.

I think that's going to be one of the fundamental issues that we have to build into this whole process, an ongoing monitoring of what's happening with those identified in the programs. We need to find ways of collecting that data in a uniform way.

DR. HOWELL: Dr. Alexander?

DR. ALEXANDER: Mike, I'd just like to pick up on those comments and say that in a perfect world, we would have gathered this information ahead of time in these rare disorders, but there's really been no organized way to do it. Only with implementation of screening for these disorders in a broad way, in a manner that we will be able to identify larger numbers of patients even with rare disorders and enter them with their parents' permission into studies of the available therapies is it ever possible to gather the size of population that we need to get the evidence that we're all asking for.

In the meantime, we have to deal, bad as it may be, it's the best there is, with expert opinion. That happens in medical practice all the time. We try to get away from it as much as we can

and gather the information as quickly as we can through controlled trials, and that's the way we're learning to do things.

The only way we're ever going to get to that point in these disorders for which we're talking about screening, because they're so rare, is to do the screening for them, gather the patients into groups where we have trials going for each of these disorders of interventions that we think are effective based on that expert opinion, test that intervention, and whether it's 10, 15, or 20 patients, and gather that data. The impediment to gathering that data is the lack of screening, and until we do that screening and gather these patients as a population for study, we will still be in the realm of expert opinion.

We have to be able to start this screening, gather the population that we need, with studies planned ahead of time on these rare disorders, approach the parents about getting their permission to enroll their children in planned studies of these interventions so that we can change expert opinion into evidence base, and that's what we have to do. But we can't do it until we start screening in an organized way.

DR. HOWELL: Coleen, do you have any further questions or comments? I think that the committee meetings that were involved in the preparation of this report that I was in echoed a lot of Dr. Alexander's comments, and also a tremendous interest in developing a system whereby every child identified in the country with a rare disorder is entered in a study with, again, the parents' permission, to learn about the condition, because some of the conditions are so rare that we don't know a lot about them. We know that sometimes lack of treatment might lead to sudden death or damage, but we really don't know much about the effectiveness of the treatment or what might be improved and so forth.

Let me ask a question of the group. One of the key issues of this report is in the beginning in the area of overarching principles. Again, those were derived over a long period of discussion with a variety of people. You say, well, gosh, this is very much like the principles that I've seen over the years, and I might point out that the Wilson and Jungner principles that are reported commonly — most people have never read Wilson and Jungner's report. I have. It was derived to look for treatable diseases in adults in developed countries. It had nothing to do with newborn screening but screening for disease and so forth.

But the one thing that's clearly different in these recommendations that the committee I think felt strongly about is to broaden the definition of potential benefit from newborn screening, with the idea that there are broader benefits than have historically been recognized and that benefits to families and so forth might accrue when there's not a curative treatment at the current time. I'd like the group's comments about the so-called overarching principles, because that's the basis on which this report I think will be used in the future.

Does anybody want to comment about that? Does anybody disagree with the concept that there might be a broader benefit to people in society than just direct treatment but knowing about a condition early and the possibility that such a condition might have treatments, such as early childhood intervention or something of that nature? Those are not yet proven. But any thoughts about that, comments about that?

DR. BECKER: Rod, I agree that, certainly, given the limitations that we've discussed about the expert opinion versus the traditional rigorous evidence-based review, certainly it's a paradigm shift, and I think that's really what Coleen is talking about. It's not the traditional well-controlled evidence-based study that I think we're used to seeing or maybe our clinical colleagues wish to see. For all the reasons that we've talked about, it just doesn't exist, and this is probably the best product that we could put out at this point in time, keeping in mind Duane's comments that it can get better with enhanced surveillance.

I think from the overarching principles, it also represents a little bit of a paradigm shift in that traditional public health screening programs don't just collect data or don't just collect information without a specific benefit or intervention that's been shown to either be effective at the personal level or effective

at the financial level to society as a whole. So I think we have to acknowledge that there again maybe a slight change in the perspective that communities or society as a whole are going to have to get used to thinking about if that's what we decide to endorse.

I'd be interested in hearing Steve's comments. Steve actually brought up the original question about the scientific validation and, from his organization's perspective, if this conversation has been enough to fill in some of the gaps or questions that he had.

DR. EDWARDS: Well, you said what I was looking for, and that is I think that's the question that I was raising, not is this a perfect instrument, but I think that this committee has to look at it not necessarily as the perfect instrument but the best available, and I think those were the kinds of words that you used, and that was very assuring to me. I guess the question shouldn't have been directed so much at Michael as at the rest of the committee, especially those of you who are involved in the research arena.

But I think that this is a fundamental question that I have been comforted by, and then as these questions have arisen, then I was discomfited by. But I'm not asking if this is a perfect study. People talk in pediatrics, my field, all the time about doing things on the basis of evidence, which is wonderful, except that there are very, very few conditions that you can study on an evidence base. I mean, evidence base is a goal. It's out there. We're all working towards that. But if you wanted to look at the practical now for most pediatric conditions, you don't have evidence-based information.

So I'm not asking that we operate in a perfect world, but I would like to be reassured by those who are scientific investigators at this table that they feel that this methodology is maybe not even the best that we could come up with but among the best, that this is very good information, because I think that's basic to the work that we have to do as a committee. If it's not, then we're at the wrong discussion. We need to be comfortable about that before we move on.

So again, I'm not asking if this is a perfect study. I'm just asking if this is close to the best that we can come up with.

DR. HOWELL: Amy?

DR. BROWER: As a scientist, when I read the report, I actually thought that the approach was elegant and that starting with the survey was a great thing to do in addressing these types of rare disorders. So actually, as I read through it, although it's not a standard methodology, I really thought that there are some things that we can model other surveys and other things like this on, because it's really a different paradigm. We're really talking about addressing a different set of issues, and so we need to think about it in a different way. So I didn't have scientifically any problems with the report, and I actually thought it was put together very well.

DR. RINALDO: I think these are all valid issues, but my goal is to force a discussion of the specifics, because if we have a problem or we perceive there is a problem with how this was done, then I would like to know. Were we asking the wrong questions, or were we asking the wrong people? Because you can have the perfect set of questions, and you ask the wrong people and whatever comes out of it is pretty much not very useful. On the other hand, you might have an array of the best experts in the world, which I believe were involved in this process, but if we're asking them the wrong questions, then again, we really don't make much use.

So again, I would like to know what was wrong. Were we asking the wrong questions? Didn't ask enough questions? Should the questions have been different? Again, I really need to get to the root of the problems, real or perceived. We've got to focus on something specific. Clearly, being involved in that process, I obviously have a bias. I really believe, though, that the effort that was put into involving everybody who could possibly have something to contribute to this was unprecedented.

If you look really at the list of names of the people who appeared and served on our committees, including many of us, and we met I don't know how many times, and then the external review group, and then the steering committee, we really reached out in every possible way. So again, tell us, please. I understand and respect your expertise. As epidemiologists, you might look at this and say these are the problems, but I really would like to have a better idea or a specific idea of what the problems were.

DR. HOWELL: Joseph?

DR. TELFAIR: Well, I guess I can't answer your question because that's not what my comment was going to be, because I think it has been covered very well. The questions that I had have been asked very eloquently and have been answered very eloquently. My question is in sort of the next level of this, which is taking the information, particularly the way the decision-making was made, and I was wondering because that's one thing I kept looking for, how would this be used by those who have to use this information to make decisions. In other words, I was looking for a little bit more of a structure.

Given the way states and given the way municipalities have to make decisions about allocation of funds, involvement of others in these processes, how would they use this information? Is it going to be something that comes out of that? Which is why, when I was thinking about comments and structuring this, maybe that's something this committee can do next, or not, but that was my next step besides just clarification on what was done. So I'm not speaking to problems, you understand. It's more the utility issue here.

DR. RINALDO: Absolutely. I think, though, that we have to really recognize the reality and the impact that the report has already had. We're hearing almost daily — the last was two days ago, that Arizona has decided to pursue and approve a bill. So it's becoming, in the newborn screening arena, the concept of this panel I think is now pretty well established. So people are actually working to reach that level.

So I think that's the first phase of a response, how people will respond, and I think, from what I've seen so far, the reaction is that people say, well, we have to catch up with this panel. It seems very interesting that when I talk to people in state newborn screening programs, they are almost fearful of the March of Dimes report card.

(Laughter.)

DR. RINALDO: I can tell you that next week in Minnesota, the newborn screening advisory committee will meet, and there was all this discussion about the things we have to add so we are complying and we get an A in the report card. I don't want to discuss that too much.

There is one disease that was excluded, and I think correctly, and that's Wilson disease. I can tell you that in our little county in southeastern Minnesota now, we're screening on a voluntary basis, a research program. But it's actually very helpful that once we collect the data, we can actually go back at the state level and physically modify it, and I believe it was included in the survey. We'll use a survey, and this time we'll have a way to score this condition and compare it to what has happened historically for all the other established conditions.

I think that is actually another tangible product, because before — and I don't know if anybody can make a strong argument against the fact that most of the decisions made in the past were very subjective. Again, I don't think perfect really exists in this world, but if I look at this report and what it has forced to happen, I think we have made some significant progress, going from a totally subjective criteria — we were discussing with Brad earlier that there is one state that has one particular condition not included in the panel, and they had adamantly opposed any discussion of why it's there, because they have one member of the advisory committee that says so.

So if we can move from that stage to a stage where it's somewhat muddy, I agree, but it's certainly a sizeable step in the right direction, I think we should be somewhat happy about it, feel that something has been accomplished, and now work on it and improve it.

I just want to add one final comment about what Dr. Alexander said, which is absolutely right, because we have this definition of rare diseases, but remember that 4 million babies are born in the United States every year. So a disease that's 1 in 100,000 means that it will take five years, and we might have between 150 and 200 patients. Even if not all agree to be part of a research project, how many rare diseases you can think of in a population study with a denominator of 100? That will be phenomenal progress and I really think what this whole process is shooting for, trying to create an evidence base for things that now don't have one.

DR. BOYLE: I don't disagree with anything in what you said. As a matter of fact, I'm right there with you, and I'll follow up on Mike's comment earlier about the Phase IV studies and the fact that part of our responsibility as a committee is to really drive home that message, the fact that we need to follow up on these children and we need to develop the evidence base. So I'm not at all arguing with that, and I do feel that we have moved the field forward in terms of trying to be much more analytical about the approach in terms of trying to decide which conditions should be included in the newborn panel.

I think that the survey and the criteria that were outlined really do help a state think through all of the different aspects of that, and they can take it at their level and sort of pull that apart and weight things differently with the criteria they feel in their own advisory committees are most important, not that our judgment or this committee's judgment or the director's judgment is the most appropriate one.

DR. HOWELL: I think the Phase IV thing is critical and is of great interest.

We have a number of people. Start with Bill, and Mike, and Greg.

DR. EDWARDS: And may I suggest that the chairman address this, too?

DR. HOWELL: The report per se? Let me make a comment about one specific area, and that is that in considering the individual rare conditions, one of the questions that obviously arose is how do you have expert input, which is a key part of this study, and that was quite systematically done, basically looking at who has published on the thing. In other words, people that have written about the conditions and are recognized in the literature as being the experts are the people that weighed in on the expert opinion, and I think that you can be very comfortable with the fact that it may not be everybody in the area, but it's certainly a strong representation.

Interestingly enough, at certain times that I remember, particularly one problem that came up with hypothyroidism, the group looking at it felt that they had not had all the input that was needed, and so specifically people were actually solicited and said, you know, we need you to look at this particular condition because you're a known expert in hypothyroidism and so forth. So I think that the expert opinion, which I think is a very important part of this — the literature is there. You can see what it is. But the expert opinion I can assure you was very carefully done and is probably as good as you could get. It's not perfect, but it's probably as good as you could get.

Now, one of the problems we've dealt with — and I'll be very candid as the chair of the committee — we've had some people that have said, oh my goodness, you didn't have this group represented and so forth. We did not necessarily have the complainant represented, but we had strong representation from that area of expertise.

Bill?

DR. BECKER: I don't think I could say it any better than Rod did. It's the best evidence that's available to us at this point in time. As Coleen said, it's a model. As Piero also suggested, it's a model that can be improved upon as we gather more information about this. Having worked with a number of colleagues on the expert group and now on this committee, I think, as Coleen said, it does advance the field in a very substantial way, and I'm very pleased with the report and the conclusions that the report came to.

DR. HOWELL: Mike?

DR. WATSON: I'd add the fact that I think the charge to this particular committee extends well beyond newborn screening. It's heritable diseases and genetics disorders of newborns and children, and getting newborn screening to the point where we're actually able to collect the best data because we're collecting it at a population base level is — I mean, you've got problems coming like you don't know in the world of genetics. The lysosomal storage diseases are coming down the pike very quickly. The therapeutics may very well be there before the newborn screening test is. Fabry's is already approved as a therapeutic, yet we have not gotten to the point where we're identifying those people in a large general population to really understand the breadth of the condition.

So I think you need to think broadly as you look at how you're going to collect information in the long term and not just focus on newborn screening but extend to the entire world of genetics. Right now, every time I read something about clinical trials, they're taking another year longer because nobody can get the patients to really run the clinical trials in an appropriate way. They're getting very many fewer patients and they're much less comfortable with the data they get from those patients.

We know that the next set of conditions, as I look at the lysosomal storage diseases and think about what's coming down the pike there, this is a group of disorders where every time I turn around the proportion of patients who are adult onset versus infantile, what we really thought used to be the classical form of the conditions, is shifting to these adult forms. So we've got huge problems to sort out in the future as we identify people in screening programs who may not have what we thought was the classical infantile form of the disease but may not have onset until their 20s, 30s, 40s, yet may come up positive in a newborn screening test. We need to capture these patient populations now so that we've got them to have enough statistical power to really do these things in a reasonable time frame so that we don't go too far too fast yet have the information to inform us about where we ought to be going, but get it in a quick way.

So I would think much more broadly in developing programs by which we're going to monitor this stuff beyond just newborn screening, where we're talking about 50 some-odd conditions and think about those other 800 or 900 that we're dealing with.

DR. HOWELL: Let me comment briefly about that. I think if you look at the way the report reads, a number of conditions as therapeutics are available on the market will "fit" these criteria for newborn screening once you have a test and so forth. Certainly, the lysosomals are an excellent example of things Mike talked about. For example, one of the conditions that a therapy is in trials right now that looks very encouraging is Pompe's disease. Again, it's focused on the acute infantile form where you have rapid death. However, most patients actually have a late onset. As we move to newborn screening, we will obviously detect those people, which means initiating the follow-up programs and so forth is just going to be absolutely key.

This report suggests a huge amount of research agendas as far as if you look at the output and you look at the follow-ups. You've got a huge array of research that's going to be needed to answer the questions.

Greg, you've been waiting patiently.

DR. HAWKINS: Yes, and I may be digressing a little bit because I've had to wait. So many different comments have been made. I want to make a comment on about five conversations back. But I have a unique perspective because, first of all, I don't do research in childhood diseases, and there are a number of experts here at this table that I can glean a lot of information from. Second of all, I'm here as a parent representative as well, because I have kids and how this would affect me or affect my children in the future.

But just coming at it from the scientific point of view, I do genetics in a different realm. I do it with adults, and you talk about the type of evidence-based studies, and one of the things that I see in my field and one of the areas I look at is asthma, severe asthma and COPD. We sometimes get paralyzed by the evidence that's out there and we tend not to move forward by not contacting people and not talking to people. I mean, that's why we go to research meetings and that's why we talk with experts and have meetings behind doors, so the experts can get together and make decisions, because lots of time in the evidence-based studies, things you read in the literature, you have to remember that a lot of that has been processed and has gone through a review process that has been reviewed again, and the information is there, and the journals may not be the evidence that we actually need to move on and to do a scientific study.

Lots of times, the studies that we see are conflicting, and when we see that evidence conflicting, like you say, it paralyzes us and we don't move forward. To be able to know that there was a group of people that got together and talked about this type of information with regard to knowing what's in the literature and having the evidence to look at this information, but that they can come up with some different perspectives based on what they know, their experience, especially in some of the rare diseases where there's nothing on them — I mean, what if there was just one paper published on a rare disease? That just paralyzed everyone from looking into that disease further.

But the experts who have experience can come in and give information, and I think that's one thing that as a parent — now I step back as a parent and look at this, and the people out here in the audience or the people who may get online and comment about this type of study, they're not so much interested in the evidence base but what's going to become of this report when it's done. They're interested in what we're going to do about the problems that we have with not having a uniform panel of diseases to actually test for.

So from the public point of view, I think they want us to get beyond the scientific arguing that maybe goes on behind doors, whether the information is right or wrong and whether we should move on it. They really want the experts to say we really need to do this, we need to do this type of testing.

Steve poked me over here and said do you want to hear my comment? Maybe my comment was kind of rambling, but it was going through hearing everybody talk along the way. I kind of had to reformulate my thoughts again. I don't know if that kind of gives you a perspective from two different angles, but I think the report was a good report from what information we had available. It was a difficult one to put together. I'm glad I wasn't involved.

DR. HOWELL: Let me comment that there was a tremendous interest in getting parents' input into this, particularly parents who have these conditions, because that input is extremely important in making these decisions, we feel. One of the things that's quantified in this thing with a number, which drives people up the wall but I think is a good idea, is burden of disease. I can tell you that if you have a child with a condition and you're treating them and so forth, the burden might be — is, as a matter of fact, quite different than what someone else perceives. Someone who is taking care of a child with a very complex diet, like low phenylalanine or something, that burden is a lot more than someone might think when you have to monitor everything.

So again, there's a considerable amount of weight that's been placed on the families which the group working felt was very important and I still think is very important.

Derek?

MR. ROBERTSON: Well, actually, my comment was following on what Greg said and you just said, because I think sometimes we look at all these conditions and probably tend to forget the babies and the parents and the people who are behind those conditions which are just listed, and some names that I can't pronounce but certainly are there. I was involved in the process, and sometimes I went home and I said to my wife, you know, I sit on this committee and I'm the parent representative, and I feel that that's such a tremendous burden, to say, well, okay, you are the parent representative of all these different conditions over there, to try to get a sense of what's out there and how people are affected by it daily.

I think, as Greg was saying, for me one of the important things about the report was the emphasis on follow-up and the emphasis on training and getting the providers to understand the diseases and to get the parents to understand the diseases. There can't ever be, I don't think, a perfect list of diseases, because something is always going to be left off for whatever the criteria. But I think the committee did the best it could do to come up with a list and as objective a criteria as possible.

I think the important thing is to get to a point where it doesn't matter where your child is born that will determine whether or not you're going to live or die. I think that's the critical thing that we're trying to get here, this uniform panel, that each state will recognize that they have to be testing for these disorders and they have to have as expansive a list as possible, because is one baby's death enough to just look over because it's too rare. I think we always want to maintain that focus.

DR. HOWELL: Dr. Howse has a comment.

DR. HOWSE: I think this has been a wonderfully rich set of exchanges, and I just wanted to thank Steve for putting the question on the table of the weight of the report and whether the scientific evidence in the report was justified, the committee's support in moving it forward. I think what I've heard, and it certainly reflects the opinion of our organization, is that the report represents the best available information, that it represents the weight of expert opinion, that it represents a very rigorous and lengthy review across families and consumers and experts and practitioners and clinicians and state lab directors, et cetera, and that the uniform panel recommendations, which we're still a very long way from having in place in states across the country, that the uniform panel represents on that list of principles conditions for which there's an accurate test, for which early detection is essential, and for which there's efficacious treatment.

That seems, at least to me, both a sufficient and appropriate basis for the report to continue to be supported by this group, and with the emphasis also in the recommendations for follow-along and tracking and report-backs, et cetera, I think it's a very strong basis to proceed.

The other aspect of what Coleen brought up, I think we might spend a bit more time, and that's up to you all really, and that is this question of the process and criteria by which we would recommend additional tests be added to the uniform panel. I know there's a section in the report that deals with that, but I'm not sure we've had quite the full discussion about how to add tests from our standpoint to the uniform panel.

DR. HOWELL: That's a good takeoff point. It's time for a break, and after the break perhaps we can have some — we have additional time before lunch. We'll take a 15-minute break and we'll be back quite promptly. Thank you very much.

(Recess.)

DR. HOWELL: We've had a very fruitful discussion, and I think that we want to move now to discuss the criteria for adding conditions, and maybe we can ask Jennifer to restate her question, because I think that's a very good starting point for this period of discussion.

DR. HOWSE: Well, thank you, Mr. Chairman. I thought that Coleen Boyle raised two sets of appropriate questions and concerns, the first of which has to do with addressing some of the issues about the formulation of the report, which we had quite a fulsome discussion about. Then the second question, which I thought perhaps we should discuss a bit more, was the question about criteria and the process for adding new tests to the uniform panel. I thought, since we had Dr. Watson here and all of us are kind of keen on the subject, that this might be an appropriate opportunity.

DR. HOWELL: As we move ahead to discuss that particular thing, I'd like to go back, as we think about adding things, to point out the issue of a change in criteria that seems rather small and subtle, but it's not. That is that the emphasis that the importance of some of these conditions might have much broader implications to benefits to the family and so forth than has historically been the case, and maybe Dr. Alexander would like to comment about that. I know that certain of the conditions that his institute is interested in are exploring the benefits of early diagnosis and treatment of such conditions, such as Fragile X.

DR. ALEXANDER: Thanks, Rod. You had earlier raised this as an issue and nobody picked up on it. But I would like to address that for a minute because I think it's so important in our deliberations overall to consider what is included in the concept of benefit.

In the history of newborn screening programs, the consistent belief and practice and dogma has been that there has to be benefit to the child in terms of an effective treatment before you screen for anything, and that has been the effective treatment for the disease/disorder itself. That has been the only benefit that has been entered into the calculation.

Many people today are starting to think that there is a broader definition of benefit, a broader category of benefits to the child and to the family than just an effective treatment for the disorder, that even if we don't have an effective treatment that's completely effective for helping avoid the consequences of the disorder or disease, that there are still benefits to be accrued from an earlier diagnosis for this child, that this child is eventually going to get diagnosed with that condition at some point in their life anyway, and the question is whether early diagnosis is beneficial to that child's life and to the family in ways above and beyond just the treatment for the disease.

The arguments include things such as having the diagnosis early is beneficial to the child and to the family because, in part, it avoids the search for a diagnosis that often starts later in life after the symptoms develop, when it's often too late to intervene effectively if you did have a more effective treatment, and that that search for a diagnosis is not only traumatic for the family but also for the child, that you go from one medical center to another oftentimes because the first place you go for the diagnosis doesn't make it, and then the evaluation starts over again and sometimes it's two, three, four places where you go before you finally get that diagnosis. Each workup involves more stickings and prickings and exposures to radiation and other kinds of diagnostic procedures that the child goes through, many of which are uncomfortable; whereas making that diagnosis initially in infancy and in the newborn period avoids this prolonged search, often with the diagnosis coming too late for potential benefit if there were an effective treatment that could be applied earlier.

It's also advantageous for the family, not so much for the child, it's hard to argue, but for the family for family planning reasons. Many families would like to avail themselves of other techniques for having children, whether it's adoption, prenatal diagnosis, preimplantation genetic diagnosis, whatever other alternatives there might be, in order to avoid another child affected; or at least if there is a chance, know about it before they make a decision about having another child. So family planning is another benefit to the family from having this diagnosis made early.

Avoiding the diagnostic search I've talked about, and also the fact that there are other interventions that are beneficial to the child even if you don't have a direct therapy for the disorder that can be more helpful if they are started early. Earlier involvement with programs to foster healthy development, foster development of motor skills, foster development of other functions can often be helpful to the family and to the child in managing the disorder, again if the diagnosis is known ahead of time.

If you talk to parents about whether they would rather have this diagnosis made early in the newborn period or late, you get various thoughts, but generally the experience that I've had is that the parents often say even though it would have been hard if I'd known about it in the newborn period, I would rather, looking back, have known about it then rather than after we went through all this diagnostic search and everything else. That's not uniform, but that's certainly the prevalent response that I've heard from the parents that I've discussed it with.

I would ask the committee that as we hear parents testifying here and talking to us, if we would ask them that question about the timing of the diagnosis and what their preference would be about knowing it earlier versus later.

I think the committee also needs to take this into account in both our comments on this report itself and in our deliberations as we get into more detail. Two things. First, avoiding harm in the process of initiating treatments so that we make that diagnosis as early and as accurately and precisely as possible, looking at variance in the disease that is associated with different genetic variance and trying to tailor the treatment or intervention as much as possible with existing knowledge so that harm is not done to this child in the course of providing treatment.

The other issue is, in our recommendations, pointing out these other benefits that may accrue to the child and to the family as a consequence of having the diagnosis made earlier, even if it's not 100 percent effective treatment for the disorder. Also, having the concept that I addressed earlier incorporated in our recommendations at some point in time, probably initially with regard to this report but as we go on with our deliberations later, and that is this issue of having available a population for study of interventions so that our knowledge base grows and we get to the point of having evidence-based practice rather than opinion leader or best judgment-based practice.

If you look at the example that's been mentioned here of the children's oncology groups that have been operating over the last 30-plus years or so, most children in the United States who were diagnosed with cancer, 85-plus percent, are entered into treatment protocols in a research context, and this practice that's developed over the last 30 years is really responsible for the marked improvements in treatment and even cures for children's cancers.

We have an even better opportunity with newborn screening for enrolling children, because they all get diagnosed at the same time and through the same process, in treatment protocols when they do exist for disorders and gaining information with every child who enters a protocol who has this diagnosis that will help not only that child but help us gain the information to build this database of information.

So I would hope that the committee would consider emphasizing that aspect of the report. It's there, but we need to emphasize that as a way to move from opinion, best expert advice, to where we have the solid database coming from clinical trials, so that we have the opportunity to offer clinical trials from a registry system and a knowledge base based on clinicaltrials.gov, which is the registry of clinical trials, and the opportunity to offer parents the participation of their child in a clinical trial that exists at that time, and if a trial does not exist at that time, an indication of the parents' willingness to be contacted should a trial develop for this particular disorder at a later point in time, not a commitment to enroll but a commitment to be contacted to consider the possibility of enrolling a child in that particular study.

Only if we do this can we get the knowledge base that we're lacking at the present time and why we have this dilemma of having to rely on expert opinion rather than on a knowledge base.

Thanks.

(Applause.)

DR. HOWELL: Thank you very much. You brought your own cheering section back here. That's always very helpful, a very familiar cheering section back here.

We want to go ahead with the discussion of criteria for adding, but I think that, particularly after Duane's very elegant remarks, Denise has had a very specific idea bearing on your comment that I think would be very important to hear about at the current time. I think it's a very interesting suggestion that she had.

I assume that's what you're going to talk about.

DR. DOUGHERTY: Yes, yes. I mean, it does seem like it's time to move forward on the criteria and what we do about the next diseases and tests that become available, and I guess rather than just sitting here and people throwing out criteria, even though many of them are well considered, such as Duane's, I would suggest that we step back a little bit and have a paper produced for us by an expert in evidence-based decision-making, because this conversation is really happening in many, many rooms all over the country and all over Washington about what is the role of the evidence base and expert opinion in making policy decisions and clinical decisions, and there's been a lot written about that, a lot of very thoughtful people, and most everybody says that the evidence base alone is not the determining factor in making a decision. There are many other factors.

So what I would propose is to have a paper done by someone very thoughtful and experienced who would address what is the current thinking about doing an evidence base for screening, diagnosis, and so forth, and then what are the other factors to consider in a systematic look at whether a procedure should be endorsed and paid for and so forth. Values come in, cost may come in. It's not just whether there's an evidence base. I think where this previous report kind of tried to mix a lot of those kinds of things into one judgment, there are systematic ways to kind of lay out how to do a systematic expert consensus, how to do a systematic evidence review, and how those things can come together to make a decision.

So I would propose that a paper be done like that and that it be presented to the committee for their comments and for their recommendations, which we're gathering today, on if you're doing an evidence review or an expert consensus, what benefits do you want to look at, and what possible harms do you want to avoid, and how you get that information more systematically into a decision-making process.

DR. HOWELL: Mike has a comment, and then Derek.

DR. WATSON: I completely agree, but I would actually add another piece to that, which is I would step back. I don't know if you'll find the same person to do both, but I would look very hard at the nature of genetic diseases and the difficulties that one has in genetic diseases with an evidence base. As we move to the molecular side of diseases like cystic fibrosis, we start binning things increasingly smaller. We have a disease where you have a wide range of outcomes based on the mutations there. We know there's over 1,000 in the CFTR gene. Some of them are private to families. The only evidence base you'll ever have on a mutation that is only in one family in the world is going to be one data point.

So I think that, in addition to thinking about the nature of evidence-based medicine, think a lot about the nature of genetics and how those two things are going to fit together.

DR. DOUGHERTY: Yes, and just let me respond to that. I'm not suggesting that there be a paper that's done in the abstract but something that's done in the context of what this committee is looking at. If we can't find a single expert who knows all of this, which is probably the case, then perhaps a writer plus an advisory committee who can help understand some of the issues with genetic diseases might be a way to go.

DR. HOWELL: Derek had a comment.

MR. ROBERTSON: Yes, kind of just following on Dr. Alexander, I think if there is going to be more of an emphasis on trying to enroll people into studies and that part, which will obviously be very important, I think there has to be a huge emphasis on educating the parents, because a lot of times, having worked with physicians, it seems almost sometimes that it's obvious, why wouldn't you sign up and join this cause that obviously is going to benefit you and benefit others.

I think sometimes when you're weighing basically the risk between this new medicine, new treatment versus what exists, that's a very, very difficult decision. I commend all the parents who have enrolled their children in studies. I was listening to NPR about the anniversary of the polio vaccine and just wondering, when they were enrolling their kids in that polio vaccine, and I wondered if I would have done that with my child. I don't know, because I struggle with that today with my own children in terms of studies.

I think one of the things with oncology is that sometimes the reality is the alternative to not enrolling in a study is extremely grave. For some other diseases there may be other options which are already there. I think the education of the parents to not just assume that there's a protocol, there's a study, so you'll sign up. Probably the best way to do that would be to get other parents you have enrolled their children, the decision-making process that went into that, and the courage it took to do that and why they also should be encouraging, to get a group of parents who would be encouraging other parents, physicians who would be educating parents to the benefits and the reason why you have to do this.

DR. HOWELL: Piero, you had a comment?

DR. RINALDO: Yes. I actually like the idea of proposing the next steps. So I would like to propose another one. In the beginning of that old project, we were looking at a very large number of conditions, and I think it's a reasonable statement to say that many of the conditions that were included in the initial group but weren't included later in the uniform panel I think are making some solid progress.

So perhaps we could define a process where proponents for extension of the panel could actually come here and present to this committee and make the argument, using as a starting point what we did in the survey, and perhaps point out to us that we didn't have sufficient participation. That was very obvious with infectious diseases. But just imagine severe combined immunodeficiency, we know that there is very, very active effort toward screening.

So at some point the proponent for such screening could make their case, and I think this committee perhaps is a good place to start. I don't know how that would work from an organizational perspective, but maybe every meeting we should have a session on the agenda devoted to a presentation by a group or whoever is the proponent — the experts, the parent support groups — to come here and make the argument for inclusion of additional conditions. In this way I think we could start spinning this wheel, because we all talk about this not being a static thing but something that is meant to evolve. But I think it's probably one responsibility for us to facilitate this evolution. Just an idea.

DR. HOWELL: That's an interesting thought, to have someone come, an expert in the area, and present and discuss the criteria by which they would recommend the addition of this condition based really on the stuff that's in this report is what you're suggesting. What are the thoughts about that?

DR. BROWER: I agree with Piero, and I think it's part of the charge of the Laboratory Subcommittee to look at new tests and the adoption of new tests. I think the best thing that we can do as a committee is to communicate to the public and to experts about what level do they need to meet before we'll consider that a disorder or a test has been validated, what level do we need to have as evidence to implement a test for SCID. So I think that if we can work in the Laboratory Subcommittee and with the committee as a whole to come up with some of those guidelines based on the report, then I think that would be helpful.

DR. HOWELL: So you're suggesting that a person or persons or whatever would meet with a given committee, like the Laboratory Committee, that would look about the data and so forth, and then come at it from that point.

DR. BROWER: Well, I think it's the job of the Laboratory Committee to start looking at all the disorders and figuring out what's next.

DR. HOWELL: Any thoughts about that around the table?

Joseph?

DR. TELFAIR: Actually, I would agree with Amy in the direction that she's going. I brought up the question earlier about utility and actual use of the information. I mean, a lot of work has gone into this, and I think we all have come to some level of agreement on that part. It seems to make a lot of sense that maybe the next steps, as Piero was just pointing out, would be for us to be thinking about how can we begin to take those recommendations and put them into something that is usable, some structure, something that is tangible and useable by those who are in the positions to influence what happens next from the national, state, local and community level, including parents and including others who are decision-makers.

So it would seem to me that that would be something maybe the committees in their current structure, or maybe even this committee as a whole, can take on responsibility-wise, even bringing in other people and talking with them and that sort of thing. It's along the same line but it's focusing on the other aspects of that.

DR. HOWELL: Dr. Alexander?

DR. ALEXANDER: Obviously, there's going to be a need for this type of function to exist as the tests evolve and the number of disorders you can screen for expands, and the number of treatments that hopefully we have treatments for expands. This is a role for some type of an organization, and I think this committee has a valuable role to play in suggesting what kind of a group might take this on and what kind of criteria they might use in making the decisions about what gets added.

Doing this by this committee for a few disorders I think might give us some useful information on which to base such suggestions. But for this committee to take it on as a formal charge I don't think is probably within our capabilities or our charge or our time.

Let me suggest something that could be considered as a model and we might talk about as we come up with a recommendation on this particular topic, guided I would hope by trying to deal with the issues condition by condition, as has been suggested, and that would be a parallel to what we have for immunization, with an Advisory Committee on Immunization Practices that is convened by the CDC that

has expertise on it from the practicing medical profession, has other scientists on it, public representatives, public health people on it, and so forth.

You could establish a parallel committee with the CDC operating it for an advisory committee on newborn screening practices or genetic screening practices, something like that, that would meet on a periodic basis to review potential new additions to the screening regimens that are used in the states. These do not have the force of law. They are a guidance to the practicing community, but they are widely regarded because of the database that is utilized in putting them together that they become pretty much the standards of practice for immunization, both for adults and for children.

So I would think that this is a parallel situation in many ways. As we have candidates for new additions to screening panel, just like we have candidates for new vaccines, and that a parallel committee arrangement, like the Advisory Committee on Immunization Practices, could be set up as an advisory committee on newborn screening practices.

DR. RINALDO: I think this point is well taken.

I have a question for Michele and Peter, because the uniform panel, I think the ownership of this panel now is, I believe, HRSA. So I think it's really the job of whoever controls and owns this product to decide or to find a solution how to modify it and expand it, as needed. I don't know if you can comment on that.

DR. VAN DYCK: Well, I think I'd only comment that I'd agree with Duane generally that I would not want to take this role on as a committee because I don't think it's the role of the committee and I don't think there's time, and I'm not sure the mix in the committee is the appropriate mix to do this kind of thing. I also think that that's a consideration that could be in the final output of whatever the Department recommends eventually. I would assume that part of that recommendation would include the best way to suggest to states to add new conditions, but I think the Secretary would be interested in what this panel would say about that and how to go about it.

DR. HOWELL: It would seem to me that this group should certainly have an opportunity to look at and comment about any changes in the recommendations, because I think that is in the purview of the committee. But one of the questions I guess that's been posed is the mechanism by which those decisions would be handled. Amy had suggested a subcommittee, Duane had suggested a parallel committee, and I gather that everybody's thinking that there would be some other type of structure that would review things and so forth, make recommendations that would come to this committee, and then to the Secretary.

DR. DOUGHERTY: Could I just go back to how we started and just not lose the fact that I think we still need to step back and reexamine whether the current fact sheets and that approach is the best mechanism and hear about some alternatives that may be helpful to whoever comes forth, whether it's a parent group who will need some guidance from us, or a committee.

DR. HOWELL: Bill, you had a comment?

DR. BECKER: Yes, I want to add to Denise's comment because I agree, and it actually correlates nicely with what Peter said. This committee, in my opinion, seems to be about establishing the process by which the panel could be added to or subtracted from or in some way modified, and certainly Duane's suggestion seems like a reasonable one. But we ought to be more focused on the process and providing guidance to how those decisions are made.

One of the fundamental considerations that we just spent an hour or so talking about is this issue of the expert opinion versus evidence base spectrum that we have in existence right now. Regardless of whatever subcommittee or advisory committee or whatever process we devise, we're still going to have

that fundamental question to resolve and provide guidance to that process. While I don't know that maybe a paper is the right forum, I think Denise is exactly right that we still are going to have to answer that central question each and every time it comes up until we provide the guidance, or at least the conventional wisdom from this committee.

So I think this committee needs to be about the process as to how will we decide it, maybe not to the particulars, but we're going to continue to have to use the evidence base/expert opinion commentary as sort of a central tenet to whatever we decide to do.

DR. HOWELL: Piero?

DR. RINALDO: Maybe I misspoke. My intention wasn't to say, okay, this is the ultimate stop where decisions are made. My point was let's try to define the process, because newborn screening has evolved, and I think the best definition is by spontaneous combustion. Eventually, somebody decided to do something, no matter what. I think that there should be, again, a defined checklist or something, and it's a process. I think Amy is right, it certainly sounds like a job for the Laboratory Subcommittee to come up with a first attempt to define what the process ought to be and present it to the entire committee and then see how that can be improved.

My concern is more how we make sure that this process becomes available and people become aware that this is one way, endorsed by this committee if that's the case, to seek extension of a panel. I completely agree with Jennifer. This has been progress, but I think it would be a disservice to the public if we now sit on it for the next 10 years and nothing changes. It must be an evolving process. So in a sense, although I understand the point that was made that this is not the job of either HRSA or this committee, I really think we have a moral responsibility to make sure that the children affected with other diseases are never considered less important. We really have a duty to serve all of them affected with whatever diseases where there is a test and early intervention can be beneficial.

DR. HOWELL: Comment about Denise's recommendation of a paper being written and a presentation on the mechanisms and so forth.

DR. DOUGHERTY: And this is just to be background, just to get the big picture of how this is done currently, and for people to then weigh in on it.

DR. RINALDO: Actually, I have a question. You probably have experience with these things. What are the time frames for these things, from the moment you find a person who will do it to the moment that you get something tangible delivered? Because it can go on for a year or two.

DR. DOUGHERTY: I guess we need to get a sense from this committee of what time frame they would like, and then to negotiate with — whoever is going to do this is naturally a very busy person, but if it's a person who has been involved in this for many years, they could probably just sit down and write it almost off the top of their heads about what the various factors are, with attachments, say here's the U.S. Preventive Services Task Force criteria, here's the community guide's criteria, here's what others use for screening or treatment, not just an essay but some background. So it really depends. Scott Gross and I actually thought of a couple of names, but how soon would the committee want something? Then we go from there.

DR. HOWELL: Peter has a comment.

DR. VAN DYCK: I wonder if it wouldn't be, as a slight alternative but going towards the same direction, asking somebody to come and make a presentation to us. If, as you're suggesting, these people know this stuff pretty cold and off the top, we certainly could have a presentation related to that, have some discussion about it, and see what direction that might lead us, then, before really

commissioning someone to spend a lot of time. I'd propose that as an alternative, because that could be done in July.

DR. DOUGHERTY: Yes, that sounds great. That sounds very reasonable.

DR. HOWELL: A presentation could be done, and obviously that would be codified in the minutes and so forth. As a matter of fact, that might be more expeditious. Would that work? Why don't we then make the following plan? I see noddings around the table. Maybe you can make recommendations to HRSA about people, and we could put said people on the agenda for July, because again, I don't want something to drag on for a year or something like that. I would hope we could also ask someone to give us some wisdom about designing a follow-up program that would be informative. It would be a pity to start a follow-up program, and obviously the laboratorians and so forth would be getting all the data and so forth. It would be nice to have someone in the planning world to say these are the kinds of things you should acquire in your long-term follow-up. So we'll do that if that's good.

DR. DOUGHERTY: So a few of us or everybody could consult and get back to you and Peter and Michele with some suggestions in the next couple of weeks, and then whoever else wants to weigh in on who those people are. We can get bios together and things like that. Would that work?

DR. HOWELL: I don't see why not.

Amy?

DR. BROWER: And I would just follow up on Mike's comment to include the genetic disease aspect of it. So it may be two presentations, one person who presents the methodology, and a person on what does this mean to genetic diseases.

DR. HOWELL: Jennifer?

DR. HOWSE: I don't know if this rises to the level of presentation for the July meeting, but I hope we can keep that connection that Duane brought up and that Peter favorably commented on. That's the connection to the U.S. Public Health Service and the use of CDC as an ongoing mechanism to advise states in a formal and timely way as to the recommended newborn screening tests to be done. I think it's quite essential since this is in many, many states still a public health responsibility, a public health service, and eventually I think we need to stay focused on that connection and what the options are to make that kind of transition.

I don't know if that rises to the level of presentation, if we want to look at the immunization model, which is a very useful public health service model to drive children's health kinds of issues, or how the committee feels about that.

DR. HOWELL: Duane, do you want to comment on that, about the value of a presentation?

DR. ALEXANDER: Well, I think it might be useful to have some sort of a presentation on the model, being the Advisory Committee on Immunization Practices and how they function and what they do and how they decide what goes into the influenza vaccine this year and when it's time to add chicken pox vaccine and things like that. It's really a very comparable situation, and I think if we had just a presentation on how that works, it might be informative.

I don't want to totally lose sight of the idea of us doing a trial run, if you will, of how you might consider adding a new disorder to the list and how we as a committee might try to go about that, and doing one and seeing how that goes and what we find that would be very useful to us as information to be

gathered, because I think that kind of first-hand experience with a trial run, a pilot, would make our recommendations as to how this process might be best carried out even more useful.

DR. HOWELL: I think that's a very interesting suggestion, and perhaps we can look at the agenda and maybe indeed get some expert proponents of a condition that is certainly moving toward prime time maybe to come and make the presentation about what is the current level of laboratory testing that would be appropriate for the general public, the specificity and sensitivity and the treatments and so forth. That might be a very interesting mechanism to hear. Although that may not be the long-term affect of the committee, it would be nice to at least see what the things are.

Mike and Piero have a comment.

DR. WATSON: I would actually suggest doing two, having done 78 of these recently. I would suggest you do one rare one and one relatively common one, because I think you would approach them perhaps differently because of the difference in the evidence bases, and I think you learn a lot by looking at the two ends of the spectrum, probably.

DR. HOWELL: Do you have suggestions? It sounds like you might.

DR. WATSON: I can think of tons of rare ones that are coming along. Pick any lysosomal storage disease. But on the common side —

DR. HOWELL: That's what I was interested in.

DR. WATSON: — people are testing pulse oximetry for congenital heart disease. That's relatively common compared to the rare diseases. Hyperbilirubinemia brings interesting issues because of its need to be done in the nursery as opposed to the state program. There's a lot of different parameters in the common ones that you'd have to think about, and I'd probably need a few more minutes to think about the options. There are ones coming down the pike, though, things like asthma perhaps. I don't know what's going to be screened in the future, but even if it's not in line right now, you might learn a lot by having thought about it in the context of a more common condition.

DR. HOWELL: Piero?

DR. RINALDO: I think it's an excellent idea, and perhaps one way — because there are so many possibilities. Perhaps we should try to make a relatively short list of these conditions, and then as a committee take a — I don't want to call it a vote but just indicate a preference. If there is a consensus, there are one or two conditions that we would like to hear. Again, that doesn't mean that they are the next. It's just a test drive. I think we can make a list of 10, and then if each of us ranked them, we can see if we have a consensus. Again, it's just a way to start. We all want different things.

I'm afraid if we sort of leave this to the initiative of the outside world, then immediately there will probably be very well organized groups that will jump on the opportunity and say we want to do these conditions. So we can perhaps prevent any possible difficulty with that process if we pick them.

DR. HOWELL: It might be interesting to explore a condition that has a clear-cut what I would call medical treatment and one that would fall more into the category of benefits of early knowledge in the family and so forth. That will give you two very divergent issues to deal with.

Is it the general sense of the committee that you would like to give that a trial run, not as something we will do always but to see what happens when you look? I see noddings and no noddings.

Derek?

MR. ROBERTSON: Just to clarify, are you saying that we would first look at developing a process and then pick two diseases? Or are you saying we would do it simultaneously? Because I don't think we're clear on what we decided we'd do in terms of developing a process first. I'm assuming you're saying develop the process first and then test it with these two diseases.

DR. HOWELL: Duane?

DR. ALEXANDER: Amy suggested that her committee might take a lead in developing what we would like to hear as a presentation, what would go into a presentation on an advocacy basis for a disorder that should be added to the current panel. I would suggest that Amy's committee be charged with developing the criteria for what we would like to hear, about whatever disorder, the information that we would like to have presented, and putting together the list of potential possible five, six, seven conditions, and then we would reach agreement on what we would like to have done and take a look at the criteria that Amy's committee suggests, and then go from there in terms of setting up a presentation at one of our meetings just as a trial run to get the experience of what it's like to try to participate in a decision-making process like this and how do the criteria that we select stand up. Were they adequate? Were they inadequate? What should be added to them that we missed? And so forth, just to have that practical experience. That's a possible way to start.

DR. HOWELL: And you're expecting Amy's committee to look at, for want of a discussion, the criteria that are currently in the College's report and make modifications and recommendations, and then hear from the group? Is that what you're suggesting?

DR. ALEXANDER: Yes.

DR. HOWELL: Okay, and then that will be simultaneous with this presentation that would inform better about some of the future. Are you comfortable with that, Denise?

DR. DOUGHERTY: That sounds great, because developing these criteria is always an iterative process. A lot of people need to weigh in.

DR. HOWELL: Okay. So the answer is that they would be moving along at about the same time.

Derek?

MR. ROBERTSON: I guess I'm not really following the process, then, because I thought earlier that Denise's comment was that you wanted to step back and look at what we have done here and see is this the best way to do it or not, and then have somebody present on it, and then we would listen to that, because I think what Amy's group would be doing is what we currently have in terms of the criteria that was developed by the ACMG report. It seems like, though, you'd end up with potentially two different — potentially, we could hear a presentation and say, you know what, that's really great, we should do it this way, and then you look at your diseases and do it based on the presentation we heard.

I don't know if they could be done simultaneously, because I think the reason to hear this presentation that Denise is suggesting is to kind of consider it vis-a-vis what is in the report.

DR. HOWELL: Denise has a comment.

DR. DOUGHERTY: You know, when you look at the fact sheets, I don't think that anybody is going to argue with the basic components of it. It's more about the way it was approached. So I don't think there's going to be that much difference in approaches. It's just that it's kind of — if you're doing an evidence-based review, you wouldn't ordinarily just list up to 20 of the PubMed references. You'd have a process for looking through those and making some judgment about what they say. But it's the same

basic thing, that you're looking at the articles and the evidence, but you're taking a more systematic approach perhaps to analyzing what's in that literature, and the same thing for costs.

You may want to have a different approach than just somebody — I'm not sure how people judged what a treatment cost or what a test cost in the ACMG process, and you might want to have a more systematic approach to cost. But I don't think the major components are going to change that much.

MR. ROBERTSON: I guess my question, then, is if you were to look at that different way of looking, would that lead you to choosing one disease over another? Would it potentially lead to a different choice? Because I think that that's the whole process. It's what disease or disorder are you going to choose to add to the panel or take off the panel. Are you saying, then — if this presentation is not going to lead to a different result, then why do it?

I mean, I think we want to look and see how are you selecting a disorder to get onto the panel. One way is to use what we already have. I thought that another way could be to hear somebody give us an alternative way of doing it, and the group, the committee would then look and say this alternative way or pieces of this alternative way is really good, let's incorporate it, and then you decide. If both approaches give you the same result, I don't understand the difference.

DR. DOUGHERTY: I think what you're getting to is one concern I have about this approach, about having people come and present, is that it will take a lot of work for them to use any approach. I mean, no doubt about it. I think Duane is saying that's part of the experience, that anybody who wants to be a proponent and use any criteria is going to have to do a lot of work to get that information together. So we may want to settle on the criteria I think you're suggesting and the way to approach analyzing the different components of it before putting people through all this effort if that's not the approach we're going to use.

MR. ROBERTSON: Right, because I think what we said first is that the role of this committee is to provide people with a process, whether that's a state or a parent group. We're suggesting a process. I think we have a suggested process in the ACMG report. I thought what you were suggesting is let's take a look at it and see if this is the process that we want to stick with. I think that we want to come up with a process, whether that's this one or we hear somebody suggest a different one, or a mix of the two, and then you go back and say now that we have a process, how would you then add X disorder or Y disorder?

DR. HOWELL: Piero?

DR. RINALDO: I was actually thinking of something simpler, and that goes with the fact that we had these other conditions not included in the recommendations, that basically they had a negative outcome in the process. So I would actually find somebody that has clearly knowledge of his condition to review what happened and prove, if anything, that some of the negative scores, the low scores were actually not based on the correct information.

So the whole idea, I think if we can reanalyze the data, I can tell you that if you eliminate — and we had done this at one point. We were eliminating the score for there is a test, yes or no. Our understanding was totally philosophical in part, just to show that if we had a test, there are conditions that actually would be right there. So that is actually a fairly simple process because these are sort of in a limbo, waiting for the test to be developed.

So I was trying to make this list in my mind. If you think of severe combined immunodeficiency, Fragile X, Pompe's disease, Wilson, kernicterus, Duchenne, HIV — I believe there is a group now working on a screening test for spinal muscular atrophy that they said they had it and it works. That condition actually wasn't included, but I would certainly think it would be a very interesting exercise to ask them to revisit what happened in the survey and say why they disagree with the outcome of the survey

and what evidence they have to show, because this is really about, to me, a number of conditions that have reached a certain level and others that are not there yet.

So that was really one of the objectives of this whole exercise, was to identify the gaps, identify what is missing. Is it a test? Is it a treatment? Is it an understanding of the natural history of the disease? Identify these hurdles and see how people can address them and perhaps show us that they are being resolved. I tend not to think at 30,000 feet. I'm trying to be more practical and taking individual conditions, and again, give it a test try.

MR. ROBERTSON: I guess, Mr. Chairman, I'm hearing two things on the table. One is what Piero is saying, and to be honest I think the committee could look at both things. But one is do exactly what Piero just suggested, which is here are a couple of disorders that didn't make the cut, so to speak, they come and they look at what's here and they give their arguments, and we say, okay, yes, we agree with your arguments, or no, we don't. But I think that that's one approach.

I thought that a separate approach was what Denise was suggesting, and I thought the committee was looking at it, and I think it's two different approaches, because Denise's approach is maybe what you have here we need to look at in a critical manner and get some folks to talk about it. So, in other words, the disorders that you're talking about, Piero, would probably be looked at differently or under different criteria. I just think it's two different things. I just don't see them as the same.

DR. RINALDO: Why does there have to be an alternative? Why don't we do both?

MR. ROBERTSON: But that's what I'm saying. I'm not debating the merits of either. I'm just saying we have to decide which way we're going because it's two different things.

DR. HOWELL: I don't think that there's going to be a great difference. I think that Denise's recommendation is going to lead some refinements, perhaps, of the approach, and a more systematic and scientific approach to that, but I think you're going to come out at the same place, basically, likely. I don't think you're going to get wildly different patterns and so forth. Maybe you will.

We've been around. Peter is very interested, and Dr. Alexander.

DR. VAN DYCK: I think you've summarized it fairly well, Derek. I think it's just in the timing of how we do it. What might be one way to approach it — I'll just put it on the table — would be to use the present criteria that are in the ACMG report and have somebody who was involved in the process, or a couple of people, go through one of the conditions, whether it's one that's opted in or one that's opted out or on the second panel, so we get a feeling for how it was done and the thoughtfulness that went into that.

Then to hear from our outside speaker or speakers on a process that they would recommend. We might be able to absorb the differences or the intricacies in that or understand how that process is different, if it's different, than what was gone through. It might give us additional information to absorb the information and then make decisions from that point on.

DR. HOWELL: Duane?

DR. VAN DYCK: Did I make that clear?

DR. HOWELL: Yes.

DR. ALEXANDER: I was going to suggest something very similar to what Peter just suggested, which is the process. First of all, we don't want to get into revisiting the committee report and making the

judgments that they made. Very clearly, we don't want to do that. What we're trying to do is gain some experience first-hand of the committee so we all get a feel for what goes into this decision-making to help us guide the recommendation we're going to make for process on adding new conditions to an existing list.

Process-wise, at our next meeting I would suggest that Denise's paper presentation be done just as we've talked about, that Amy's committee make her report on what information we would like to have presented that is relevant to the criteria that were used for the ACMG report, and whatever modifications based on the discussions that have happened since her committee would make as basically what we would ask a presenter to present to us at a next meeting as they make the case for adding one or two new conditions to the list, and that presentation then take place not at the meeting in July but at the subsequent meeting based on the guidance that we get as a consequence of our committee discussion after the presentation of Denise's paper and Amy's committee.

We'll have some discussion based on that, we'll provide some criteria and some specific requests of the information we would like to have included in a presentation to us as somebody tries to justify adding a new condition or two to our list. That's basically the process.

DR. HOWELL: That seems very logical. Are folks comfortable with that?

Denise?

DR. DOUGHERTY: That's probably better than having a presentation by a proponent.

DR. HOWELL: And Amy has suggested already that she would be supportive of accomplishing that.

Derek, are you comfortable with that?

MR. ROBERTSON: Yes, I guess so. So essentially what we'd be having is a combined recommendation to somebody who would — in other words, we'd take what Amy's group comes up with, we may take something from what somebody presents, and then go to somebody from Fragile X and say this is what we would want to hear.

DR. HOWELL: I hear considerable comfort with that. So we'll ask Michele and company to work on that for the next agenda item.

Piero?

DR. RINALDO: The only thing, perhaps, that I missed is how do we pick these conditions?

DR. HOWELL: Well, that will come out of the discussion with Amy's subcommittee. I think that will work very well.

Any more discussion on that?

DR. VAN DYCK: Can I just clarify, Rod?

DR. HOWELL: Yes.

DR. VAN DYCK: So at the next meeting, what I think I heard Duane say was we'll hear a presentation from Amy's committee on the recommendations in the ACMG report, modified by whatever

the committee suggests, a peer presentation by an outside expert on a process for including new tests, and then the committee deliberate on what they like from both pieces and end up with some final set; then at the next meeting have someone come to use that final set to try to add a new condition, practically.

DR. HOWELL: That's what I think I've heard, and Amy's committee, during the course of their deliberations, will come up with some suggestions of conditions that might be appropriate for that next meeting. I believe that's what I heard.

Bill?

DR. BECKER: I'm very pleased with the process and would certainly yield. I have a slightly different question that I have which is primarily towards HRSA. Now that we have this product, the report, and now that it's in the public domain for comments, and as Piero correctly pointed out, there's significant momentum, or some would call it pressure, for newborn screening programs to respond to it, it's more than just the panel and it's more than just the number of disorders being screened for, and we all know that.

I'm curious as to how HRSA plans to monitor the impact of the ACMG report at several levels. Obviously, we can know what particular states are screening for with the scorecard. That's getting a bad rep, by the way. But there is so much more. Has follow-up improved? Are we doing a better job of identifying babies, getting them in for care, identifying the medical home, getting the follow-up and all of the things that really speak to the heart of the report itself and what we really all want as an effective newborn screening system? I'd like to know how HRSA plans to monitor the impact of this document.

DR. VAN DYCK: Well, I think HRSA feels a responsibility to monitor the things that you've suggested on an ongoing basis regardless of the report or regardless of where the report is. We don't view the report as a report to the public. The report is a report to HRSA, which will then generate, we would assume, some eventual recommendations. So, yes, it's important to look at the report, to look at the recommendations in the report, but I think those are not so much different than what would be good practice in following up and measuring and monitoring the program itself, rather than thinking about it as monitoring the report.

DR. BECKER: Will that information be brought back to this committee?

DR. VAN DYCK: Sure, any time the committee wants to hear it, and then those are part of the ongoing reports to the committee.

DR. HOWELL: Jennifer, has that explored your original question that opened this session?

DR. HOWSE: Yes, and I hope in the afternoon we can also circle back to what I think Bill was partly bringing up, which is making sure that in July we also devote adequate time on our agenda to the progress of these recommendations, because right now, while they represent good practice and I think we've developed a general consensus about our support for the report, newborn screening is still a state-based public health program that relies upon guidance, federal guidance, professional medical group guidance for its shape and content.

We've got these important recommendations, but I think the question that still sits before us is says who? Who says these are the right recommendations? My organization does, and the American College of Medical Genetics does, but quite a number of the organizations haven't spoken, we're still in the public comment period, and we still have no formal position by any entity within the federal government with respect to the disposition, the federal disposition towards these recommendations.

Denise raised an essential point, and Coleen. We need to look at how to add the appropriate and responsible way to recommend addition of tests, but I think we've also got to stick to a very basic question, which is how do we advance the recommendations in the report. So the answer is yes, concerns raised, but I still think we've got to hitch it to the more basic question that Bill was suggesting.

DR. HOWELL: And we can depend on you to prod us forward with advancing the recommendations.

DR. HOWSE: I'll do my best.

DR. HOWELL: It's lunch time. But one comment is that we don't have any place in the program, but there are a lot of things happening out there as a result of this report, regardless of where it stands, and one of the things that's been of great interest to me personally and very pleasing is that I've been extremely pleased that the National Library of Medicine has taken upon itself — and Dr. Fomas is here — to do on its genetics home reference, that gets a million hits a month — they're doing an informational sheet on each of the core recommendations, and I think that's terrific. They're using the ACMG sheets, and then with their professional help putting it in the proper language for the public. I think that sort of thing is invaluable, and I think that we're going to need the cooperation of all sorts of people to make it go. But I think in the education area, this is a very powerful new thing that's exciting to see coming forth.

Are there any other things that are urgent before we go to lunch? It's going to have to be very urgent.

Steve?

DR. EDWARDS: I want to just introduce something that I think is germane to what we were discussing, and that is — and Jennifer talked about it earlier, about the dynamic process that this would be. But we're talking about new conditions, and I think that our process is going — and I'm just introducing this. I'm not asking us to resolve it now. But our process is going to have to review the 29 treatable and 25 reportable conditions. This has to be a dynamic process, too. We can't just look at new conditions. We're going to have to continue to monitor those that are on the list already, and I don't expect us to resolve that before lunch, but I'd like to have that noted as a part of this discussion.

DR. HOWELL: Right. I think that in the preparation of the report, it was realized that some conditions that are currently on the list potentially could leave the list and move around, move from a secondary target over to the primary, depending on developments and so forth. I think that if we could get widespread understanding of those two lists, we will have a parade down Pennsylvania Avenue, because it has been virtually impossible to get some folks to clearly understand what comprises that second column in the report. But perseverance will make a bishop of his reverence.

It's lunch time. We'll get back promptly at 1 o'clock, and we'll begin the afternoon with the public comment period. I'm pleased that at least a couple of major professional organizations will be here today to comment on the report.

(Whereupon, at 12:04 p.m., the meeting was recessed for lunch, to reconvene at 1:00 p.m.)

AFTERNOON SESSION (1:05 p.m.)

DR. HOWELL: We're at the point of beginning our public comment, and we're delighted that a number of folks have signed up to make presentations and comment. What we've done is that we've made arrangements to use the seat to the right of Dr. Dougherty, and there's a microphone there, and we're going to begin with Dr. Bennett Lavenstein, who is from the Society of Child Neurology.

Dr. Lavenstein, if you would be good enough to push the little green button to get that mike livened up.

I would appreciate everybody giving the exact and proper name of their society.

DR. LAVENSTEIN: Thank you very much. It's a pleasure to be here. I'm Bennett Lavenstein. I'm a pediatric neurologist here in Washington at Children's Hospital. In the interest of disclosure, I should tell you that I've had the pleasure of working with Dr. Rinaldo, and we've had some patients together over the years. It's been certainly educational for me.

We, I guess, have the distinct situation in looking at this list of being involved with 28 of these 29 disorders. I think the only one that we don't readily see on a daily or weekly or monthly basis is cystic fibrosis, speaking as a neurologist per se. But from the standpoint of the Child Neurology Society, we certainly want to make the following statement and position, and that is that we certainly support national minimum standards for newborn screening for the specified genetic disorders, and for some disorders timely intervention for affected infants can certainly assure significant reduction in mortality and morbidity, and in all cases secondary prevention through genetic counseling can be offered and can be particularly efficacious.

I think that federal oversight is necessary in order for all newborns to have equal access to identification and interventions for these disorders, and in addition a combination of adequate federal and state funding should be allocated to initiate and sustain statewide programs and limit the long-term effects of these disorders.

Key elements to a successful newborn screening program I think include parent and health care provider education, and these programs should include parental notification and consent, timely screening and testing prior to birthing facility or hospital discharge, post-discharge follow-up, resources for appropriate referrals, accurate systems for data collection, policies to ensure patient confidentiality, and access to interventions and treatments. In the event that state or federal policies institute some degree of mandatory testing, these requirements should not interfere with parents' rights to be informed of any and all procedures involving their newborns. So mechanisms should be in place that are appropriate and address parents' options.

Mandatory testing, counseling and follow-up requirements must be fully supported by designated federal funds, we believe, since the U.S. health care system currently either does not support such services in totality or perhaps does so somewhat inadequately.

As we know, every state has newborn screening. It's one of the largest prevention programs in the country. But certainly there's variability amongst the states, and uniformity is a sought goal. A number of organizations obviously have played a major role in supporting this movement, and some 29 disorders which are on your list have been identified. I don't think the national minimum standards will solve all of the ethical dilemmas or the cost concerns surrounding the current patchwork system where each state has different requirements for newborn testing. However, creating national minimum uniform standards using evidence-based practice will ensure that all infants have early access to screening and treatment.

I think with regard to neurologic diseases, I can tell you that last week the American Academy of Neurology clearly moved forward with multiple new genes being described for many neurologic diseases. Now they're trying to figure out which proteins they code for, which diseases they impact upon, and certainly it is a marriage of clinical experience, expertise and evidence-based medicine to bring all these things together to make it work, because in some conditions if we wait just for evidence-based medicine, it will take 10 years to figure out the impact of that disease.

But thank you for the opportunity to participate. It's a marvelous conference.

DR. HOWELL: Thank you very much, Dr. Lavenstein.

We'll move ahead.

Let me make one other comment before we go ahead that I should have made at the beginning. I read some of the commentary that's coming up, and there are people in the audience that I'm sure would like to comment about the commenters, and we won't do that. In other words, if someone would like to agree or disagree with one of the people presenting, they need to sign up to talk in the public session, but we're not going to have a dialogue. That didn't refer to your particular presentation, but thank you very much, Dr. Lavenstein.

(Laughter.)

DR. HOWELL: I'm pleased to welcome Ms. Jana Monaco, who is a parent and who will speak next.

MS. MONACO: Good afternoon. I am pleased to have the opportunity to be here again to speak on behalf of newborn screening. As the parent of a child with IVA, isovaleric acidemia, who fell victim to the lack of comprehensive newborn screening and suffered lifelong brain damage, and another child who is living a normal life because of early screening, I come with a strong passion to see the goals of the ACMG report attained and implemented. It is enlightening to see how this report is helping to move states forward already.

Having attended these meetings and viewed the report, I can only offer my full support along with fellow parents to this report in helping it to become a national standard for newborn screening. We are so excited not to feel alone in our efforts and commend you for providing the states with a wake-up call to newborn screening.

Since the last meeting I am proud to announce that Virginia did pass a bill to expand our newborn screening program to 30 disorders beginning in March of 2006. They have also included language to allow the addition of other disorders when deemed appropriate. This committee and its efforts has helped influence that bill passing. They are now in the process of implementing the necessary changes to carry out the bill.

I have also been invited to be a state representative for our New York/Mid-Atlantic Regional Collaborative. I am honored to participate in such a capacity as I highly value the importance of parent presence and input. After all, we are the ones that manage and care for children with these disorders. We are at the mercy of all the professionals, whether the policies and guidelines are effective or not.

Our regional collaborative had their first meeting this past weekend. I was one of only two parents on the committee, with another parent in attendance. I am not a physician, health department worker, counselor or technician. However, as the parent of two affected children, including one with multiple health issues, I wear many hats myself, like my peers. I can honestly say that I have mixed feelings about the meeting, and I only speak from a parent's perspective.

The meeting included a general overview of the regional and national status and a discussion of the objectives dealing with laboratory standards and procedures, follow-up and education. There was a great deal of input from the committee, and although there were numerous suggestions to achieving the objectives, like tele-health systems, legislative advocates, enhanced educational programs, there was a significant degree of barriers and problems expressed by the various committee members that hinder achieving these objectives.

Concerns included problems with backup labs for emergencies and the fact that labs do not all operate under the same policies. The issue of reimbursement and fees was also expressed. Lab space and the fact that all labs are not able to accommodate the tandem mass spectrometry equipment according to the manufacturer's guidelines was yet another issue. Of course, staffing is always an issue whether it is technicians or clinicians, and how reimbursement is going to be handled. As a parent, I had my own concerns, which included the lack of knowledge within the medical community on these disorders, and the lack of communication with our own medical home. This is a problem with other parents as well.

Guidelines or legislation for insurance companies is yet another problem. We, like numerous other families, do not have coverage for metabolic medications because a form of them can be found in health food stores, although they do not serve our children's medical needs. There is a great disparity with medical formula coverage. Many insurance providers do not recognize it as a medical food, and hence do not cover it, leaving families to bear great financial burden. This is an issue that needs to be addressed by the advisory committee when working with subcommittees.

These are just a few of the barriers that were discussed at the meeting. However, I can highlight that regardless of the issues, it all came back to the need for improved training, education, and technology, whether it was in the technical or clinical setting. Of course, the issue of reimbursement was always raised. There was an unremitting concern about where the funding would come from. As a parent, I was not completely confident that the regional committee had an overall good understanding of how the report was going to assist the development of the newborn screening programs. I feel as though the committee is supportive of the changes for the most part and will continue to work at the objectives, but has great concerns as to how to initiate the necessary changes and what kind of guidelines and assistance they will receive from the federal government.

I am confident that you will address these issues and help reduce the disparity that exists. I cannot emphasize enough the value of parents. We are a very resourceful group of individuals and have the advantage of open communication with one another. We already educate, advocate, assist and translate. For us, there is a personal stake at hand. We are motivated by the well-being of our affected children and providing them with the best medical care possible. Our advocating efforts are not determined by financial gains or determined by monetary parameters, or fall into a set methodology. Our advocating efforts are motivated rather by prevention of potential tragedies that we all know do exist.

I'd like to comment just on a few of the items expressed earlier, and I can attest to you that parents do want to know what they are dealing with. They would rather avoid the long dragged-out diagnostic odysseys that affect the entire family, creating an immense strain. It is much easier to learn a diagnosis early and incorporate it into life, whether there is a cure or not or management or not. Also, parents are interested in trials and databases. Parents of children affected with methylmalonic acidemia are knocking down the doors over at NIH to be part of their research program conducted right now.

We ourselves are currently doing gene analysis. We already have the disorder, the diagnosis of IVA, and live with it, but are interested in helping to better understand the disorder and its mutations for further research.

Thank you again for your continued efforts and for the realization that it is important to have some type of program that will help move states forward and to provide the children with the newborn screening and the care that they so greatly need.

Thank you.

DR. HOWELL: Thank you, Ms. Monaco. We appreciate your being here.

DR. EDWARDS: Could I ask a question?

DR. HOWELL: Yes.

DR. EDWARDS: I thought there was a bill last year about therapeutic foods.

DR. HOWELL: We can't hear you, Steve.

DR. EDWARDS: I thought there was a bill in Congress last year about therapeutic foods. Didn't you say that —

MS. MONACO: The DDNC has kind of umbrellaed the metabolic formula issue, and they rally every year to try to get states to make a mandate for insurance companies to cover it. It hasn't gone through. They are trying to get support of a bill, but on a state to state basis, it varies.

DR. HOWELL: Thanks very much.

We now are going to hear from Ms. Jill Fisch, who is a parent.

MS. FISCH: Thank you for the opportunity to address the committee again today. I also want to express my sincere thanks and gratitude to the committee for their continued efforts and great successes I have seen over the last several months. The lives of many children have been saved and others will have a better quality of life because of your work.

My name is Jill Fisch. I am the national director of education and awareness for the Save Babies Through Screening Foundation. I am addressing the committee as the parent of two children affected with SCADD. I am sure most of you will remember the diagnostic odyssey my family endured while looking for a diagnosis for my youngest child, Matthew, who is now 4 years old. This odyssey took us all over the country over a two-year period. Matthew did not benefit from early detection as New York was not screening for his disorder at the time. This is why I am here today and will continue to be committed to all children and newborn screening until all children in all states are treated equally and fairly.

Since New York's expansion of newborn screening took place in the fall, there have been two confirmed SCADD cases in the state. This shows that the system is working. As a member of the FOD support group, I have seen an increase in children who have received the benefit of early detection from newborn screening. The combined efforts of parents and the anticipated recommendations from this committee have caused many states to expand their newborn screening programs. However, other states are not at that point.

States such as West Virginia and Arkansas are two of several who have yet to move forward on expansion. Hopefully these other states will expand in anticipation of the Secretary accepting this committee's recommendations. However, it appears as though there is a serious situation regarding the expansion of newborn screening in Texas. House Bill 790 was presented to the Public Health Committee and is due to be forwarded to the entire House for voting the week of April 18th. If passed, 19 disorders would be added to the panel, and I understand that this has happened.

Unfortunately, Pediatrix Screening and others worked with representatives from San Antonio to create House Bill 3325. I was told that it was created to undermine House Bill 790. Sponsored by Carlos Uresti and Jose Menendez, this bill discards the recommendations of the ACMG report and the March of Dimes and asks for a panel to be convened in order to decide what Texas should screen for. It would take two more years before expanded screening could be passed in Texas. Advocates in Texas feel that this bill was written by Pediatrix solely for the purpose of delaying passage of House Bill 790 so that they, Pediatrix, would get an opportunity to perform newborn screening services in that state.

I do understand that Pediatrix is a business. However, I am concerned that such pressure can be exerted from an outside source that could cause great harm to the children of Texas. Everyone involved needs to work together to address these issues instead of working against each other. I am open to hearing both sides and would hope as a parent that somehow this can be resolved to everyone's satisfaction. Pediatrix does run a great lab, and I do feel some states would benefit from their services. If Texas is looking to build a new lab, hire and train new personnel, babies will not be getting comprehensive screening in just a few months. We all know this takes time.

Texas should contract with an outside lab to screen babies supplementally until their state lab is ready to handle everything. They are not doing any outsourcing, and they have Baylor right in their own backyard. In the meantime, there needs to be concern for the affected children who will be born in the meantime. However, as I said, we all need to work together. I would appreciate any insight on this issue that can be given to me by the committee.

I am very excited to see the new research and test development taking place. New York is running a pilot program for lysosomal storage disorders and other tests are being developed which will save the lives of children. How will the committee review new tests and technologies? I am very interested in learning what the committee's plans are in this regard. We are also seeing great progress with HRSA's commitment to newborn screening through the committee's recommendations, strengthened by the success to date of the National Newborn Screening Coordinating Center and Regional Collaboratives.

As you know, SCADD is one of the disorders on the secondary panel in the ACMG report. I have not seen a natural history study done for SCADD, which is one of the criterion in order to be added to the core panel. If these studies are not done, how can the committee help to get these studies implemented? My family is participating in the collection of data needed for a natural history study under Dr. Vockley, as we have three affected generations in my immediate family. I am happy to share this data with the committee as it becomes available. When there is more data collection and sharing of this data, we can track treatment and its efficacy.

As we all know, the need for research and test development is imperative. I am looking forward to seeing the methodologies recommended by this committee for reviewing these tests and technologies and, in turn, the benefit it will bring to the children. How will this be structured by the committee? How will these new tests and technologies be reviewed? How will translational research be recommended and evaluated?

I am concerned about the follow-up of children once they are picked up by the newborn screen. These children need to be followed by different specialists, nutritionists, and therapists. We need to develop collaborative partnerships between primary care providers, genetic and/or specialty care providers and health insurers to ensure continuity of medical care for children identified with disease by the newborn screening programs within the medical home, which is an objective of HRSA and the New York/Mid-Atlantic Consortium for Genetic and Newborn Screening Services. This is an issue that I will be following closely.

I feel this needs to include children who did not benefit from early detection. How will the children be followed, especially in a state like New York, where the metabolic centers do not have the proper funding? There needs to be a follow-up system in place to assure that no child falls through the cracks and every child gets what they need. Drawing on my own experiences as a parent of a child who was not diagnosed through newborn screening, I feel very strongly that there be a follow-up system in place for these children as well. With a national database where information could be entered and tracked regardless of whether or not diagnosis came as a result of newborn screening, we would have a much clearer picture of how well these children are being treated.

In addition, there should be services such as counseling available for the entire family. My daughter, who is only an SCADD carrier, spends so much time worrying about her family, she is now seeing a therapist. This counseling should be available regardless of ability to pay, as these disorders affect the entire family.

There is a situation in Missouri that has been brought to my attention. The Missouri Senate and House of Representatives have voted to accept the governor's budget recommendations, and the budget will now go back to the governor, who will determine which cuts will be incorporated into the Missouri budget 2005-2006. With these budget cuts, the governor is looking to close the outreach clinics immediately. The funding provides salaried support for genetic counselors who cannot bill their time, as well as transportation to outreach clinics. Without the proper funding, the number of families served each year will be substantially decreased. In addition, genetic counseling and follow-up for families throughout Missouri will no longer be provided. How can this be addressed by the committee?

I also would like to state for the record my concern over the ethicists who have been very vocal in the past few months in speaking out against newborn screening. I do feel that everyone is entitled to give their opinions freely. However, I would hope that their concerns would be based on valid and current information. Newborn screening saves lives. I do not think that is a fact that can be disputed.

As the parent and committed advocate for newborn screening, I feel it is imperative to have parents serve on the HRSA subcommittees. We have lived and breathed this every day and have much to offer. This is a very special role that the subcommittees need. Public involvement is crucial. The value of our input is unmatchable. Parents have played an important role at both federal and state levels. There needs to be assurance by this committee that parents will be included in these subcommittees. We have shown and will continue to show our dedication and support of this committee.

Thank you for the opportunity to share my thoughts today. I look forward to hearing the answers to my many questions as the committee moves forward. It is my great hope that we can all work together to better the lives of our children.

Thank you.

DR. HOWELL: Thank you very much, Ms. Fisch.

We're now going to go to Micki Gartzke, who again is a parent.

Let me comment that we're running behind time. We had anticipated that folks would keep their remarks within five minutes. So if we could stay within the five minutes, that would be great.

Micki?

MS. GARTZKE: Hi.

DR. HOWELL: Hi.

MS. GARTZKE: Thank you, Mr. Chairman, and the members of the Advisory Committee, for this opportunity to address you once again. If I talk quickly, it's trying to hit the five-minute mark because I did not time this.

Your work over the past several months has already helped not only to improve the quality of children's lives, but it has helped to save the lives of many children, and for this you all have my deepest gratitude.

My name is Micki Gartzke. I am the director of education for Hunter's Hope Foundation, which was started to raise awareness and provide education for Krabbe disease and related leukodystrophies, and to also provide funding for research, for which we have now provided $3.9 million for research into these related diseases. We at Hunter's Hope are strongly in support of your work and the ACMG report.

I continue to be committed to the expansion of newborn screening and the value of, and the great need for the education of newborn screening for professionals and families. As a mom who lost a child to the lack of early detection, my big commitment began the day I was told, "Your daughter has a fatal illness and the average life expectancy is 16 months." My daughter was 10 months old at that time. So briefly to refresh why I am here, my daughter died of Krabbe disease, which is a lysosomal storage disorder, which we always hear referred to as "those up and coming lysosomal storage disorders," and they are moving forward.

Our family endured a six-month diagnostic odyssey, only to have it end with that fatal prognosis and a big "but," like this is what I heard from the doctors: "If we had only known earlier." "There is something out there now, but it's too late to try." These are no words a parent should hear, especially when they're holding their 10-month-old baby in their arms and their baby is smiling back at them.

Just thinking about that brings a momentary flashback to when I learned that my daughter would soon die. I was told this on August 7th, 1997, which is my birthday. For my own birthday present, I knew at that moment that I would be committed to doing anything and everything in my power to prevent this from happening to other families, and I know I do not need to tell you this, but yet I think it is important for it to be said.

As the director of education and awareness for Hunter's Hope Foundation, my professional role has provided an excellent avenue to best achieve my original personal commitment, and our organization continues to advocate for universal newborn screening. I am enthused and excited by the changes that I have seen recently in newborn screening. It seems that a groundswell is underway. Some states are moving forward because of actions of this committee. There's expansion going on.

Piero, I believe, mentioned Arizona earlier today. Another example is Kentucky. Its expansion is due to begin this July, and it will increase its screening from only four diseases to I believe everything that you guys have recommended, which I think is just fabulous for the State of Kentucky. They also have included language right in their legislation, "The listing of tests for heritable disorders may be revised to include conditions as deemed appropriate by the Cabinet based on the recommendations of the American College of Medical Genetics." So we just see example after example of what this report is doing.

There are other states, though, sadly, that have not expanded — Arkansas, Oklahoma, New Mexico — and they do need your guidance and insistence to move forward. There are struggles for education, infrastructure development, follow-up, and training, and it continues alongside the ever-steady funding issue. Too many states are not proactive. It is my hope that all the states will use this committee's recommendations. I personally have my own top-ten list of which states I'm involved in, and they're going to be hearing from me and many of my cohorts along the way in the next six months.

It is very exciting to see the research and test development taking place for many of the different diseases. The lysosomal storage diseases newborn screening pilot is going on in New York State, and this pilot program is an excellent example of team work that is needed to accomplish such visionary goals. There's state, industry, research and advocacy groups working collaboratively to achieve this common ground of newborn screening for the first round of LSDs. We hope this works.

The addition of these new screening tests to the core panel in the future will help save even more babies' lives, and Duane Alexander's comments earlier today about the additional benefits beyond effective treatment of expanded newborn screening are very encouraging. Many children could be

spared repetitive, uncomfortable testing that yields no diagnosis if newborn screening did this at birth. This population-level screening could also give the data where no collection currently exists, which would yield unlimited benefits, I assume.

Like Dr. Alexander said, only with screening can we identify patients together, sizeable population to get evidence. So the need for the ongoing research and test development will and must continue. Complementing that is the need for the ongoing methodology for reviewing these tests and technologies. I have many questions which I will not ask at this time regarding these subjects. How will the committee structure this? How will it review these new tests and technology? How will you recommend and evaluate translational research?

Your commitment to newborn screening at HRSA is already yielding great success through your committee's recommendations, the regional collaboratives, and the Newborn Screening and Genetics Resource Center and what they have achieved to date. The follow-up of the diagnosed children is vital, as is access to the variety of medical professionals and services they need.

I have been concerned about the ethicists who continue to speak against newborn screening, especially those whose media contacts have been responsible for large articles in national newspapers. I have met with a couple of these ethicists, and while I believe they express great interest in the children and they have the right to fully express their opinions, I continue to hope that they would base these concerns not only on valid information with citeable sources but on current information as well, and we all know that newborn screening saves lives.

Recently I read a Dartmouth Medical School telephone survey of 500 people. It was published in the USA Today. That survey showed that 66 percent of people ages 40 and older say that they would be willing to be tested for an incurable cancer, thus showing their desire for early detection. I can't help but wonder if a similar poll were done about early detection of newborn screening if that same two-thirds majority would express a similar desire for early detection. It has not been asked on such a scale.

Education still remains to be the key component. We need better systems for educating medical schools, health professionals and families about newborn screening. The future health professionals in our country need to be educated on the diseases that will be detectable through newborn screening. They will also need funding to be able to do their work.

Finally, public involvement in committee matters is a must, especially parents who have lived through the lack of early detection and access to treatment, the parents who have had the misfortune to experience the diagnostic odyssey and the ensuing challenges of lifelong disabilities and/or premature death. We have real-world experience. We have firsthand knowledge that we wish we didn't necessarily have. Our knowledge needs to be recognized, heard, and considered in moving forward from this point. Our experience is invaluable. We are representatives of the market.

I cannot emphasize enough my next point, and I guarantee you I will not rest until there is assurance by the committee that the parents will be included on the subcommittees. Parents deserve a role here since they and their families are the ones that are affected. I know you will make the right choice on this, as you have done on many other matters. I am confident that this committee values the needs of children above all else.

Finally, the meeting this morning has been very encouraging with the dialogue moving on to the next steps. I want you all to know that I'm here to help and I'll continue to do everything I can to further help expand newborn screening. The children deserve their lives.

Thank you for all you do. I look forward to seeing you again.

DR. HOWELL: Thank you very much, Micki, for being here and being thoughtful and brisk.

(Laughter.)

MS. GARTZKE: Sorry.

DR. HOWELL: We're next going to hear from Mr. John Adams, who is here from Toronto, and Mr. Adams is also a parent.

MR. ADAMS: Thank you very much. I am a PKU dad. Thanks to Bob Guthrie and a lot of other people who fought the battles for newborn screening in the 1960s. I'm happy to be able to share with you the fact that my son, who is 18, graduates from high school this year and has been admitted, hopefully, to the University of Toronto for this fall.

I got reengaged in this issue a couple of years ago when there was a bit of a crisis in our PKU community in Ontario, my home province, because there was a threat to the funding for the Adult Program for Medical Foods and Formulae. That's still not completely resolved, but some very capable people in Canada taught me some lessons, saying John, if you're going to engage in that issue, we've got to let you know about some other issues, some other gaps in the system of newborn screening. It tears my heart out as a parent who has a newborn screening success story to know that there are babies in many jurisdictions, not just America, who are dying or being damaged needlessly.

I have to tell you, I'm a proud Canadian, Torontonian and Ontarian, but I do believe in evidence-based decision-making, and I want to give you a little bit of an international perspective here today. Perhaps I'm the only one who is adding that flavor here today.

In Ontario, it's sad to report that we screen newborns for three conditions: PKU, congenital hypothyroidism, and hearing. Compared to any of the American jurisdictions, that is substandard. There is none of your jurisdictions today that are screening for as few as that. Ontario is not alone. We only have one province, Saskatchewan, that is screening for 29 conditions using tandem mass to a relatively fulsome extent.

I also have to report to you that our federal government is AWOL on the question of newborn screening. I also, in one of life's ironies, have to report that the doc who delivered my PKU newborn-screened son is now the Minister of State for Public Health for Canada. She owes newborn screening something, and I intend to collect that debt.

(Laughter.)

MR. ADAMS: Dr. Caroline Bennett.

My sense in reading all of the 324 pages of the report was that it was a snapshot of the state of the art, the best available evidence, not yet perfected. I also have to report to you that the inherited errors of metabolism professional community in Ontario and in Canada are at their wits' end with frustration at trying to move the agenda forward and have, as a group, all resigned from the Province of Ontario's Advisory Committee on Newborn Screening out of sheer bloody frustration.

I'm delighted to be able to participate in this open forum today. The Ontario government's Advisory Committee on Genetics is meeting today behind closed doors. They do not publish their meetings. They do not publish minutes. They do not take public presentations. So I'm here to salute you for the openness of the American way of doing business.

Now, I say that because not everyone outside of America thinks that the American model is the way to go. You may have noticed that.

(Laughter.)

MR. ADAMS: But I want to say to those people that in my case, my evidence is if some good Canadians and other people hadn't listened to the Bob Guthries of the world, my son would have been condemned to a lifetime of profound mental retardation. So it's important to listen to the right Americans.

(Laughter.)

MR. ADAMS: Now, as recently as yesterday, I had a meeting with the cabinet minister in the Province of Ontario in his office about the deficit in newborn screening in our jurisdiction, and one of his assistants, a very bright person, raised in a premeeting, well, what about the lack of consensus? So I'm here to tell you that my counter to that point was I put down on the table the 324-page report of the American College of Medical Genetics and said I do believe there is a new threshold of consensus, including a consensus identifying when there is a lack of consensus in certain situations.

You have already performed yeoman service for us in being able to address that, and I want to say thank you as a Canadian for the American taxpayers' investment in a number of things, including the National Newborn Screening and Genetics Resource Center, which is a wonderful source of information for people like me. So thank you so much.

I do have a suggestion or two. I hope as you move forward that you do not focus exclusively in your decision-making on what's best for America but you also have some regard for the role model in this field that you are performing for people in other jurisdictions.

I also would make the suggestion that the report correctly identifies the growing problem of the lack of person power in terms of the deep talents that are required increasingly in this field. You might want to give some consideration to having HRSA support the development of smart systems so that we can, with authoring systems, try to capture the deep knowledge that is involved in the craniums of some of the people around this table and other experts and getting it into a more accessible format so that high levels of service can be rendered to children and adults in need without requiring the scarce knowledge, the scarce supply of that deep knowledge. We have to find a way to democratize and push down into the system the ability to put the intelligence and best practice available at the hands of a clinician when there's a child or an adult who is in a period of crisis.

I have a few ideas about that I will explore offline.

Thank you very much for this opportunity. I love this committee. I love this report.

(Laughter.)

MR. ADAMS: Carry on, please, all right?

DR. HOWELL: We're going to have to get more Canadians like him down here.

(Laughter.)

DR. HOWELL: I told Mr. Adams as we were walking up the stairs that we also were relying on some of his colleagues in Toronto that have some extraordinarily innovative technology that we think will be highly relevant as we move ahead in expanding some of the newborn screening arenas. So it's a two-way street.

We are now pleased to have a series of folks representing some of the professional organizations. Peter Sybinsky is here representing the Association of Maternal and Child Health Programs.

DR. SYBINSKY: Good afternoon, Chairman Howell and members. The Association of Maternal and Child Health Programs — and I'll be referring to us now as AMCHP, by our acronym — appreciates the opportunity to provide input to the Secretary's Advisory Panel. AMCHP commends the Secretary's Advisory Panel for an exceptional example of bringing together expert opinion and evidence-based research in developing relevant national recommendations.

AMCHP, as you may know, represents public health leaders who direct maternal and child health programs for families and children with special health care needs. Our programs are funded jointly by the Maternal and Child Health block grant and by state funding. These efforts, for example, serve over 1 million children with special health care needs every year.

We find many strengths in this report: its comprehensive approach to evaluating the 84 conditions; the needs of the public health system that includes policies and standards but retains a certain amount of necessary flexibility; and its addressing of newborn screening system components in addition to laboratory testing. However, we do have some concerns about information not in the report, and these we'd like to elaborate on.

The ACMG findings have considerable impact on the follow-up requirements of state maternal and child health programs, and we're pleased to see that follow-up is on tomorrow's agenda. We believe that the report should place more emphasis on discussion of the broad state responsibility related to follow-up. The report should also define the term "follow-up" as a guide for future state efforts, and should also emphasize the significant commitment and financial responsibility of newborn screening programs to assure access through rescreening, specialty care, and long-term tracking and monitoring of children and their families.

Since Title V programs hold ultimate responsibility in states for this follow-up, we recommend that the advisory panel carefully review the implications of the uniform panel on follow-up and develop national recommendations to provide the needed assistance to meet the demand equally across all states.

Financing is another issue. With new technologies, testing requirements, reporting and follow-up all requiring resources additional to those already in the system, new resources are necessary to build systems which are adequate to meet the needs for follow-up. The report should consider new funding options and propose changes to current funding structures that pay for newborn screening systems.

Finally, we recommend that the report develop mechanisms for evaluating new conditions or technologies as they become available. We recommend a uniform procedure for adopting national changes to the screening panel.

Once again, AMCHP appreciates the ongoing work of the Secretary's Advisory Committee and would welcome the opportunity to designate a representative to provide the committee with continuing input from the maternal and child health perspective at the state level. Thank you very much.

DR. HOWELL: Thank you very much, Dr. Sybinsky.

We next hear from Dr. Scott Grosse from the Centers for Disease Control. Here comes Scott.

DR. GROSSE: Hello. I'm a health economist. I work at the National Center on Birth Defects and Developmental Disabilities. I work with Coleen Boyle. Coleen asked me to address the committee in response to Piero's challenge with regard to the specifics. We have reviewed the fact sheets and have a

number of very specific objections, not to the rare sheets but to the common condition sheets, including congenital adrenal hyperplasia, hearing loss, MCAD deficiency, hemoglobin SE disease.

For example, with congenital adrenal hyperplasia, the second criterion, which deals with whether the condition is detectable at birth, reported as rarely detectable at birth. Yet the published data indicate that the majority of children with the classic salt wasting form of the disease are detected prior to newborn screening results being reported. We feel the fact sheet should reflect that information.

Under "Burden of Disease," it was stated that the rate of mortality in untreated CAH, the salt wasting form, is 9 percent, but the references provided do not support that number. I have a postdoctoral fellow who just did a systematic review of the epidemiology of CAH. Of the three cohort studies that have compared screening cohorts and unscreened cohorts, two found no deaths in unscreened cohorts with complete case ascertainment based in terms of the numbers, the prevalence; and the other was the Swedish cohort study, where they found 2 percent mortality. Now, there is a range of estimates. Nine percent is not unreasonable, but it's at the upper end of that range, and the fact sheet does not adequately reflect the published scientific literature.

We could go on to many other specifics for other conditions and other criteria, and we will do that in writing, but I just wanted to let the committee know that we do have a number of concerns.

Thank you.

DR. HOWELL: Good, and it's important to provide Scott any specific comments in writing so that they can be reviewed in the document.

DR. GROSSE: Yes, we will.

DR. HOWELL: Piero would like to comment.

The audience can't comment, but the committee can comment.

(Laughter.)

DR. RINALDO: That's actually very welcome, because I think the review by a number of experts was really meant to refine and define any information. I cannot speak for the CAH one, but I'm dying to find what you found incorrect in the MCAD sheet.

DR. GROSSE: Piero, your gene review is accurate. For example, under "Mortality Burden," the fact sheet said the rate of mortality in untreated MCAD deficiency, the first crisis is between 30 percent and 50 percent. Your gene review says 18 percent.

DR. RINALDO: Well, but — okay.

(Laughter.)

DR. HOWELL: I can assure you we won't settle that issue today knowing all the people involved.

DR. RINALDO: There is actually a very simple answer, and that is age specific. It's after two years of age is between 30 and 50 percent, death at first episode, and before is around 10. So probably the 18 percent is somewhat of an average. But does it really matter?

DR. GROSSE: No, in terms of the ranking of MCAD, it does not. But in terms of providing reliable information, it does matter.

DR. HOWELL: I would trust this discussion will go on for a long time. It will be profitable.

Thanks very much, Scott, for your comments.

Again, I think that the bottom line is that it's intended that this document will not be cast in stone and that as information comes forth and as other expertise weighs in, every expert has not weighed in, and I think that those will certainly be evaluated and included, which will be good.

We now have as our wrap-up hitter today Dr. Jerry Vockley, who is here from Pittsburgh as president of the Society for Inborn Metabolic Diseases.

Dr. Vockley?

DR. VOCKLEY: Thank you, Mr. Chairman, for the opportunity to speak, and thanks to the committee for your efforts on behalf of those children with inborn errors of metabolism and other disorders. As Dr. Howell mentioned, my name is Dr. Jerry Vockley and I'm professor of human genetics and pediatrics at the University of Pittsburgh and Chief of Medical Genetics at the Children's Hospital of Pittsburgh. I'm here today in my capacity as president of the Society for Inherited Metabolic Disorders.

The SIMD members provide diagnostic and treatment services to individuals of all ages with inherited metabolic diseases in an attempt to minimize risks of disability and death. The SIMD members play a prominent role in the diagnostic follow-up and treatment of children detected by newborn screening with all inborn errors of metabolism.

We first wish to state our unequivocal support for the ACMG report, "Newborn Screening: Toward a Uniform Screening Panel and System." Members of the SIMD have been involved in this process, including as part of the expert panel, and we have submitted a formal letter in support of the report as part of the public comment process. We urge the committee to ask the Secretary to move forward expeditiously to implement the report.

The remainder of my comments will focus on this implementation. We look forward to the work of the committee's three new important subcommittees. We recognize that members of the parent committee serving on each of the subcommittees are deeply committed to the welfare of children and to the smooth working of newborn screening as an important public health system.

However, as those who routinely diagnose inborn errors of metabolism and provide lifelong therapy for these disorders, we hope that the subcommittees, especially the Treatment and Follow-Up Subcommittee, will address the entire spectrum of issues critical to the lives of our patients and their families. While initial follow-up has traditionally fallen within the boundaries of a newborn screening program, it is clear that lifelong treatment with ongoing involvement of knowledgeable caregivers is needed to realize the benefits of the initial screening. This ongoing treatment bridges newborn screening and the rest of the health care system.

In addition, careful collection of long-term information on the outcome of children identified by newborn screening is needed as part of a continuous feedback system for quality monitoring and improvement. Optimal design and implementation of long-term treatment and follow-up systems will be best achieved only if expert providers of the long-term treatment and follow-up are involved from the beginning in system design. Involvement of front-line experts is especially critical to properly address issues of diagnosis and management of variant forms of disease discovered by newborn screening.

Any advance in medical screening and diagnosis leads to new discoveries about human health and disease and has profound impact on health care and society. For example, the introduction of MRI scans of the brain led initially to some instances of more invasive diagnostic evaluations for what we now recognize as normal variations. Screening for PKU is, of course, an unequivocal success story, as we've already heard. Yet we should all remember that it was only through newborn screening that we recognized the existence of mild hyperphenylalanine variants and learned to properly treat them. We now know that this treatment needs to be tailored to each child to assure that we cause no harm.

Through this and similar experiences with other diseases, members of the SIMD have accumulated the knowledge and perspective to understand and treat not only children with classic disease but also those with variant forms. We are, for example, the experts who see children with life-threatening medical crises due to 3-methyl-CoA carboxylase deficiency, but we also understand that the condition is usually benign.

We note, therefore, with some concern that no current member of the Follow-Up and Treatment Subcommittee is an expert in the treatment of metabolic disorders detected by newborn screening. The clinicians and scientists of the SIMD can provide this expertise for inborn errors of metabolism and urge you to include us as a significant partner in the activities of the Follow-Up and Treatment Subcommittee. We will be the best resource to help design systems to avoid incorrect diagnosis, mislabelling of patients, and over- or undertreatment. Our expertise, along with that of practitioners directly involved in the care of children with endocrine disorders and hemoglobinopathies, is needed to round out the subcommittee and assure good long-term outcomes for children identified through newborn screening.

Finally, as we mentioned at your last meeting, we continue to urge your efforts to assure availability of adequate resources, including adequate funding and personnel for successful newborn screening and long-term follow-up and treatment.

Again, we thank you for this opportunity to speak, and we want to assure the committee that the SIMD and its members are eager to help in your efforts on behalf of the people we both serve. Thank you.

DR. HOWELL: Thank you very much, Dr. Vockley, for coming down from Pittsburgh today.

This has been an extremely valuable public comment period. It's been helpful to have the parents' perspective, which is always extremely valuable, and it's also been particularly gratifying to have a group of professional organizations who bear a lot of the responsibility for following the children who are diagnosed in the newborn period. So that gives us a great perspective, and we're actually right on the money here.

There will be additional public comment tomorrow, and the public comment list as posted has been changed, because the APHL will be commenting tomorrow, and then some additional people also.

There's been a good bit of discussion this afternoon in the public comment about subcommittees, and we're now going to have a relatively brief meeting of the subcommittees over the next 45 minutes. Let me again comment that the subcommittees are open to the public, and the only limitation is one of space. So if you happen to choose a meeting that's particularly popular, that may be a problem and you may have to choose something that's less popular, shall we say.

The three committees are going to be meeting in the following areas. The Education and Training Subcommittee that's headed by Dr. Howse will be meeting in Meridian B, which is the room at which the committee's lunch was had on the ground floor concourse, Meridian B. in Continental A, which is right next door to Meridian B on the ground floor, concourse level, will be the Laboratory Standards and Procedures, and that's the subcommittee headed by Dr. Brower. Then finally, the Follow-Up

Subcommittee that's headed by Dr. Boyle will be meeting in the Rotunda Room, which is next to the registration table. That's the little room behind the registration table. It's kind of under this room here on that level.

So we will adjourn this room at the current time, we will have the subcommittee meetings, and we will return. Actually, at the end of your meeting you'll have a break, and then we will return here, having broken, at 3 o'clock. Thank you.

MR. ROBERTSON: Dr. Howell, can you just mention about the parents?

DR. HOWELL: Oh, yes. Derek had brought up the following circumstance, which I think is a great idea. Derek, as you know, is a parent, and he said that he would very much like to meet with the other parent representatives at the close of today, to meet —

MR. ROBERTSON: At the break.

DR. HOWELL: You want to meet at the break? Okay, excuse me. He wants to meet at the break. Where will the break be? We're going to come back up here for the break? Okay. If we can get all the parents together so that you'll have a chance to meet each other and exchange ideas and so forth — so you will meet with the parents at the break. Great, and then we'll meet back up here at 3 o'clock.

Thank you very much.

(Recess.)

DR. HOWELL: We've got a very busy afternoon moving into the parental educational session, and we're going to start off with a presentation from Donna Williams from the National Newborn Screening and Genetics Resource Center on the survey of the states for policies and procedures for public and professional education.

Donna was here —

DR. LLOYD-PURYEAR: She's right here.

DR. HOWELL: Oh, you're right there. Congratulations. You snuck up behind me. Great. I thought after all that and you weren't here.

Okay, Donna. Thank you.

MS. WILLIAMS: Can everybody hear me pretty well? Okay.

First of all, I'd like to thank you for allowing me to present to you at this committee meeting, and especially the honor of being the first speaker after a break, so I get to lead this all off.

I'm going to talk a little bit about the state policies and procedures for public and professional education in newborn screening. We always like to start with a task force report as a way to bring everybody's mind back to focus on this document that kind of pulled a lot of the previous guidelines and standards on newborn screening, pulled it together in one place and got some expert opinion on the current scope of newborn screening.

The other thing it also did was looked at newborn screening in view of all the current changes and the rapid changes and the growing disparity in testing because of how quickly newborn screening is changing. So we're going to look at some of their recommendations.

My presentation is going to be — it's a short presentation, just kind of giving you some background information on where we stand. The first part is going to be about newborn screening professional education, and the second half is going to deal with public and parent education.

So for professional education, these are some of the task force key recommendations regarding professional education. States and state public health agencies should implement mechanisms to inform and involve health professionals and the public. Also, each state should design and implement public, professional and parent education efforts regarding newborn screening.

Prenatal health care professionals, as well as the infant's primary care health professional, should be knowledgeable about the state's newborn screening program through educational efforts coordinated by the state's newborn screening program in conjunction with the newborn screening advisory board. So keeping these recommendations in mind, we're going to see what's actually happening in the state programs.

First I'm going to talk about educational tools and resources for professionals responsible for prenatal care. I think this is one of the big gaps in professional education. Newborn screening education should best be provided in the prenatal period because that's been recommended by the task force and that's been shown to be the time when parents are most receptive to the information. However, obstetricians and family practitioners that deal with prenatal care are not often at the table of the advisory groups that develop the educational materials.

Only a few newborn screening programs, like 10 programs or just about 20 percent, provide brochures to obstetricians for distribution to their parents, and this isn't even talking about educating the obstetricians. This is just even saying only 10 state programs have newborn screening materials in their offices. The other programs don't even go that far. So this is one of the problems, one of the gaps in professional education.

Now, these are educational tools and resources for health professionals responsible for newborn screening specimen collection. With limited state resources for education, this is where states often spend most of their time and efforts. This is where the importance is to make sure the providers can collect an adequate sample and get it to the screening laboratory in a timely manner. They do this through provider manuals, collection posters at the different birthing facilities, newsletters to keep all the professionals appraised of new guidelines and new things coming up. There's a widely distributed NCCLS newborn screening collection video, which is passed out to all the different programs. They have formal onsite training, when necessary.

This is an important point because this is one of the few areas in state education where they actually have an ongoing evaluation of the education, the results of the education, and ongoing feedback to the providers when they're doing a good or a bad job. So this is a good example of how education works when it's working well.

States also have websites with information for professionals who do the sample collection.

The last step for education is for the health care providers who are responsible for follow-up of the newborn screening sample that showed a presumptive positive. Again, this is where a lot of energy is focused, because second to getting an adequate and acceptable sample is the need to quickly follow up on the children who were identified as possibly having a disorder. Again, they use provider manuals, disorder fact sheets to give the providers a little bit of information about the disorders, follow-up ACT sheets or procedures, and pediatric subspecialist contact information.

Now, of all of these, the two most important pieces for them are the ACT sheets or procedures that the physicians need to follow immediately when they get an abnormal report, and a lot of these instructions on what to do next are delivered via telephone. So they really give the physicians just-in-time information and tell them exactly step by step what they need to know, which is a good and bad thing. It's good because it really provides in-time information to get the child back in and rescreen, but it doesn't really encourage the primary care physicians to learn a lot about the disorders because they know all they have to do is get an abnormal and they're going to be walked through the process.

Again, websites are available in all the state programs that have information that the providers can use. However, we've learned that providers, especially now in managed care systems, don't have the time to really surf the Net or spend a lot of time on the Net. So the website is helpful but not the optimal way to get information to the doctors.

So to summarize the professional education out there, although the prenatal period has been identified as the optimal time for parent education, we see that prenatal providers are not receiving the necessary training to provide the appropriate education to parents. Again, the last trimester of pregnancy has been identified as the optimal time, and the OB/GYNs, for different reasons, are not at the table.

States are providing education and resources through birthing facilities, with a primary focus on specimen collection. Again, this is taking care of making sure the specimen is collected correctly, but if this is another opportunity for the professionals to educate the parents, we're not sure if they have even a full scope of newborn screening beyond just giving the brochure and letting the parents know that the screen is about to happen.

Lastly, states are providing just-in-time information to primary care providers, but the providers are generally relying on the subspecialists to educate the parents in the case that a child has an abnormal result and needs continued follow-up and care.

Now I'm going to talk a little bit about newborn screening public and parent education. Again, the task force has some key recommendations. Parents should receive information on behalf of their children about newborn screening. Prospective parents should receive information about newborn screening during the prenatal period. Pregnant women should be made aware of the process and benefits of newborn screening and their right of refusal before testing, preferably before a routine third trimester prenatal care visit. So these are the recommendations, and now we'll see what's being done on education.

Some background work has been done, some different reports kind of looking at the situation. This was a paper on the examination of communication practices between state newborn screening programs and the medical home, and it came to a lot of conclusions, but I just pulled out a couple of bullets that speak to the education piece between primary care physicians and parents.

Newborn screening roles and responsibilities vary between states and do not always include primary care physicians. Twenty-three states, or 45 percent, indicated that primary care physicians, and in this case this was to study the medical home concept, had some responsibility in informing parents about newborn screening. Thirteen states reported that the state has a policy encouraging or requiring that parents be informed about newborn screening during the prenatal period. Three states were unable to report a procedure at all for informing parents about newborn screening. So this is just some background information.

This is from a paper that we were (inaudible), Dr. Therrell, Melissa Johnson and myself, on the current status of newborn screening programs in the United States. Some interesting things that came out of that. Twenty programs had legal requirements for states to provide specific education on newborn screening before screening takes place. Below I have a list of some of the items required in that legislative language, including the right to refuse screening, the panel of disorders, consequences of

treatment and non-treatment, the need for testing, retention of samples, and confidentiality and privacy issues. This is interesting because you can see this has a lot of legalese in it, and coming from a legislative view, this is the kind of information parents need.

But as we're going to see later, Dr. Davis is going to give a report on the type of information that parents can absorb and is most useful for parents, and most of these didn't make the list. So that's an interesting point.

So some of the educational tools and resources that states use for parents prior to testing including brochures, which are available in all but one newborn screening program. States also use posters at different birthing centers or hospitals. They use videos, and all states have a newborn screening website, and the websites range from very basic information with just the name of the program, one blurb about newborn screening and contact information, to websites that have multiple layers of information for any type of viewer, for the general public, frequently asked questions sections for parents, legislative sections. So all sorts of things are available on the websites.

But again, the website is probably not the best means of trying to educate the entire population about newborn screening because of access issues and other issues.

Educational tools and resources for parents of a child with a confirmed condition, also brochures, but usually these brochures now are disorder specific and have enough information for the parent to go home with, or maybe in between that time of just getting the diagnosis and getting in to see a specialist. So it's just something for them to take home and have to start learning about what they're going to be facing.

Disorder-specific videos, and most of the videos are more uplifting than anything else. It's, okay, your child has this disorder, but there is hope, and lots of interviews with families of children with the condition that are doing well. So those videos are usually very uplifting and informative.

A lot of states have newsletters for parents in a community with a specific disorder so they can share milestones and menus and just a lot of information specific to their disorder.

Again, the websites have a lot of information.

Since the brochure is the number one educational tool, our resource center did a survey on the parent brochure. We had 23 questions focused on the information contained in the newborn screening brochure and the mechanism for how the brochures were distributed. We emailed the survey to follow-up personnel in 50 states and the District of Columbia. Programs not responding to the email were contacted by telephone by Donna Williams so that, in the end, all 51 programs participated. Again, all programs had a brochure except one, and the ones that did have brochures also gave us copies to use for further evaluation, and you'll see some of that information when Dr. Davis gives her report following this one.

I'm just going to kind of go over some of the results of the survey. As far as distribution, 10 programs, again only 20 percent, reported that distribution was typical in the OB/GYN offices. Twenty-eight percent, a few more, reported typical distribution in prenatal classes, and 19 programs reported having a mandate for distribution at birthing facilities.

Now we're going to go over some of the content of the brochures. All the brochures listed the conditions in the screening panel, and all the brochures included the time of collection. They were very good to say that soon after your baby is born, a sample is going to be taken from the baby's heel. Then we're just going down as fewer and fewer things are included.

Most brochures included the collection procedure, talking about heel sticks and a painless heel stick. Forty-nine of the brochures contained that. Forty-seven percent of the brochures contained a brief description of each condition, and 94 percent, 47 states, noted the potential need for retesting. This is important, because this is one of the main things with screening. After you get a suspected abnormal condition, it's very important for the parents to know the importance of bringing the baby back as quickly as possible.

More than half of the brochures included how the results could be obtained by parents, how results were reported to the primary care physician, and the citation of legal authority. Less than half of the brochures included the possibility of false-positive results, when results would be available, and the circumstances for refusal.

This list is looking very much like the list of legislative suggestions. Brochures rarely included information on the accuracy of screening, the limitations of screening, the possibility of false-negative results, the cost or copayment for testing, the retention of specimens, and last, confidentiality and privacy issues.

So just to kind of summarize what I've just presented, the need for public and parent education is well understood by newborn screening programs, and all make an effort to provide printed and online materials and resources. We can really vouch for that at the resource center because we actually have relationships with all of the programs, the follow-up staff, the laboratory staff, and they are trying their best with what they have, and they're very receptive to new ideas, new solutions, and any kind of resources that we can give.

A brochure right now with basic program information is the main educational tool. However, for different reasons, we're seeing it's generally not given at the optimal time to have the best impact on the parent. Most programs lack an educational plan that includes assessment and monitoring of material distribution and an overall assessment of parent education efforts. I think that's one thing that really stands out. Even though everybody has a brochure and the brochures are being distributed, the states don't know exactly how it's being distributed. They know they send 10,000 brochures out to certain regions. They don't know how they're being used. They don't know if the training is effective. So it's kind of a passive education process.

Lastly, obstetricians, who should have a responsibility for prenatal education, are generally not intimately involved with screening programs, let's say on the advisory committees and different things. Again, that's a two-way street. The OB/GYNs typically don't see newborn screening as something that's in their realm of responsibility, even in states where the legislative language kind of points the responsibility of the first newborn screen, gives them that responsibility. They still don't see the connection. Newborn screening programs have not been aggressive in trying to get people to the advisory committee table. I think all but one or possibly two newborn screening programs have active advisory committees. They have pediatricians, parents, public health, a lot of stakeholders, but somehow we're missing the OBs at the table.

I gave kind of an overview of some of the deficiencies in the education programs, and that's it for me. Terry Davis is going to follow up with some resources and some ways to help remedy some of these things I've pointed out. Thank you.

DR. HOWELL: Thank you very much, Donna.

(Applause.)

DR. HOWELL: We will hold our questions until we've had all three talks, if we might, please.

The next speaker is Terry Davis from Louisiana State University at Shreveport, and she's going to review the parental education project.

DR. DAVIS: Thank you.

Can I stand up?

DR. HOWELL: Yes.

DR. DAVIS: Thank you. I just can't stand up when I talk. I'm on the faculty of a medical school, and I like to stand up when I'm talking.

I want to commend this committee. I want to commend HRSA and AAPI. I think you all are setting a standard in this country. People are interested in patient education no matter what the field. They realize we've got to bring the patient to the table and do a better job of communicating with the patient. HRSA is kind of putting their money where their mouth is, so I commend you for doing that.

I see communication about newborn screening as a quality issue. The IOM said a couple of years ago that they thought quality was the top health care issue in the 21st century, and how do they define quality? Knowledge based. Newborn screening is knowledge based. Patient centered. I think that's what we're talking about today and the reason that I was given this contract, to try to make it more patient-centered and systems-minded. Who is in the system? What do they need to know? When do they need to know it? And what role can they play in educating parents?

Now, my talk is going to focus, and my work really focused on initial screening. I'm a psychologist by training.

Is this messing you up?

THE REPORTER: You can stay close to it. It'll be okay.

DR. DAVIS: Thank you. It's hard to be still.

(Laughter.)

DR. DAVIS: As you heard from the parents, newborn screening has different stages. The initial screening, retesting, and confirm positive, and parents' information and psychological needs vary at each of these stages. What I'm going to be talking about is primarily the initial screening, maybe a little bit about the retest.

Here's the background. We've been over this today. Parent education materials are available in 49 or 51 states and territories, and they're mostly given in the hospital. There are no national guidelines for the content or a dissemination plan currently. AAP, as Donna was saying, the task force recommends that families be educated during the prenatal period. Even though she said 20 percent of states reported on a survey that obstetricians are given the information, does that mean it's in the packet at the OB's office? It's on their wall? The OB has a conversation? We don't know what that means. My work was qualitative. It was done only in six states, but it gives a little more density to what these things mean.

Also, pediatricians rarely discuss initial screening with parents. They may discuss it a little bit at the hospital, but it is still a rare mom who visits the pediatrician when she's pregnant.

So here are some challenges. You all have been talking about new technologies rapidly changing environment. State programs differ. Parent and public lack basic knowledge. The hospital visit is a

fog. If there was one theme that the pediatricians, the OBs, the moms, the dads said, it's a fog and it is the worst time to try to teach me something.

Primary providers may lack up to date information, patient education materials, and they all say they lack time, and they do. I believe that best practices are yet to be identified. I believe we found out certain things that take us down the road a couple of steps, but we're still seeking best practices for communication, not just about newborn screening but about all kinds of stuff.

Here are some hidden barriers, and this is what I really want to teach you about today. Patients, primary care providers, hospital nurses and state programs, their agendas, their communication style, and their knowledge levels differ. So you're set up for a gap in communication. Also, we must consider, as Janet Ohene-Frempong was saying in our committee meeting, parents' education, their literacy, their language, their culture, and their health literacy.

Now, what am I talking about with health literacy? What I mean is patients' capacity or an individual's capacity to obtain, process, understand basic health information and services in order to make appropriate health care decisions. In other words, ability to understand and use — and use — health care information.

Now, I want to talk about education just for a minute. Many of you have very high-powered teenagers who are in the best of colleges. You may be thinking if you have a senior in high school, this cohort, it's going to be the most competitive. But let me tell you something, our dropout rate is 29 percent. We rank 16th among industrialized countries, and that doesn't include India and China, in high school dropout rates. Half of black kids drop out of high school. What's going to happen to those kids?

If you look at today's 9th graders, only 14 in 100 will finish college in six years. Now, I want you to think about that when we're talking about designing education materials for people, for the 4 million parents. Look at the job requirements. Eighty-five percent of jobs in the 21st century are going to need some training past high school education, and we have all of these dropouts. So only half of high school students can eventually get a job that supports a family.

So the IOM came out with a health literacy report last year that basically said that 90 million adults have trouble understanding and acting on health information. Complex text must be simplified and attention paid to culture and language. Harvey Feinberg of the IOM said health information is unnecessarily complex. So think about the task before us. Newborn screening is complex. Think about all of those high school dropouts.

Healthy People 2010 said improving health communication and health literacy are a new objective for the nation, and you're to be congratulated because you're working on it. I don't think any of us have all the answers. But, you know, years ago, 13 years ago JCAHO said patients must be given information they can understand.

Now, the National Adult Literacy Survey was done 10 years ago. Another one was done in 2003, and the government is trying to get it out. But here's what they did. They interviewed in a Household Survey 26,000 people, and it's not a reading test. It was a test of functional literacy. Can you use this bus schedule and get from here to there? Which can of beans is the best buy for your family?

What they found is — it was scored on five levels. 1 and 2 were the lowest. Level 1 and 2, people could not use a bus schedule or a bar graph. They couldn't explain the difference in two types of employee businesses. They couldn't write a simple letter explaining an error on a bill. Think of that pyramid, the new pyramid that came out. They can't handle graphs. What are they going to do with this new food pyramid?

So I don't know where you're from. I tried to guess where some of the people sitting in this room might be from. But the point is that nationally, 21 percent of Americans are in Level 1. One out of five Americans are in Level 1. They read on about a 5th grade level. But look at our major cities. It's like 1 in 3, 1 in 4.

Now, the average high school graduate, if they're making it to graduation, is still about here. Everybody at this table is right here. So when we simplify materials, we get them right around here. These are the high school graduates, and I've already told you a third of our kids are not graduating from high school. So we must consider this when we're developing patient education.

Who is at Level 1 nationally? Well, almost half, 42 percent of Medicare beneficiaries, 41 percent of Medicaid beneficiaries. Over a third of the births today are to Medicaid moms. Twenty-five percent of people delivering babies haven't graduated from high school. Maybe that's haven't graduated yet, but they haven't graduated. We know from an AHRQ evidence-based report last year that low literacy is linked to poor health, lower health quality, medical errors, poor outcomes, and disparities.

This was a study done at Emory several years ago on diabetes, but it applies directly to the work of this committee. All of these patients had received the same five hours of diabetic education. If you're in any hospital system, one of the best educators is usually the diabetic nurse, okay? But what I want to point out is in looking at one thing diabetics need to know and one thing they need to do, people with higher literacy understood more of the same education than the people with low literacy. Also, more importantly, what do you need to do? Even people with high literacy weren't as high as maybe their providers thought they were in knowing what they needed to do, and people with low literacy really understood very little about what they needed to do. Very few of them were clear about what they needed to do. These people had the same education.

Now, I want to show you a video. These are two clips, and what they illustrate is in this video are people with all education levels. Some went to college, some are reading on a 2nd or 3rd grade level. It shows you that being a patient and trying to take care of your family, whether it's children or aging parents, is difficult. It also shows that it's easy to make a mistake.

(Videotape shown.)

DR. DAVIS: Now, this clip shows it's easy to make mistakes.

(Videotape shown.)

DR. DAVIS: So the question for M.D.s in this audience is, are these your patients? They're our family members, they're our neighbors, and we know these people. They're us, is the point.

So you can see that we're set up for mismatched communication between the provider or the state newborn screening program giving information and the patient's process of understanding it, remembering it, and being able to act on it.

So what do we know about patient education? Written materials, when used alone, will not adequately inform. Simplified materials are necessary, but they won't solve the problem. We need to focus on parents' need to know and need to do, and we need to work with parents to identify best practices.

I think I got this contract because I was working with Michele on childhood vaccines, and originally the government wanted us to develop a curriculum for pediatricians. They said don't give me a curriculum, I'll just put it on my shelf. So we listened to the pediatricians and we listened to the parents,

and what we were doing was finding out the need to know. What we did was sort of, as they say at Harvard, deconstruct childhood immunization.

These were seven things parents wanted to know about the baby shots. So we made a poster. We also made a booklet for parents. Now, pharmaceutical companies and the CDC had booklets, and they were organized by the disease or by the vaccine. Parents wanted it organized by the age of their child, because the way they thought was here's birth, here's two months, et cetera.

Then the public health nurses need a contraindication screening sheet, a check sheet, so we developed stuff that helped all these people. The first paper was published in Ambulatory Peds, and we found out that with just the poster alone, vaccine communication increased. Doctors and nurses and parents initiated more conversation about childhood vaccines, and there was more verbal teaching, there was more talking about side effects, risks, and contraindications.

I want to point out one of the things I missed here. Benefits didn't increase. We didn't stress benefits. But one of the things I've subsequently learned from patients is don't just tell me about the risks, tell me about the benefits. So we've got to stress benefits, and a provider might think, well, it's a no-brainer to know the benefit of a childhood immunization, but not all parents know that.

Now, what about our HRSA contract? We were supposed to evaluate the user-friendliness, including readability and cultural appropriateness of newborn screening parent education materials in English and Spanish. Donna and Brad collected materials they had from 49 programs. We conducted listening groups of key stakeholders. We developed pamphlets in English and Spanish for parents, and we worked with Brad and Donna to develop and evaluate educational tools for prenatal providers and toolkits for the state programs. I believe we were a true partner with HRSA. Not only did we have Penny and Michele, we had Marie, and we had a lot of back and forth with HRSA program people.

So what did we find out? What about readability? Well, the feds say you have to try for 6th grade. It's really hard to get 6th grade. The average American probably reads at about an 8th grade level, but the deal is that over a fourth of the current brochures were on a college level, and average was high school. Remember that pie graph I showed you? Those people in Level 1 are out of luck when it comes to these brochures.

The other thing I want you to know is people don't comprehend on the same level they read on. So comprehension is a couple of levels lower than just what this readability would be.

Now, we looked at all the materials that Donna and Brad sent, and one thing I want you to remember is readability is the tip of the iceberg. We partnered with Janet Ohene-Frempong about what is user friendly. Well, we sort of deconstructed that, too. A lot of people had different items. Janet had some, and we sort of came up with about five things.

Is the layout user friendly? Does the pamphlet have ample white space, limit paragraphs to four to five lines, use bullets, boxes, bolding? Is there was one problem with these pamphlets, it was lack of white space and lack of limiting paragraphs. They were not all this dense, but I want you to think about what comes across your desk. even emails that you read, even directions for getting over here this morning. Janet was pointing out if they had been bulleted, they would have been a lot easier to read. We all scan for stuff. We're trying to pick it up. What do I need to know? What do they want me to do?

That's what we're looking for.

You need white space, and you need to limit those paragraphs, and you need to use bullets. When we did focus groups of parents, they told us that. They didn't use that jargon. This is part of a brochure we developed where the headers are asking questions, we tried to use white space, we tried to limit the words. Winston Churchill said if I had more time, it would have been shorter.

(Laughter.)

DR. DAVIS: It is hard to write succinctly. It is an art. When you're reading anything, a lot of times we use way too many words.

Do the illustrations convey the message? Are the pictures and captions serving a purpose and not just decorative? In the focus groups, parents — all humans are attracted to babies, mamas and babies and daddies and babies, the "aww" factor. This group of mamas don't know what a stork is. They said, oh, that's old time, like on "The Flintstones."

(Laughter.)

DR. DAVIS: This octopus I think is supposed to be multicultural, but it's a stretch.

(Laughter.)

DR. DAVIS: But the most important thing is, is the message clear? When we were reading all of these brochures, they have the content, but it's buried, it's buried. Is the message clear? Is it easy to pick up? Is the title helpful? Here's the deal: "Newborn screening program," that doesn't resonate with parents. They don't even know what newborn screening is. Some of them don't even know what the word "screening" is. But "newborn screening program," that doesn't sound like something you want to read about.

"These tests could save your baby's life." Well, maybe you want to read this, maybe you want to look at that. So this is part of the challenge.

Then, is the information manageable? You guys are talking about all the stuff you need in there, and then when lawyers get involved and state legislatures and all this kind of stuff, and they need this and they need that. the deal is do you want them to read it? Do you want them to understand and use it, or is it a checkoff to say we've distributed it?

"Newborn screening can determine if your baby has any of the following conditions: PKU, hypothyroidism, sickle cell disease, CAH. These are rare but serious conditions which can cause brain damage or even death if not treated. Even if your baby looks healthy, he or she may have one of these conditions. If these conditions go untreated, serious problems will arise." That gives you the information, but nobody is going to read it.

"Why does my baby need newborn screening tests? Most babies are healthy when they're born. A few look healthy but have rare problems. Babies who are born with these diseases seem normal at birth. We test all babies to find the ones who may need treatment. If we find problems early, we can help prevent serious problems like mental retardation or death." The point is it's the same thing, it's bulleted, and if the information is not manageable, it's kind of useless.

Then, is it meant for me? One of the other problems was "Newborn screening is offered to families with babies as a service through the Department of Health. The initial screening tests are performed by the Department of General Services Division of Consolidated Laboratory Services, which is located in" — man, are you still reading? I'm talking to you guys.

"How will my baby be tested? Before you leave the hospital, a nurse will take a few drops of blood from your baby's heel. The hospital will send the blood sample to a newborn screening lab." Make it personal. I tell medical students, if you treat every patient like they're your grandmother, you'll probably do all right. So if you talk in conversational tones, people can understand it and remember it better. They don't care about the bureaucracy. Don't tell them about the bureaucracy. They care about their baby.

Avoid common mistakes. The medical model, which all of us were trained in, we tell the description of the problem, the statistics on the incidence, the prevalence, treatment forms and efficacy. It's more useful to think of a newspaper model, which gives the most important information first. Think of scanning that newspaper. You don't read every word in that. You scan it. You look for the most important information.

The health belief model. Your baby may be at risk. There's something you can do about it. Your baby will get personal benefits if you do. So Janet Ohene-Frempong is the one who is looking at this. When I'm talking about patient-directed as a quality health care issue, this is what I'm talking about.

Now, what did we find out in our focus groups? We did 22 focus groups and three interviews. We talked to and listened to English- and Spanish-speaking parents of babies recently screened, a few parents of babies who had false-positives, pediatric and prenatal care providers, and state screening professionals. There were about an even number of black and white parents. Sorry, Marie, but we didn't talk to any Asian parents. They were about half divided between private and Medicaid insurance. They were just about all moms, but the baby was young, six weeks to one year.

Here are the provider demographics, family doctors, neonatologists, pediatricians, OB/GYNs, midwives, a few nurses, PAs, NPs, their demographics.

So here are some lessons learned. Parents and providers had limited knowledge and awareness of newborn screening. It was like not on the radar screen. Parents are not familiar with the term "newborn screening" or "newborn screening program." I know it's a term that is so familiar to you, but it's not familiar to these 4 million people that are having babies.

Physicians did not know what newborn screening information parents were given in the hospital, and no doctor that we talked to had read their state brochure. All stakeholders felt parents should — everybody. I mean, state program people, parents, every doctor we talked to, every nurse, prenatal, prenatal, prenatal. I mean, it was a consensus across the board. Get it prenatally. The hospital visit was a fog. The only thing I wanted to know is, is my baby okay.

Physicians and nurse education before discharge tended to focus on practical things, breast feeding, crying, car seats. There is a ton of stuff parents have got to know before they leave the hospital. The pediatrician wants to be sure they've covered these things. Those are the things that the parent is focused on. If the parent has a child in the NI, they are really focused on that baby's health and well-being.

Parents want a heads-up about initial and retesting, seven to eight months pregnant. This is the best time because I'm going to the doctor almost every week. Parents wanted information orally from a provider, as well as a pamphlet to take home. They want to hear something. They don't want the doctor to give a mini-lecture on newborn screening, but they want — the doctor is the most credible source of health information, and they want to hear something from the doctor. The OBs said they would do it. They said they would really turf it to their nurse. But I think something needs to come out of the physician's mouth. "All babies are going to be tested. Your baby is going to be tested in the hospital for newborn screening." I'll go over some of the bottom lines in a minute.

The pamphlets, the parents said, and the doctors said, needs to be to the point. I just want it as short and simple as possible. Prenatal providers indicated willingness to educate parents. OBs and family physicians were more likely to incorporate newborn screening information if it was on the ACOG checklist. ACOG has a checklist. You talk about the car seats, you talk about this, you talk about that. If it's on the checklist, they'll do it. If ACOG says to do it, those OBs said they would do it, no questions, no arguments.

Parent experience. The pamphlets were often given in the hospital with no oral information. The pamphlet often is just put in the packet. You get a packet when you go to the OB's office and you get a packet when you're leaving the hospital. A lot of people had not even looked to see what was in the packet. So if it's just put in the packet, it's a checkoff. Somebody can say, yes, we gave it. So if they can answer that survey yes, it's given, it's given in the OB's office, it's given in the hospital, but rarely did a parent have a conversation about this.

Opinion was mixed on the need to know if the result was negative. Most said I don't really care if everything is okay. Others said, man, I don't want the state to drop the ball. I want to make sure my baby is tested, not fall through the cracks. So it was a mixed deal.

Also, unless the baby had to be retested, the parent didn't know the state was involved, and this was the biggest systems problem I saw. When parents think about health care, they think about the doctor or going to the hospital and having the baby. They don't think about state public health. When they think about state public health, they're thinking about TB or HIV or something. They don't know that newborn screening, the state is involved at all.

A woman who was called in Maryland to come back in for testing said the baby is crying, the two-year-old is running amuck, I'm there, I'm not feeling good, the phone rings and it's a lady from the state, and I just kept trying to figure out how the state department got my name and knew I had just had a baby.

So let me tell you about this list of diseases. I know that when lawyers get involved, and state legislatures, and I know you want to put all those down there, and if you want to, that's fine. But let me just tell you what a lot of parents said. They expressed little interest in detailed information on the diseases or newborn screening programs. This is initially. This is the 4 million.

I was doing focus groups with Susan Penny in Maryland. She had 32 diseases. She was so proud of her description of these diseases, and I gave them to parents, and they quit reading them. They quit reading them after sickle cell and PKU because they had never heard of them. One woman said who made up these words?

(Laughter.)

DR. DAVIS: What language is this?

(Laughter.)

DR. DAVIS: Nobody read all 32. They read about three, and they said I don't want a lot of details. Please put less information so people will read it. Make it concise. Less overwhelming. Parents were only interested in the description of the disease when their baby needed to be retested. Then they wanted a lot of information about that disease. But that was the disease they were interested in. They weren't interested in the other 31 or whatever. If that was the problem, they wanted to know everything they could get their hands on about that disease.

So you've got to think what is the need to know? How do you want to learn it? Who do you want to teach it to? When do you want to get it? A few highly educated parents requested web links, computer savvy moms. I sat down at the computer with moms and I said, okay, galactosemia. Let's say you get word that the baby has to be retested for galactosemia. They didn't look for a web thing. They went to Google. They went to Google and typed in "galactosemia."

So what did the parents and the doctors and the state health people say was the need to know when I said what's the need to know here? All babies are screened. Screening will benefit the baby. Get that benefit up there. Testing is safe and not harmful. The baby may need to be retested. Parents will

be notified if retesting is needed. It is important to act quickly if retesting is necessary. I can tell you that cost and consent were not really a concern. Most people had no idea — they didn't know — nothing was itemized for them. It was only a few parents who were paying out of pocket that got an itemized bill.

Then this is the first draft of a brochure that we developed for a pilot test. It has since been tweaked up. We went back and had to do some focus groups after it was developed, and an interesting thing. Parents said that they would more likely keep high-quality materials and throw away stuff that looked like it was throwaway. I know cost is a huge issue, but a lot of the materials that we saw had been xeroxed so many times, it looked like a throwaway. High quality means sturdy paper, sort of glossy print. I know that's more expensive, but I'm just throwing it out there.

I asked them, you mean stuff from drug companies? You keep stuff from drug companies? Oh, yes. So if it looks polished and nice, they're more likely to keep it.

These materials are going up and down the food chain at HRSA. Peter, not everybody is as fast as you are checking them out. They're going to be produced and distributed by AAP. I guess they're working on AAFP and ACOG. They wanted us to do English and Spanish, and Spanish speaking mothers wanted pamphlets — many of them wanted pamphlets in English and Spanish because they wanted to share this with their families. People in their families spoke a variety of things, read or didn't read a variety of things, and they wanted English and Spanish to take home.

I'm on a committee that is reviewing the new National Adult Literacy Survey, which is coming out, and one of the little factoids I read in there is that in the 2000 Census, 18 percent of U.S. households do not speak English at home. Now, in the 1996 Census, it was 13 percent. So I would say it may be over 20 percent now of people who may not be speaking English to each other at home.

Lessons learned from providers. They're not interested in time- or resource-intensive training programs. CME is not a carrot. What if we gave you CME? What if it was an electronic CME? Wouldn't do it. I'd rather spend five minutes learning about this and get no credit than spend an hour and get credit. Pediatricians wanted to know about diarrhea and stuff they had to deal with every day rather than newborn screening.

Would you go to a newborn screening seminar at a conference? Probably not. What if it was one of the few things that was available to you? They're just not interested in an hour CME on this. So they preferred short handouts, checklists, brief articles in their professional organization newsletters. They wanted to the point information to help them educate parents more effectively. They requested brief information and handy notebooks to prepare them for conversations with parents. They wanted a concise list of definitions of the diseases screened, the specific diseases screened in their state and where they could get more information if they needed it.

So CME is not a carrot. They're not into computers. Academic docs, the feds, are into computers. Not everybody is into computers. They may email their friends at home on computers, but they're not really using them in the office. I was impressed that Susan Penny took us to some young pediatricians. They had just gotten out of Hopkins. I thought these guys are going to be the cream of the crop. They weren't using computers as a part of their practice. They said a lot of stuff from AAP they just deleted.

(Laughter.)

DR. DAVIS: But, having said that, what do they not delete? They wanted something mailed to them. So I said how does it get through the front desk? Because whoever is at the front desk can throw away whatever they want to throw away. The deal is if it came from the professional academy, the state health department, HRSA, it more likely gets to the physician's desk.

I have to tell you that one of the guys on my state advisory board was the state president of ACOG. I said surely as the state president of ACOG, you have to use the computer. They didn't even know, these private physicians I was talking to, a lot of them didn't even know their emails. He said his nurse gets the emails from ACOG, puts it on his desk, he writes the reply, and she types it back. I was in the office of the head of OB at LSU and he was saying this on a conference call. The head of OB nearly flipped when he heard that.

So here are some recommendations to improve the quality of newborn screening communication. Information needs to be more patient and provider centered. Patients and providers need to be involved in the development of the materials and the distribution plan. You guys have got to think about the distribution plan. Even if you've got the best mouse trap in the world, how are you going to get it out there? Who is going to put it in the hands of the parent? Who is going to get it to the physician? How are you going to get it in their hands?

What will be taught, when, where, how, how often? It needs to be more systems minded. This goes back to the quality slide I showed you. Systems minded. Brief education at multiple times may be helpful. What is the role of the office nurse, the hospital staff? Providers need to be more in the loop. Parent education needs to be convenient and practical for usual practice. If a doctor is going to keep doing this, it's got to work out in their system. Professional organizations, state agencies, HRSA and affiliated groups should collaborate more — that's what you're all trying to do — to prepare and motivate providers to educate parents.

So here's what we developed. This was talking points for doctors. Is it a script? No. Do I want them to read it verbally? No. But when they think about, oh, I've got to talk to them about this, they think about all the stuff they need to tell them. It's basically these seven points, but I want you to tailor it to your practice, your personality, how much time you have that day, and that patient.

Then Brad developed this quick reference, and this is exactly what the providers said they wanted to know, and I'll tell you in a minute that when we pilot tested it, 100 percent loved this quick reference. This is all they wanted to know. Then we gave them in our pilot state specific, what screened in your state, who do you need to call in your state, what's the procedure in your state, the website, the phone number in your state.

Now, here was the pilot. Penny Kyler was my project officer on this. They said they wanted a notebook, okay? So we gave them a notebook. Here's the notebook, a sturdy notebook, and it was mailed to 25 providers in four states, OB-type prenatal providers. Providers used the materials for a month, with a total of 240 English-speaking and 140 Spanish-speaking parents. Ninety-two percent reported they were highly satisfied with all the material. Eighty-four percent found the seven things helpful. Eighty percent were likely to use it on an ongoing basis. Eighty-eight percent thought parent pamphlets were relevant prenatally. Eighty percent were likely to use them on an ongoing basis. One hundred percent found the quick reference helpful and thought it contained the right amount of information for them. Ninety-two percent found state-specific screening information helpful, but only 12 percent checked the website out, and they said it took two to five minutes. I would say it probably took less.

Then the final thing I want to tell you is we developed — I thought this was very clever — a CD. Every state is different, so what we did was put the template in English and Spanish and a bunch of pictures of babies and parents of different ethnicities on this CD, and the states can take this and tailor it to their needs. They can do what they want to with it, and we have a template if they want to use it. We also have a little guide in there, like the program notes, which teach you what I just taught you about how to develop or modify materials to make them parent centered.

So in closing, my newborn screening education ideal is that parent-centered materials and messages be delivered first prenatally. Perhaps messages need to be given multiple times. OB and

pediatric providers need to be more involved in the system. Provider centers need to know and need to do education, provider centered. Public awareness campaigns may be needed to get it on the radar screen. Finally, quality control or tracking is needed to ensure consistency and the efficacy of the educational efforts.

Thanks.

(Applause.)

DR. HOWELL: Thank you very much, Dr. Davis.

Now we're going to wind up this particular session with a presentation on sickle cell disease newborn screening education project by Janet Ohene-Frempong.

MS. OHENE-FREMPONG: Hi, there. I'm also going to stand. I can't possibly sit down or stand still, I don't think.

This is going to be more of the same, which is a good thing. One of the principles of good communication is a little bit of repetition. It is specific, of course, to sickle cell disease. I worked along with Terry on the newborn hearing screening and the metabolic screening project. Her work will inform the work that we are doing.

I will just give you a little bit of background on just the funding and the purpose, just a little background on the project, the mission and the intended outcomes in terms of the Sickle Cell Disease Association of America. We've gotten funding from, or the Sickle Cell Disease Association of America got funding from HRSA's Genetic Services Branch to create and implement a national coordinating and evaluation center to accomplish the goals of the sickle cell disease in newborn screening program, and of course everyone here knows what that does, to support the comprehensive care of newborns diagnosed with sickle cell disease or carriers, and of course their families.

The overall mission — again, this is just to give it context — is to increase the capacity of the HRSA-funded sickle cell disease newborn screening community-based programs — there were 18 funded — to provide services to babies identified with sickle cell disease, or of course as carriers of sickle cell disease and other hemoglobinopathies. What we wanted to give them is to model education, counseling, and of course follow-up.

There were a number of outcomes. This is one of three that's specific to what I'm going to be talking about today, which involves patient and family education for families of babies with sickle cell disease, carriers and so forth, and also their providers. The ultimate goal is to create materials and methods of information delivery — this is a very interesting little challenge here — that will increase health literacy, particularly about sickle cell disease and genetics, and through this information created for families and providers that will establish a foundation to disseminate standardized information about sickle cell disease.

One of the charges really was perhaps to go beyond the typical brochure-creating type of things that we do. I think that what has been very, very interesting is that, obviously, printed materials are alive and well. This is a very standard way of people getting, receiving, and really using information. Although we have the Internet and people do Google everything, we want to make sure that there's good web content when people come to the NCEC or Sickle Cell Disease Association of America. But we should not forget that what the easiest thing may be to do sometimes is to pick up something and browse through it. So we'll have to keep that in mind. That was very, very good data.

I won't belabor this because Terry went over this. I'm going to just re-present it to put it in the context of sickle cell disease. What the National Adult Literacy Survey did, obviously, was to break tasks up into levels of difficulty, Level 1 being the task that required the least skill, Level 5 being the task that required the most skill. The 27 percent of the population, those 26,000, were functioning on the two lowest levels of literacy. That's bad news. So that's about 47 to 48 percent of the adult population in this country.

That's the group that we really need to focus our attention on, not exclusively, but the attention needs to go there because very often this is the group of people that unintentionally gets left out of information giving. We think we are creating information for the general public, but we have overestimated — our tendency is to overestimate the abilities of people. This is half of the population. If nothing else gets across this afternoon, this is an issue of some magnitude. So it's not an issue of a few easy-to-read materials over there but a way of really doing business, which is a bit of a different way.

What is of interest and, of course, of concern is that if you look at this in terms of race and ethnicity — and don't misunderstand me. I'm going to make a point about this — for the African American and Puerto Rican populations, we're talking about 79 as opposed to 47 percent of the population, 75 and 79 percent of those populations operating at those two lowest levels of literacy. For sickle cell disease, that is of immense importance. I will say this because very often when I make these comments in public, African Americans come up and they say, "I don't know, girl. Why did you say that?"

(Laughter.)

MS. OHENE-FREMPONG: "You don't need to be saying that." We can have a whole other session on what the reason is for it. The fact is it is an issue for us. The nice thing about Terry's work and the tapes that she's produced is that it shows you that this is not exclusively an issue for African Americans. You've got everybody over there confused. Some people are operating at very marginal levels, and also, obviously, there are African Americans and Puerto Ricans who are actually quite literate and who do quite well and navigate their way through. So we're going to put that issue to rest.

Again, I want to drive this home. This is not a new issue. It has been emerging for some time. Fortunately, the Institute of Medicine helped us focus our attention, and as a result of the release of their report in April of 2004, we now have a lot of national attention on something that has been an issue actually for some time. So this is the IOM, and I think Terry mentioned to you about that report. It puts it into the context of real health communication issues, and it is definitely related to, at the center of a racial disparities issue, ethnic disparities, and also other health communication issues.

The other point I wanted to make — Terry didn't mention this. She mentioned it in passing — is that the Agency for Health Care Research and Quality, AHRQ, did a systematic review. For those of you who question this issue in terms of its public health importance, the American Medical Association requested that a review be done of the literature in the area of health literacy to produce a good, solid evidence base. It is now there. Now we have something to really build on. This is not just something nice to do. There really is a good amount of evidence, and I will say that although HRSA has really taken this issue very, very seriously, there is activity in other parts of the federal government.

The Centers for Disease Control, certainly we've done work with the CDC, we've done with the Food and Drug Administration, we're doing work with the National Cancer Institute, and the Surgeon General, by the way, if you ever get a chance to listen to him on this issue, stop, drop and go, because he is absolutely passionate and eloquent on this. So there's a lot of leadership. This is a moving train. Again, it's not just a nice thing to do this. If you're not on it, this is a missed opportunity.

Now, in terms of the Sickle Cell Disease Association of America, the things that I'm going to talk to you about, we're doing many things there. I am working with them as a consultant. I'm just going to talk to you about some selected work that we've done and are in the process of doing.

One of the first things that happened after getting this grant was to provide some technical assistance and training to selected staff from the community-based agencies around many issues, one of which was health communication, the production of reader-friendly information, not only brochures but letters, the flyers that you send out. When you send out a letter and people don't come in, of course we call people names. We call them non-compliant, we call them apathetic. But the question is, what has that letter done? Has it overwhelmed people or has it actually drawn people in? So there are many communication issues and opportunities that people need technical assistance for.

There's a lot of good will, but do people really know how to write a good letter, a good brochure, a good poster and so forth? So I'll talk to you a little bit about what we did there.

Then we also took the time to evaluate trait notification letters not only from the local agencies, the local newborn screening programs, community-based programs, but also from the state agencies. That was the next thing we did. Then starting last year, Chris Corbin, who is the nutrition education coordinator for the Sickle Cell Disease Association of America, collected materials from all of the community-based agencies that were part of this project so that she could begin to track what are the most commonly used materials, and then we began to test those materials with parents to see how effective they were, and also talk to parents and get a sense, just like Terry did, of what their real issues are, what are their real informational needs around trait, as well as disease notification and disease management.

We are now in the process of developing a tool kit. Again, Terry has blazed a trail, and we are also developing a tool kit for information providers. In terms of technical assistance, the presentation that was given at that point was called "Words, Space, Pictures and Appeal: How to Evaluate and Develop Easy to Read Materials." This was just Level 1. By the way, I might add that this is way beyond reading level. There are many, many, many opportunities to make materials easier to read, easier to understand. This was just a basic introduction, but there are many levels of this.

We talked about layout and typography. Terry gave us some examples. I'll give you a couple myself. What we were asking them to do — and this is the conceptual framework that the local agencies have been working with that we provided for them. What we did in the hearing project and the metabolic screening project was to take this and to narrow it down to just five. But here we go. We talked about layout and typography.

The print should be easy to see. The layout, as Terry pointed out, should be short and spacious, and there's a guideline that goes along with this to explain the details of what short and spacious means. The information should be visually well organized. The font should be plain. Fancy fonts find their way into all kinds of materials. It's just one more barrier for people who are struggling with the written word.

All caps is something that sometimes people use. You'd be surprised at how much stuff gets into all caps. Illustrations work. They should be present. If someone is having a hard time with the printed word, pictures help. Very often we give people things without any kinds of illustrations. They should be clear and cause little confusion. We can do a whole presentation on just illustrations alone. Of course, we're not going to do that today, but it's fascinating. Way beyond the words, what kinds of illustrations work? Not all illustrations are good illustrations. Some work, some don't. They should be simple. They should be literal and not abstract, and they should provide context and order.

For text, language should be simple and friendly. Message should be clear. If we said nothing else, this is probably one of the most insidious problems in all of our writing, and I challenge any of you to pick up anything today, tomorrow, as you go forth, and read it and ask yourself after you've read it, what is it actually asking you to do? Very often that message is not only visually but conceptually embedded. You have to read through with a marker and a pick ax basically to find out what it is we're

asking people to do. That is a problem when you have people who are reading like the people you saw in the video.

Discontinue. People are having a hard time. So if people are having a hard time with words like "discontinue," you can simply say stop. You really need to make things manageable. They should be engaging. We need not bore people to death. It's hard enough to manage this stuff without making it boring. So we have to find ways to engage people. And there should be some repetition.

Finally, there is something called document literacy and quantitative literacy. Some of the materials that we have actually recall for large amounts of document and quantitative literacy skills. We need to decrease the literacy demand. So it's not just about reading level. Finally, last but far from least is appeal. Is it attractive? Terry talked to you about how people relate to material. If they find it unattractive, very often they won't even look at it, let alone keep it. It should be easy to use. It should not be an origami. You should not need an elbow and a knee in order to keep it open. It should feel like it is for you. There is personal relevance. It's not like you're writing for each other or another medical geneticist or epidemiologist and so forth. It should be for the patient.

Here's a case in point. This is an example from the American Heart Association. This is "Facts About Stroke." You know that they're prolific. They do gorgeous, beautiful things. You open this up and you see what you see. "Stroke is the third largest cause of death in America after diseases of heart and cancer. Although elderly people account for the vast majority of stroke deaths, stroke ranks third as a cause of death among middle-age people." And then it goes on to say that "Despite these statistics, there is good news."

Now, anybody who is an epidemiologist is probably thinking what is that? Well, the age-adjusted death rate for stroke has been steadily declining in the U.S., dropping from 88 per 100,000 population to so and so, and then it goes on. Then it goes on to talk about cerebral thrombosis and subarachnoid hemorrhage. Finally, it tells you "Know the warning signs of a stroke. The warning signals of a stroke are sudden weakness or numbness of the face, arm, leg, or on one side of the body; loss of speech or trouble talking or understanding speech; dimness or loss of vision, particularly in one eye and unexplained dizziness and unsteadiness."

This is, of course, the nitty-gritty right there. This is what people really need to know. But they knew that they were missing people. So look what they did. "Signs of a Stroke." The same American Heart Association. "My father is alive today because I know the signs of a stroke. You can save lives too if you learn these signs." Then it says "Let me tell you what happened. My father has high blood pressure. Last week we went fishing. He dropped his gear. He said he felt weak on one side. He did not talk clearly. He said his sight blurred and he felt dizzy. He felt okay in a few minutes. Still I did not wait. I called 911 for help. I knew what was happening to dad were the warning signs of a stroke."

What's the difference here? Can you see this? You see all those principles of good, plain language communication. Now, we may be very well educated, and if you want to know about cerebral thrombosis, you can Google it. But the question is what about the people who don't have access? What is there for them? In fact, what is there for us when you're feeling a tingling in your arm? Are you going to think about the disease-adjusted death rate?

(Laughter.)

MS. OHENE-FREMPONG: Or is it going to occur to you that somebody's dad dropped his gear? So even for those sophisticated amongst us, when push comes to shove, as we say, it very often is the human side of it.

This is not the only way. There are many ways to communicate, but we are missing opportunities to do this. You can have your didactic, feeling weak or numb, blurry vision, unable to talk clearly. You can do those things, but hopefully you've engaged people.

Now, sickle cell disease. Here we have "The Infant and Young Child with Sickle Cell Anemia." "Sickle cell anemia is an inherited blood disease that is particularly serious for infants and young children. About one in every 400 black babies is born with sickle cell disease. A person with this lifelong disease has normally formed red blood cells. All complications" — and so forth.

If you look at this, first of all, just if you look at it, does this look easy to read? No. But is it made with love? Yes. This is good intentions. This has good intentions all over it. This is someone who wants people to understand what's happening. But just as a starter, even if you begin to get beyond the layout and typography of it, you begin to see some of the words there. If somebody is having a hard time with "discontinued," they're going to have a difficult time with "supportive treatment" and that sort of thing. What is supportive treatment? It's a concept. So the challenge will be to translate this into plain language for people.

Evaluation of trait notification letters. This is qualitative. I'm giving you a sense of the issue. Here's one of the letters. It's a lovely letter. It's not that rough, but it is up there in terms of reading level. It does require a bit of effort. One of the things we did is to take this letter and rewrite it, reorganize it, basically getting to the point. It says "Here are six things that you can do. Don't be alarmed. Don't worry. Think about getting each parent tested if you have another baby. Get more information if you need it. Share this letter with your baby's doctor. Keep this letter for your records, and keep this information for your child."

What we did was to take what they had and basically translate it. Since we did that, after having talked to some parents, we got some feedback saying that actually people like the looks of a formal letter but found this easier to read. So the challenge will be to make it appealing to parents as a letter and at the same time keep it easy to read.

The other thing that we learned subsequently, a year later, was that one of the things that parents warned us about, particularly in the trait notification, is to not tell them not to worry. There's some interesting information we found out. I'll talk about that now that we're going to move on to field testing.

We looked at the most commonly used materials for trait education and disease management. Now, because we have a limited time this afternoon, I'm going to focus really on trait. If we talked about disease, we'd be here a little bit longer, and we don't have the time, so just to give you a sense.

These are the kinds of things we said we were going to do, assess and test for readability and user-friendliness, the five most frequently used materials not only for the sickle cell newborn screening materials but also for treatment materials, and we did that. Develop and test draft prototypes for these materials; create and disseminate the materials. We're also doing a draft tool kit. This is the tool kit that we are going to be using for people who are producing materials on how to accomplish this with even more success than they've had in the past. Here are the results.

This is "Sickle Cell Trait and Disease Information: What Parents Want to Know." Christine Corbin was the assistant moderator in our focus groups. In June 2004, we conducted three discussion groups. Actually, some were discussion groups and some were focus groups with parents of young children, ages 4 and under, with sickle cell trait and sickle cell disease. The results of these discussion groups were combined with the results of two parent focus groups that had been conducted previously. We had already gotten information not under this grant, under another project, but the information was still there. So we combined the information.

The purpose of the study was to find out really three things, what parents in each of the following three categories want to know about sickle cell trait and sickle cell disease. One, parents of newborns diagnosed with sickle cell trait; parents of newborns diagnosed with sickle cell disease; and parents of young children who have sickle cell disease. So they know what they've got and they're dealing with it. We wanted to know how they like materials to be designed and how current materials most frequently used by the grantees could be improved to better meet their needs, if necessary. We didn't assume that they needed improvement, but we asked.

At Brookdale, we had one group of 19 parents, but they were interviewed in two consecutive sessions. The reason the group was large was because we piggybacked on a parent support group that was meeting at the time, but a separate recruitment effort, a very successful one, by the way — the staff at Brookdale drew in people whose children had been diagnosed with trait only. So that was a separate group. So six parents of children with sickle cell trait only, 13 were parents of children with sickle cell disease. That's why you really can't call it a focus group, because it was a little bit too large for that.

But it was very orderly and we got a lot of very good information, and the report is available and the questions that we asked, the discussion tool is there. The trait notification discussion group. Parents were asked to first discuss their reactions to the trait diagnosis, then give their opinions on selected materials designed to give parents information about sickle cell trait. For Part 2, the disease management discussion group right there at Brookdale, which is in Brooklyn, New York, parents were asked to give their opinions on selected materials designed to give parents information about disease management.

We then went to Children's Hospital, Philadelphia. They also had a support group that was meeting. These were parents specifically of children with sickle cell disease. Some of those parents, as you can imagine, also had children with sickle cell trait. So we were also able to get some information from them. That group was first asked to give their opinions on one specific piece of material, which was a longer piece designed to give a comprehensive overview on how to manage sickle cell disease, identify what they felt might be missing and what they would like to know more about, including psychosocial issues.

Next we asked them to view the same video here on health literacy problems, because even though parents — you figure that people know about this. Well, no. We wanted to raise their level of consciousness. Some parents, as you know, are quite savvy, system savvy, disease savvy, but they may know relatives, friends, other parents who may actually be struggling with this information. So we wanted to raise that issue so that we could put it into context for them. We didn't want to keep it a secret, what we were trying to do. We wanted them to let us know what kinds of things they think parents are most likely to find confusing in the management of sickle cell disease. They're dealing with it and we wanted to say you're dealing with this everyday; what kind of things do you think might be confusing to people? And they told us a lot of very interesting stuff.

Finally, for those who had children with sickle cell trait, we separated those out a little bit discussion-wise, look at trait notification materials and tell us what they think parents of newborns diagnosed with sickle cell trait should be told, and how. Okay?

For the previous groups that had been held in 2001, these were parents specifically who had just been told that their children had sickle cell disease. So these are parents of newborns. So these were disease notification focus groups. They were asked to reflect on how they had been informed that their child, one, may have sickle cell disease and, two, did in fact have sickle cell disease, and to let us know their opinions on how a parent may want to receive this information, what a parent may need to know at these two points in time — so those are different situations — and what a parent may not want to know at these two points in time. Sorry, this is a typo.

So selected issues. In terms of the trait notification, as I said, I'm going to focus on trait just to give you a sense of that's who we talked to, this is what we asked. In terms of trait, we asked them what the main message should be, where to place the emphasis, how parents want information presented, and other issues. Just let me give you a few excerpts from the report.

One parent in particular — this is just one quote — she says, "You can make choices." Now, these are parents whose children had been diagnosed with a trait. One mom said, "You can make choices if you know what you're dealing with. I had one with a trait before I had one with the disease. If I knew that this child had the trait and the other could have sickle cell, I had choices I could have made." So that opened the discussion about the fact that some of these parents really were not getting the message that if you have a child with a trait, the implication there is that you might be able to subsequently have a child with the disease. There were a number of people who said they were unaware of that, and we asked what had happened. A variety of reasons.

One, they received a letter but did not realize or understand that they could have a child with sickle cell disease in the future, and they asked no questions. Another thing, some were told not to worry, so they didn't. Some said they did not receive a letter because they had moved. This was a systems issue. Another systems issue was that their baby had had a transfusion at birth, so the information about the trait had been delayed. They missed it. Some said they had the trait themselves or knew someone with the trait, knew that it did not cause problems, and therefore saw no need to worry about future pregnancies. Do you see all the little issues here? Isn't this fascinating? Finally, some people said they did not know what sickle cell disease really was and did not view it as a major problem to be avoided. Very, very interesting.

So there were about five major issues that parents of children with trait felt other parents should know. Number one, they said that the materials should acknowledge the different knowledge levels, to just acknowledge that we're talking to you and you may already have a child with sickle cell disease and this may not be new information for you, but maybe you don't know what sickle cell disease is, and so this is for you, this is to let you know what sickle cell disease is.

The second thing is they said you really, really should stress that you could have a child with sickle cell disease, that this is an embedded message, it's not getting across to people, and that you should definitely not lead with the third thing, which is not to worry. But you should let them know that this is not a disease, because there is real confusion about that.

The fourth thing is to tell them what sickle cell disease is because they felt they really didn't know. There were people there with trait who said, well, what is this thing? What is this sickle cell disease anyway? What is it? Finally, people wanted to know that if there were some things, what might happen if you had the trait, what they were, because there are some materials that allude to it but never really say exactly what the problems are.

The materials that we tested — I have a list here. I'll just show you some pictures. This is from Children's Hospital, "Sickle Cell Trait and Your Baby: Your Questions Answered." It gives the main questions that people tend to ask up front, and then goes into more detail, if I want to learn more. People had a number of comments about all of these materials. Then, of course, one of the most daunting tasks, which is to describe the inheritance patterns. There are many, many attempts at this. It is always a difficult issue. This is something that we're working on.

There's a "Sickle Cell Testing for Newborns: What Every Expectant Parent Should Know." This is expecting parents. That's the inside of that. Many of these tested well, but there were suggestions for improvement on each of them. "About Sickle Cell Disease and Sickle Cell Trait." That's the inside.

This is one I showed you before, the trait notification letter we tested. Then we also tested this piece here, "The Family Connection." Some of you may have seen that, for those of you who are familiar with sickle cell disease.

So what we're now in the process of doing, what we have been in the process of doing, is taking that information and developing the components of the tool kit, which will include a guide to reader-friendly materials development based on the information that the agencies have received already, a checklist that is a companion to the guide for evaluating reader-friendliness, easy to use — you've got to practice what you preach — a template for a trait notification letter, a template for a trait notification brochure that takes into consideration the comments and suggestions of parents regarding what they need and how to improve existing materials; a "What If Future Baby" cards. The question is what if you have a baby in the future? What happens? We're trying to meet that challenge of how you translate quantitative probability information into something that's meaningful to parents so people can make decisions about having future babies. A fact sheet on sickle cell trait that may be for the public which goes beyond the information that you give to the parents. Maybe you want to have statistics and so forth in that. Finally, the five things that parents want to know.

In terms of next steps for families, what we want to do is to modify and develop, test and refine — I'm almost done — materials to provide a welcome kit for parents of newly-diagnosed babies with sickle cell disease that will have various components; easy-to-read web content, which we will have to perhaps add to, on disease management and system navigation skills, which is very important, for parents of infants and children with longstanding diagnosis of sickle cell disease; and then, of course, materials for providers, modified, the same thing.

Our plan was to distribute this through the web because the Sickle Cell Disease Association of America has a website, so we want to enrich that site, for community-based providers, including primary care providers and emergency room physicians, and also hemoglobinopathy counselors and educators.

Hopefully this just gives you a general sense of the kind of work that we're doing. As I said, Terry has been blazing a trail on this issue, and so the information that she has gathered over six states and very broadly applies specifically to the type of work that we do and will inform it. I think I'll close here. I'm not sure how far I've gone, but probably far enough.

DR. HOWELL: Thank you very much, Ms. Ohene-Frempong.

(Applause.)

DR. HOWELL: I wonder if we could have all three of the persons from the parental education session. Terry has gone. She had a flight. Is Donna still here?

Are there questions of our two remaining speakers at this point? They've both given wonderful and detailed presentations on the educational thing and so forth.

No questions? Joseph has some questions, and I think Piero has some.

DR. TELFAIR: Yes, thanks. This is to both of the speakers, because it was mentioned earlier about the confidentiality and privacy issues, and I was wondering — there was the earlier comment that in the brochures, that issue was barely covered in the materials read; and in the information that you presented, Janet, it was not really discussed all that much. I was wondering if either one of you all could speak to that to some degree, because that is a real concern right now. So I think that with the recommendations and everything, one of the things is being able to explain that. It's Part 1, Part 2 around confidentiality. A lot of times with the research work that's being done, it is not left up to, many times, the providers or whatever to design the consent forms. A lot of times they have to go by the structure that is

specific to the institution. Maybe you all can say a few words on that, because that directly affects what kind of information and materials can be given out. Thanks.

MS. WILLIAMS: Well, one thing I know, part of the work that HRSA is doing also recommends information to the parents on what is going to happen to the screening spot after the screen. It does include privacy and confidentiality issues and the right to refuse a screen. That's all part of the education component that they'd like to deliver up front so parents are aware not only of the screening process but of their rights, of their rights to make a choice.

So although it doesn't seem to fit into the one-page brochure that just gives you a snapshot of screening, I think eventually it's going to have to be worked in there if there's really going to be a true education process up front. Brad or Michele can correct me if I'm wrong on that, but I think that's going to have to be included, and that's the direction we're going.

MS. OHENE-FREMPONG: I'm glad you mentioned that because, actually, what I neglected to say in my rush to get done is that Donna's presentation will inform our work too, because I looked at that and I thought, good, we're going to have to make sure that whatever we produce will pass muster on that checklist.

If we know what information people must have, then it will be our job to give it to them, but to give it to them in a way that they can understand it and appreciate it. As far as consent forms go, you have a challenge there. I think one of the things that really needs to happen in a systems way is that people who sit on institutional review boards really would benefit. We need to sort of bring them in so that they can understand the role of literacy in this whole issue. I think it just is not something that's on their minds. So you can begin to give people a sense that you can translate that information into language and formats that people can understand and still minimize the risk. It is something that can and should be done, but we are not including our risk managers in our institutions in this mission.

For us to do all of this work and then to have it all ratcheted up by people who don't really understand some of the legal implications, for example, of not understanding — 75 percent of malpractice lawsuits involve issues of communication. So there is some risk, actually, in failing to communicate.

MS. WILLIAMS: I have one more piece to add to that. There are risks in failing to communicate, but the newborn screening community that has had a quiet but successful newborn screening program for the last 40 years is worried that the opportunity to refuse more up-front information about consent, it's good for the parent in theory but hopefully it won't take away from the success of the program in getting every child tested. So those are some of the things that have to be weighed when we look at consent issues.

MS. OHENE-FREMPONG: And those difficult issues, there's really a way of saying that to people. You can say to people that one of the concerns is that people may feel that this is something we don't want them to do, and here are the reasons why we think it's a good idea. So you can address that issue, but you can address it in plain language rather than just leave it out altogether and pretend that it doesn't exist.

DR. HOWELL: Dr. Rinaldo has a comment.

DR. RINALDO: I really want to thank you, both speakers. This has been an eye-opener for me, because when we talk about difficulties in communication, we somewhat refer often to communication with our peers or communication between specialists and practitioners. One of my favorite stories when I talk to residents is I tell them that 90 percent of the time when I call up general practitioners to communicate a diagnosis, 90 percent of the time the first question they ask is "Can you spell it?" I thought that was our problem. In reality, I realize now that the problem, the real problem, the iceberg is

that that practitioner or any physician or health care professional, the difficulties they will encounter, I really thought that either was compelling.

So I think that a practical consequence of this is that I think we should consider very heavily this reality when we deal again with the debate how we count these conditions, because I really think that we might have very sophisticated academic debates and be technically or scientifically impeccable and come up with a product that, when it reaches the public, might be incomprehensible. I really think it's an extremely important message that we really all need to consider very carefully. So thank you.

I have a question about the emphasis that seems to be placed on obstetricians as a provider of information. My impression, when I was a practicing pediatrician, and now in dealing with metabolic disorders, is that they often are really not that involved with not the care but the concept of the baby. This is particularly evidence when we deal with certain metabolic disorders where there are maternal complications of the pregnancy. So many times we encounter this kind of history, a mother with acute encephalitic pregnancy or HELP syndrome, and when we ask the obstetrician how is the baby, it's like why are you asking me?

So how do you plan to overcome these difficulties and get obstetricians involved in the care of a patient that often they don't see as their patient because the patient is the mother?

MS. OHENE-FREMPONG: I give that to you. That's a systems issue.

MS. WILLIAMS: Well, I think, from what Terry found out — well, we found out in the study working with Terry is that at first, obstetricians really don't see the child as their responsibility. They think that's the physician's responsibility. But they do accept the fact that education is necessary, and again, they were very clear that if they were asked to do it by ACOG, they would do it.

Now, the quality of the education is going to have to be monitored because, as you all said, providing the education to them could mean putting the brochure in the packet that goes home with them. So the first step is getting them to agree to do it if ACOG says to. The second step is to maybe have ACOG outline or standardize throughout the different states what that education should look like and what we expect to come out of it.

MS. OHENE-FREMPONG: But are you asking about what happens after the baby is born?

DR. RINALDO: No. I'm just referring to my impression that obstetricians don't feel it their responsibility that the baby is their patient.

MS. OHENE-FREMPONG: Prenatally. Oh, I see.

DR. RINALDO: Prenatally. Obviously, you might think that the patient is the mother, so they should have a responsibility educating the mother, but it's not about their own health. It's rather the health of the baby, and that's where I see the blank stare sometimes.

MS. OHENE-FREMPONG: That's interesting. That's a concept that would need to be promoted, that we're talking about at least two people here. That's an attitude. It's how people see things.

DR. HOWELL: Dr. Boyle?

DR. BOYLE: I guess I wanted to get your reaction to something, and I do appreciate your presentations. I thought they were extremely informative. In thinking about the challenges here in terms of educating and increasing awareness, and obviously in providing clear and accurate information in the simplest form is obviously a real challenge to all of us who work in this area.

But I guess I was drawing a little bit of an analogy to some of the work that CDC and others have done in trying to educate on a national basis. Actually, I thought it was one of Terry's suggestions in her concluding slides, and that is whether we need some kind of a national campaign to increase awareness very globally and very generally of the importance of newborn screening from the provider as well as the parent perspective, just communicating some of those really basic messages. As health educators, I guess I was hoping you might react to that concept.

MS. OHENE-FREMPONG: Terry said something, and I think it applies to me to some degree, except that I will say that I'm also a parent. I have a son who is 33 who has sickle cell disease. So for me, this is an issue that is not only professionally but personally really, really important. Again, it's a systems issue. The difficult thing, it seems to me, about these diseases is that they are rare diseases. So I'm not quite sure if everyone — when you say national campaign, I guess you mean national but targeted to specific kinds of groups.

DR. BOYLE: Let me just draw an analogy for you to something that we're currently involved in, which I think I can draw a lot of parallels between, and that is the issue of developmental screening, trying to identify children early, as early as possible to identify conditions like autism or other developmental problems that are occurring in children, and that's a national campaign that we're running currently. It's called "Learn the Signs, Act Early," and it's focused on providers and parents, basically to develop better communication about the basics related to developmental problems in children and getting parents, as well as providers, to listen to parents about concerns.

Obviously, the strategies are a little different, and the messages are different, but I was thinking that we could at the committee think about whether or not something similar could be done with newborn screening.

MS. OHENE-FREMPONG: One of the things that I would really suggest strongly is if people are going to walk way from this meeting today and think about what they remembered, ladies, parents, there wasn't a word that you said that I don't remember. I will say that people's stories — I think you really need to put a face on this. You know, in academia, you think, well, I don't know, we need our statistics and so forth. But I really think that physicians and all people are moved very, very much by case studies. We can call them that. How about that? To be able to put a face on it, but to practice the same principles.

Providers are busy. They may be scientists, they may be strong readers, they may be really interested in what they're doing, but they've got 50 million other things to do. So we really need to be able to get the really important points, but also at the same time give it a face, give it a voice and reach for the affective and not just for the cognitive. I think it's very important, because then people say, oh, this is what this means, to translate that into this is what happens when we don't screen everybody. To say that my daughter is having a problem because all she's doing is worrying about her children? This really means more than 90 percent. Those are the kinds of things.

So I would say that we should begin to practice these communication techniques, engage people, not only for consumers but also for providers.

DR. HOWELL: Bill?

MS. WILLIAMS: I had one more comment about that, about the national campaign. I think this is a good time for it because it's happening anyway in pockets across the U.S. We get so many requests from reporters now in different cities to find out about newborn screening, and they're writing articles, and it's happening all over. Newborn screening programs are getting prepared for this, getting prepared to be able to answer these questions, because it is making headline news.

I think if it comes from a group like this, it will provide some standardization, because some of the news articles are better than others, and some of them have kind of misleading information. So I think this is a good time for it before too much information starts coming out of the wrong places and misleading people.

DR. HOWELL: I think Coleen's point is a good one, though, and that is that certainly, for those of us who have been around newborn screening for a long time, never has there been as much interest as there is now. But on the other hand, there's not been the systematic effort, and I think that's what you're talking about, and I think that's something that we really — there are obviously major groups that have focused on this, the March of Dimes being the primary one, but it's a great time to think about it systematically because people are very interested in the subject. I mean, it's not on everybody's first list, but there's a great deal of interest.

Bill?

DR. BECKER: Yes, thank you. I also, like Piero, found these presentations to be incredibly helpful, and I suspect that our subcommittee is going to find much of the material incredibly practical. Obviously, the need or the desire to communicate effectively, though, has to be balanced, regardless of who the practitioner is, whether it's OB, pediatrics, primary care, with an obligation to inform, because this is, after all, a medical procedure, and I'm wondering if — and this may be a better question for Terry, but since she's not here I'll ask it and put it out there — if the materials that she developed for HRSA were reviewed by someone with a familiarity with the legal perspective to basically give a judgment on whether it satisfied the obligation to inform, and I don't mean this in any demeaning way, but Cliff Notes for newborn screening are very appealing for a number of the reasons that you mentioned.

Were those passed by some form of formal legal review that would satisfy a physician's or practitioner's obligation to inform a person about what newborn screening really is? Did it stand up to that test?

MS. OHENE-FREMPONG: Gee, I don't know about Terry's materials, but I think it should be a part of this process. At least for the Sickle Cell Disease Association, we have a medical research and advisory committee. These materials are not going anywhere, nowhere at all, until it goes thoroughly through them. The thing is to make sure that legally — medically is one thing, but legally is another issue. Certainly, the pharmaceutical companies, when they're producing materials, nothing gets out of those pharmaceutical companies without real thorough medical regulatory and all of those things review. We can hold ourselves to the same standards.

DR. HOWELL: Ladies and gentlemen, this has been a very productive and excellent day. Let me thank the speakers and the hard work of the committee.

(Applause.)

DR. HOWELL: And we will see everybody back promptly at 8 o'clock in the morning.

(Whereupon, at 5:08 p.m., the meeting was recessed, to reconvene at 8:30 a.m. on Friday, April 22, 2005.)

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ADVISORY COMMITTEE ON HERITABLE DISORDERS

AND GENETIC DISEASES IN NEWBORNS AND CHILDREN

Fourth Meeting

Friday, April 22, 2005

Rotunda Room, 8th Floor
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1300 Pennsylvania Avenue, N.W.
Washington, D.C.

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C O N T E N T S

C O N T E N T S

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P R O C E E D I N G S (8:32 a.m.)

DR. HOWELL: Ladies and gentlemen, I wonder if we could find our seats on this rainy morning. I congratulate our folks for getting here and braving the Washington traffic on a rainy morning. That's quite an accomplishment.

Yesterday the minutes that were in the book of the committee members were replaced by a draft that is more recent and that corrected a few typos and so forth, and also is somewhat briefer. The first order of business we need to do today is to review and approve those minutes.

Can we have a comment about the minutes? I think that you have all read the minutes. Is that correct?

DR. EDWARDS: We read the earlier version of the minutes.

DR. HOWELL: This version of the minutes is basically the previous version of the minutes that have been shortened. Is that fair to say?

DR. BOYLE: I move to accept the minutes.

DR. HOWELL: Coleen moves to approve.

Is there a second?

DR. BECKER: Second.

DR. HOWELL: Second.

Those in favor?

(Chorus of ayes.)

DR. HOWELL: We had an interesting thing. Michele, who worked very hard on these, had concluded the minutes were too long. Then we have certain people that have said they really liked all these details and so forth.

Can we have a comment from the committee? The first set of minutes were really long, but I found them quite interesting, frankly.

DR. BOYLE: I appreciate the longer version, yes.

DR. RINALDO: I second that. I thought it would be actually good, especially when you want to go back and sort of remember. At one point, I think at one of the prior meetings, we were having a debate about what was in the minutes. So having a longer version, I think, would facilitate resolution of issues and perhaps prevent that.

Personally, I would like to have the longer version.

DR. HOWELL: Well, thank you very much. I think that for everybody in the room who writes things, you realize that it is much easier to write a long document, particularly when you are using the verbatim minutes from these minutes, which are just extraordinary. To condense them down to the current level is tremendous, and it is better.

So Michele, we'll appreciate getting long notes in the future if that's good. Thank you very much.

We are going to start this morning with a discussion of "Guidelines for Newborn Screening Follow-Up: Addressing the System." Our first speaker is Bob Vogt from the CDC.

Bob?

DR. VOGT: Thank you, Rodney, and thanks to the committee for the chance to come here and introduce two speakers that you will hear in about ten minutes. I'm here as a surrogate for my boss, the chief of the Newborn Screening Branch at CDC, Harry Hannon.

It is a nice opportunity for me to speak to the committee. It is always nice for those of us in the branch to get out a little bit. Still, we feel whenever we go out and talk on Harry's behalf, we sort of think he's in the background watching us.

(Laughter.)

DR. VOGT: I couldn't resist. Harry is very hands on, those of you all who know him. He is looking over blood spots there, and he still looks over blood spots every time they are made.

The two programs that you all will hear about shortly are both devoted to the process of evaluation and the non-laboratory aspects of newborn screening, and yet both of them come from a sort of laboratory perspective. I think that has been one of the features of newborn screening since its inception. Michele was mentioning this in a conversation last week.

All the laboratorians interested in newborn screening were interested in a system, not just a laboratory test. So what you'll hear about today are part of the larger elements of the system with respect to follow-up.

The two talks come from two different venues. I think you all are quite familiar with the National Newborn Screening and Genetic Resource Center. I won't say anything further about that. But we thought you may not know as much about the Clinical and Laboratory Standards Institute. So hearing this may provide some background for you all to put that in the same context so that you could look at these two projects as companions.

So I'll talk now a little bit about the Clinical and Laboratory Standards Institute, or CLSI, which is the home of a guideline currently under development. You'll hear the details about that from Judy Tuerck in just a few minutes.

CLSI is, as the slide says, an accredited developer of global voluntary consensus standards and guidelines. The accreditation part comes from two standards organizations, ANSI and ISO. I suspect you all are probably familiar with those independent standards institutes.

We still think of CLSI by its original name, which was NCCLS, which was an acronym for the National Committee on Clinical Laboratory Standards. So we often say NCCLS, but I'm learning to say CLSI. It was actually Harry's wife who pointed out to him that if you think CSI and add an L, then you can keep track of the new name. It changed just in January.

CLSI has a large support base. There are a bunch of industry organizations, and a couple of international trade organizations here in the Ronald Reagan Building. There is an exultation of professional societies, and a gaggle of government agencies, all of which contribute to its efforts. Then at the primary care level, there are a large number of hospitals, hospital laboratories, health care delivery systems, and educational institutions that maintain an active membership status.

It is a pretty viable organization, and like all these things that work in the background and do their job most effectively when you don't hear much about them, it is not a plush organization. It is pretty much a shoestring operation. But it has had a disproportionate effect on the use of medical laboratory testing in health care. We have always felt it was a very effective organization.

The mission formally is to enhance the value of medical testing and health care services. Please note the twofold, the yin/yang, of this. Not just the laboratory tests, but also the delivery of the service in the context of health care. This is done through the development of documents, and these documents fall into three major categories. Standards, guidelines, and best practice documents.

The activity of NCCLS is actually performed by a series of standing area committees. This is the current listing of committees. These are actually under evaluation at this time, and there may be some changes here. But there are two points that I want to make here.

One is that there is a very broad scope of area committees, standing committees, with members from industry, academia, and government that meet on an annual basis and have conference calls on a quarterly basis that solicit and consider submissions for guideline proposals, and then that promulgate the subcommittees that actually develop those guidelines.

The Immunology and Ligand Assay Committee is in red, because the guidelines that you'll hear about today, the one that is under development and its precedent guideline were both under the Immunology and Ligand Assay Committee, and that area committee was chaired by Harry for I think about 15 years. He got a very nice award recently for his exceptional service on behalf of this area committee.

Now, the consensus process itself involves getting the subcommittees together with representation from very importantly, the private sector, and government, mostly federal government, but also other government entities and academia, and putting them in a little room and forcing them to talk about things, writing, and then revising until this subcommittee addressing a particular topic feels that it can approve this document. Then it goes forward into a larger review process.

The two major document types are standard, which are intended to be followed exactly as written, and a guideline, which are designed to be somewhat educational, somewhat instructive, but may be modified by the user. Very importantly, there are two aspects or two levels of this consensus process. The document is first approved by the subcommittee and goes through a little NCCLS review, then it is sent out at the proposed level and widely distributed to all the NCCLS membership.

Then that proposed guideline is used to gather comments. Those comments are returned to the subcommittee, and the subcommittee revises the document in accordance with comments. Every document has an appendix with all the comments listed and with the subcommittee response comment by comment. Once that process has been finished, the standard can be completed at the approved level. So when you see an A after the standard, that means approved.

These documents are widely used. They are used in the clinical laboratory, and they are used in academia, to some extent. They are used in the regulatory process in the federal government, and industry scientists do use them in their attempts to develop products that can be ready for submission, for instance, to FDA as an in vitro diagnostic device.

Perhaps the most important thing that happened some 15 years ago is that the federal government gave FDA official permission to use CLSI documents in their review process. So if a manufacturer can say that it has satisfied the requirements listed in a particular approved standard, then FDA is allowed to use that information to help expedite the approval process. My understanding is that this has been a useful tool in the FDA regulatory process.

CLSI is an active organization. There were 42 documents published last year. I think there are 30 some on the docket for this year. The examples from last year, some examples are shown here. The ones in red came out of that Immunology and Ligand Assay Committee.

Some of these documents are very arcane laboratory pieces, such as the Fluorescence Calibration Guideline which we worked on for years, and then others are much broader and not so focused on laboratory procedures themselves. So again, each of these is spawned by a subcommittee, and has gone through that review and revision process.

Now, of all the guidelines that have come out, actually the most popular NCCLS guideline is the one on antibiotic resistance testing. That one is their best seller of all time. But a close second is Standard LA4-A4. That is the Fourth Edition. Originally as a proposed standard in 1982, it's a blood collection on filter paper for newborn screening programs.

There was a six-year process to go from the proposed standard to the approved standard. That whole process has been accelerated as a policy at NCCLS, or CLSI. Then there were a number of additions of the approved standard, including the most recent updated edition in 2003, which actually had to go into a second printing.

So these are useful guideline documents that concern the qualities in the filter paper to be used. And you all know that the filter paper used for newborn screening is an in vitro diagnostic FDA-approved device as part of the laboratory test.

This has all been done through the consensus process, and these guidelines have been used since the inception of this proposed standard in 1982.

Here we took a picture to show the — that is actually not the original guideline. I think that's the second edition from 1992. The newest one is on the right. Down below the older one, you'll see a videotape that was made that is an instructive videotape. This is not a common thing in CLSI, but there are a few guidelines that have been transferred to video for educational purposes.

This one actually won a Freddie Award, which is an international media in health and medicine that annually reviews training media and so forth, and awards those that they consider to have special merit. So we are a Freddie Award winner, for those of you all that may have missed that fact.

Now, Harry wanted me to sort of end up this introduction by emphasizing the fact that all the components of the newborn screening system from the educational aspect to the actual testing through treatment and management share the need for evaluation. So part of what you'll be hearing today is how to integrate the evaluation process into newborn screening in a constant, consistent fashion.

The two programs you'll hear about, one of them originated more at our branch in CDC, and one originated somewhat more so at the Genetic Services Branch at HRSA. But the important point here is that both of these are highly interactive in their development. The NCCLS, or CLSI, guideline on follow-up in a way is a subset of the NNSGRC Program Evaluation and Assessment Scheme, or PEAS. But the important thing here is the interaction in the development of these two documents.

Harry wanted me to emphasize strongly that the point here is to have both the CLSI subcommittee and the PEAS committee working hand in hand as these documents are developed. Of course the point of all of this is to enhance quality and standardization in newborn screening.

The CLSI guideline, this I took from the original proposal, showing the primary goal is to improve and ensure quality and effectiveness of follow-up in newborn screening.

One point to make is that one of the reasons that NCCLS changed its name is that it wants to become more globally engaged. So the proposal to set this guideline is intended to be used by both private and state operated newborn screening programs. In fact, these things have international impact.

Harry wanted me to emphasize that our program at the Newborn Screening Branch provides services to about 400 laboratories now in 53 different countries. So the challenge is always to try to come up with something that is relevant to that entire array of newborn screening labs globally.

Then on the PEAS project, which you'll hear in the second talk, the goal I took here from the proposal was to create a model program, performance evaluation, or assessment scheme for various newborn screening system components, and to combine them into a systemwide PEAS to be used as a self-help tool.

So these are the two programs that you all will hear about now. Thank you very much for the chance to introduce these.

DR. HOWELL: Thank you, Bob.

Are there questions of Dr. Vogt before we go on to our other persons?

(No response.)

DR. HOWELL: Good. Well, let's move ahead.

Thanks, Bob.

Let's move ahead to Judith Tuerck from Oregon. Judy has addressed this group before, but today she has a new subject for us.

MS. TUERCK: Thank you, Dr. Howell, and thanks for having me back, members of the committee.

Good morning, everyone. It is a little bit rainy out here. Dr. Vogt gave a nice introduction to the CLSI procedure and the various components of CLSI. I, as one of the peons of newborn screening follow-up truly, truly, truly appreciate this opportunity for us to develop guidelines for follow-up in newborn screening. This is something that has never been done before. We're very, very excited about it, even though it is a terribly torturous process for all of us involved.

The committee is made up of eight voting members, which you see here. A number of these people are also on the PEAS project. We also have a number of other advisors. There is another whole group of observers. Trust me, we have plenty of people on this committee to advise and help us out with these guidelines.

This week I'm sort of equating the guidelines to transitional labor, because we are really at the process where our subcommittee has gotten the document to what we hope is going to be a semi-final draft. I hope it will be a semi-final draft by Monday. So I get to go home and work the weekend on getting the draft put together. But it has been a very interesting experience to do this.

The intent of the guidelines, as Dr. Vogt said, is really to provide a framework and a best practices model for follow-up. We met in September, and we wanted to make sure that we are addressing only the follow-up sections of newborn screening, and this document will not address any of the analytical portions of the program, any of the confirmatory tests, nor any of the treatment modalities.

Guidelines for these particular parts of the screening program have been in existence for awhile. The follow-up section is really sort of the last piece to get follow-up guidelines, or to get guidelines.

Our intended audiences, as Dr. Vogt suggested, is really global. This has been a real challenge for the folks on this committee, because 90 percent of us are from the United States. So it has been a real challenge for us to be able to write these guidelines without a U.S. bent.

But the guidelines are really intended for any person in the screening system who may be participating in follow-up activities, not just for follow-up people per se.

I need to point out to you a bit of a difficulty we've had in follow-up over the years, because we use it as a noun and a verb. The verb is obviously the actions that we take to find the babies, and I like to think of follow-up people being sort of the emergency technicians, if you will, that get a baby from the point of an abnormal screen to the point where they're in the hands of a medical specialist who is going to evaluate and take care of that child.

Then there is the noun, which is the follow-up people that actually do the job. So sometimes we talk about follow-up as the noun, and sometimes we talk about it as the verb. You need to kind of be aware that they are used interchangeably.

Follow-up actually really begins with the birth of the baby. For most hospitals and docs in the community, the American Academy of Pediatric Guidelines say that they need to know the screening status of every infant in their care. So hospitals and private practitioners have a responsibility to ensure that the screening test is actually done.

The actual follow-up services that are provided by people in newborn screening programs begins generally at the time that a test is determined to be not adequate. Follow-up really begins down here. If the test is adequate and the result is normal, then a report goes out and nothing more needs to be done, and everything can stop. But if the result is not normal, or if it is not conclusive, or there are risk factors or any number of things, follow-up personnel begin to get involved.

Either that means repeat testing or confirmatory tests. These then get down into the diagnostic tests and confirmation, and eventually hopefully the child, if affected, is into a treatment or a clinical follow-up setting. At this point, short-term follow-up ends, and long-term follow-up begins.

We have talked about these terms in the past. Short-term follow-up, the guidelines I think will primarily address short-term follow-up issues. Long-term follow-up, I need to make a distinction between the long-term follow-up care that is given to children in specialty clinics. That is the actual taking care of the child's needs on a day-to-day basis.

Then there is the long-term follow-up data collection. That is how are the children turning out functionally. What is their functional outcome? Do they graduate from school? Do they need special services? What is the morbidity? The mortality? What are some of the epi studies?

That is the long-term follow-up data that newborn screening programs are meant to be collecting, but unfortunately are not doing a very good job of doing that. This document will not address long-term follow-up data collection in great detail, but we will certainly include it in the body of responsibilities that belong to a screening system.

Follow-up personnel in this country do more than just follow up. The majority of us do, in addition to follow-up, probably 80 to 90 percent of the education. This varies a little bit by program. We try actually to get lots of folks involved in the educational process if we can, folks in the lab, and our medical consultants. But the primary responsibility for education has fallen to the follow-up people.

As you heard yesterday, we are doing just a wonderful job of it. But I must say in defense of my colleagues around the country that we have not had the luxury of having public health education specialists involved in the newborn screening program in the past. We didn't know we were being ineffective. We thought we were doing everything we could to do a good job. It is only now in the last few years that these kinds of data are becoming available. They are so important to us, because we do want to do a good job, and we do want to get the word out. We just need help in knowing how to do that.

Follow-up folks are taking on increasing roles in administration as well. Many of them are involved in contract negotiations and program administrative duties as well.

The Follow-Up Committee met in September of 2004. We had sort of a two-day marathon session. We came to agreement over a number of sort of overarching principles. That is that obviously follow-up is an integral part of the screening system.

We feel that follow-up should be centralized within a given jurisdiction so that you don't have a separate follow-up system for hemoglobins, metabolic disease, and endocrine diseases. There needs to be within a program a certain overall consistency in the follow-up activities that are taken for each disease.

If I had my way, I would say that follow-up activities need to be consistent across jurisdictions. But that will not come in my lifetime, I know. But we will begin working toward that.

I think follow-up activities need to be prioritized. I worry too much about folks who are following up babies who may have a trait, or who have minor abnormalities to the exclusion of the babies who have presumptive positive results. I have certainly seen this happen. So there is a priority list in follow-up about what you should do first.

All of the members of the committee believe that active follow-up is needed for all abnormal and unsatisfactory samples, and that follow-up should be accomplished quickly. It shouldn't be something that is drug out for months and months and months. All cases should be resolved and closed within a specified period of time.

Again, this is defined by the program guidelines at the moment. Hopefully we will get to a stage when we can all say things should be closed by X amount of time, and we can all do that. But right now, those cases are being resolved based on program specifications.

Finally, follow-up activities need evaluation. This has really never been done before. We really want to be able to define follow-up and its place and function within the newborn screening system. We are trying to outline the follow-up responsibilities.

We want to describe the communication channels and data systems and how that works within the system, develop policies and procedures for follow-up activities, quality assurance, and evaluation, and also to outline some of the research needs in the area of follow-up in this document.

If you look at essential follow-up functions, the most important responsibility any follow-up coordinator or follow-up person has is the follow-up of abnormal samples. These are children who have been found to be possibly affected in the screening program. These are the children who need to have the full court press of the follow-up system and screening system brought to bear to find those children, to get their confirmatory tests drawn, and to resolve the question about whether they are affected or not as rapidly and as quickly as we possibly can.

We would also say that whatever follow-up activities any given system takes upon itself, they also need to resolve all of those cases. Some programs do a lot of follow-up for QNS samples. They do a lot of follow-up for trait counseling and carrier follow-up. Anything that they take into their shop should be resolved within a good time, and certainly resolved.

Every newborn has a valid screening result. Well, this is a humongous job, and one which, to be quite honest, most follow-up programs and most screening programs really cannot do themselves. The way that this is managed is that you set up your program so that there are responsibilities assigned to hospitals and to the practitioners to make sure that screening is done, and done a certain way, and done

in a certain manner. Then you sort of monitor how well those hospitals are complying with that kind of regulation.

In some small states, there are still follow-up coordinators who will say to hospitals, if you don't want to screen this baby before he goes home, that's okay. You can let him go home. We will take care of it. So then the hospital faxes a sheet to the follow-up coordinator, and then they go out and actually collect a sample on the baby.

This is doable in a state which may have 10,000 or 15,000 births, but it is certainly not doable in a bigger state, and is not standard care. Then there is obviously collection of long-term data.

Follow-up personnel really need to be pretty knowledgeable about the screening system in general. They need to understand the conditions, and they need to also understand the laboratory methods and the constraints on the methods by the various tests that are being done in the lab. They need to understand the confirmatory services and how to access them.

They certainly need to know about the birthing facilities, the physicians, and the care providers in their own communities. They also need to develop a network of community services to assist follow-up. These include public health nurses, which we use almost on a very regular basis to assist us to find children who are hard to find, all the way up to police.

I remember one case in California where they sent a helicopter out to collect a baby that needed to have a screening test done. So very extreme sorts of measures have been taken in some cases to ensure screening.

Certainly you need to have a person who is very tenacious, resourceful, and doesn't give up easily. I think that that is probably the most critical piece that a follow-up coordinator can have is that tenaciousness and willing to go that extra mile.

I put this up, and everybody says, what's "passive follow-up"? It's an oxymoron is really what it is, because passive follow-up is really just reporting out case reporting. This is what happened in the first 20 years of newborn screening, or the first 15 years of newborn screening. You need to realize that from probably about 1965 or 1962 when screening programs first started until the early '80s, many screening labs only sent reports out on abnormal results. They didn't send any reports on normal results. That was a relatively new phenomenon.

On the abnormal results, typically in the early days they would just mail the abnormal result to the physician, like any standard lab would do. They would expect the physician to do the right thing.

Well, the physician gets this result and has absolutely no idea what to do, has no one to call, struggles with it, and may or may not get it sorted out. But the result was that a lot of babies were falling through the cracks, and children were being missed. Active follow-up really ensures that the cases are resolved in a specified time frame.

The categories of follow-up. Obviously abnormal results, unsatisfactory screening, not done, inadequate, too early, and carrier and risk factor. This is sort of the bucket of follow-up that folks do in this country. What is that load?

This is actually from the 2000 data. You can see that about 1.5 percent of the cases that got referred were abnormal. That's the number. Two percent of specimens in this country were inadequate, but there is a huge range. This is actually Oregon. This is another state, and 11 percent of their specimens are inadequate.

What is very interesting is that 67 percent of the children in this country are tested before 48 hours. This comes back to the idea that how can we follow-up 60 some percent of 4 million kids. That's just ridiculous. We can't.

We don't know really how many children are not screened. We think it might be around 1 percent. Children that don't get screened tend to be those kids in NICUs. The screening test gets forgotten, or children who were born out of the hospital, or who were discharged early without a screening test, and then failed to return. We don't know how many kids are needing to be followed up for carriers and risk factors in hearing. That is still unknown, but maybe 5 to 10 percent. So it is a huge load on the follow-up folks.

Emergent disorders. How are we doing? Emergent disorders are things that are going to kill the kid in the first seven days of life. Non-emergent disorders, things like PKU and CH, biotinidase, once again you have to realize that old guidelines when I came in '78, the guideline was that you could get a kid with PKU or hypothyroidism on diet or on therapy by three months of age and you were still okay. Well, none of us would dream of that today.

Days to treatment if specimen is collected. There are four different time periods in this. The specimen is collected, it takes some time to get to the lab. It takes some time in the screening lab to be tested, and then the follow-up folks need some time to do their work.

So you can see that there can be a huge difference in the follow-up time for any given individual, depending on when specimens are collected. If you look at the National Screening Report, these are for emergent disorders. Here is the goal of 100 percent on treatment by 10 days of age. Here is where we were in 2000, about 55 percent are on treatment by 10 days of age, and another 10 or 15 percent that are on treatment by three weeks.

What is really disturbing is these kids out here that are really unknown. Nobody knows what happened to those kids. Did they get on treatment, or didn't they? We don't know. For non-emergent conditions, if you look at 2000, here we have about 75 percent of the kids being on treatment by 21 days. These are PKU, sickle cell disease. If I had my druthers, I would say everyone needs to be treating all these cases as emergent conditions.

The lost to follow-up cases, about 2.5 percent a year are lost to follow-up. Unfortunately, we're not collecting very good data on those kids. For example, there were 45 deaths in this group, and about half of those were due to abnormal results in CAH, galactosemia, or MSUD.

I don't know how this is going to change once everyone starts doing tandem mass screening, but I'm worried about that. I'm concerned about it, because I don't think we're following up our babies fast enough.

Most of our follow-up coordinators are not measuring their own activities, but they are looking more at program goals. As I said earlier, the follow-up priorities may not be clear in all cases.

There are some problems in follow-up in that the coordinators really don't have the time or the expertise to devise follow-up studies. We need help in that. The coordinators I think have difficulty advocating for themselves. We haven't had any guidelines.

There is no standard follow-up for educational activities. Most of us who do this are nurses or genetic counselors. But there are certainly a few states where there are secretaries who are doing it.

I'm going to skip this actually. We are the last part of the newborn screening system to develop guidelines. We sort of struggled for equal status within the screening system. I would just like to point out that we're not represented on this committee or on the subcommittees at this point.

Follow-up activities are often underfunded, although HRSA and CDC have definitely changed that in the last five to ten years, and really have made an effort to help us do this.

Research needs. Certainly a survey of policies and procedures is desperately needed. We have no idea what we're all doing in this country. This list, I'm going to let you sort of read at your leisure.

Then I just want to close with the time line for the document. We hope that by June of '06 that we will have published approved guidelines by that time. So about a year from now we hope that this document will be done, reviewed, and we'll have gotten through all the processes.

Thank you very much.

(Applause.)

DR. HOWELL: Thank you very much, Judy.

I think we have one question from Dr. Edwards.

DR. EDWARDS: Yes. I'm not sure how many tests you were doing, but I would think with the exponential increase in tests, that the problems with follow-up would be remarkably different.

MS. TUERCK: Oh, absolutely.

DR. EDWARDS: What is happening? Do you have any data like with the 29 conditions that we are recommending, what sort of personnel would be needed for that? What are the costs relative to say the three to five tests that probably were done ten years ago?

MS. TUERCK: I can't speak for the whole country. I can certainly tell you what has happened in our program. We have a five state region. We started tandem mass two and a half years ago. The follow-up load for the metabolic diseases doubled. In the beginning it was actually triple because we were chasing a lot more false positives.

It is now about double the load that we were doing before. So instead of getting one case, we are getting two cases. It has been hard for us to do it.

DR. EDWARDS: What about your (inaudible)?

MS. TUERCK: I believe that a couple of extra personnel were added. I work actually, or have worked in the metabolic clinic. So we act as the medical consultants to the screening program. I was doing the primary metabolic follow-up. The personnel in the state lab have increased two or three personnel in the follow-up section of the lab since the addition of tandem mass. So it is definitely going to take more people.

DR. HOWELL: Dr. Rinaldo? Excuse me.

DR. EDWARDS: Two or three relative to what? Did it double?

MS. TUERCK: Doubled. There were two people before, and now there is four.

DR. HOWELL: Dr. Rinaldo had a question.

DR. RINALDO: Judy, following the question from Dr. Edwards. Can you give us a general idea of the false positive rate currently for this program?

MS. TUERCK: I think now we're down to less than 1 percent. But in the beginning, the first year was tough, because we had it set pretty low because we really needed to establish those cutoff ranges.

DR. RINALDO: Thank you.

DR. HOWELL: Dr. Rinaldo, as I think many on this committee are aware, is a great proponent of focusing on more accurate laboratory testing, in particular to reduce the false positives. Chasing false positives can be deadly. By changing that just slightly, you can make a huge difference. That's very good.

You made one comment about subcommittees. There obviously is an important subcommittee of this committee that has just been established under the directorship of Dr. Boyle that is charged with follow-up. The subcommittees are still in the process of formation, and are looking at the needs of the committees and so forth. So it would not be correct to assume that any group at this point has been excluded from the subcommittees until these committees are really moving along.

We will now move to Dr. Therrell, who is going to tell us about the PEAS project.

DR. THERRELL: Thank you very much.

This is the Performance Evaluation and Assessment Scheme or Program Evaluation and Assessment System. It doesn't really matter, as long as you get PEAS. I don't think we can fault HRSA for this name. I think some of this name came from Dr. Hannon, who said this would be kind of neat and let's have these little peas over on the side. So this is our new project.

As Dr. Vogt mentioned earlier, the purpose is to support improvement of newborn screening systems and ultimately patient services by developing a Program Evaluation Assessment Scheme.

This was a competitive grant with HRSA, and the grant activities are described here on the slide. We have developed multidisciplinary project teams, which I'll show you in a minute. We are collecting and assessing tools that the states are using. We are creating comprehensive evaluation schemes for the system, we are developing electronic means for states to use these PEAS, and we are going to plan how to evaluate and implement this program.

So previously in the world of public health, we have talked about total quality management and continuous quality improvement. Now we've got PEAS. This is the wrong attitude, to say that I don't do PEAS. We are going to be developing PEAS, and we hope people will use them.

So we have an oversight committee where we have pulled in people from organizations and people with certain skills that we thought were necessary to help us with this project. These people are listed here. Bill Becker from Public Health Laboratories, Steve Edwards is on it from the American Academy of Pediatrics, and Charlie Homer from the National Institute for Children's Healthcare Quality.

Then Alex Kemper, who is an evaluation specialist at the University of Michigan, Kelly Leight, who is a parent advocate for CAH, and Trish Mullaley, who is also a parent advocate in PKU and allied disorders and represents the Genetic Alliance.

We've got Patricia McLaughlin from the Association of Women's Health, Obstetric and Neonatal Nurses, David Ross from the Public Health Informatics Institute, and we did have Nancy Wade, and we're going to get a new name, from the Association of Maternal and Child Health Programs. She has moved back into private practice.

Then our overall direction, or the POD, includes our HRSA collaborators, Michele and Marie, Harry Hannon from CDC, and then we have two subcontractors, Marion Schwartz and Carol Southard, who used to be with the New Jersey Department of Health. Both retired at about the same time. One of them was laboratory and one was follow-up, so we hired them both.

So what we're looking at is developing a self-assessment tool that states could use to sort of look at their program and find out where they need help, and then we would give them advice on where to find that help. Being a laboratorian, I have sort of defined this as pre-analytical, analytical, and post-analytical.

Our group has been meeting now for about a year. We've had a couple of face-to-face meetings, and a couple of phone calls. We have sort of decided that the approach we'll take is the one at the bottom of the page. We'll have performance indicators, and then people can assess their programs in terms of yes, we have it, no, we don't have it, or we have it sort of halfway in between, we're working on it. Then if the answer is no, we would give them some advice on how to improve that particular indicator.

We hope to do this electronically. We originally had thought we'd do it on CD, but the more we've gotten into this, it looks like we'll do it on the Internet. It would be sort of go to the Internet, and if you pick a no, then it would lead you off into, we hope, a person who will talk to you and lead you through the process, or give you some direction in terms of references and that sort of thing. We'll probably also have CDs available for states to use.

We've got another year on the project, and so that is what the second year is intended to do, is develop the electronic means.

This is one of our working committees. We have two committees. One is the Follow-Up/Education Working Group. It is working primarily on the pre-analytical and post-analytical PEAS. Then there is a Laboratory Working Group that is working on the analytical PEAS. You can see that this is a pretty diverse group.

We picked sort of the cream of the crop from around the country in follow-up in newborn screening, and we have also added to that some people who actually are in the trenches in terms of nurses at hospitals. So you'll see people from New Jersey, Delaware, Minnesota, Oklahoma, New Hampshire, California, Nebraska, Louisiana, Maine, and Washington.

Then we have also invited people from the hearing program of both HRSA and CDC to sit in on our deliberations since we're not dealing with hearing particularly in this project. But since there is some interest in the hearing community to develop a similar project, both of these people have been observing.

Marie and I primarily interact with this committee. Since this committee is mostly women from around the country, these are the heavenly PEAS.

What I'm going to show you here is sort of where they are right now in terms of general PEAS. We're getting into now the specifics, which I'm not going to show you. So each one of these PEAS has some sort of subheadings under them. Then under those subheadings, which you're not going to see today, are numerous indicators which are being developed. We are still debating some of those.

You see they defined some things as cross-cutting across all areas. Education, data systems, monitoring of screening, and program policy and financing issues. Then in terms of pre-analytic, we talked about prenatal and birthing facility education for parents and consumers. Just as an example, prenatal education materials, the distribution of the materials, and the evaluation of the impact of the materials. Then looking at professional education, the same sorts of issues. Again, under each one of those would be numerous indicators.

Likewise, for post-analytical, looking at overall follow-up system evaluation in terms of what does the evaluation plan look like, what are the minimum evaluation elements, looking at the follow-up of presumptive positive results, as Judy was talking about earlier, looking at the follow-up of unsatisfactory specimens, and looking at mechanisms for evaluating the timeliness and effectiveness of diagnosis and treatment in terms of diagnosis and medical intervention.

Parent/consumer education for newly diagnosed newborns in terms of education and counseling, and outcome measures for evaluating long-term follow-up, which of course is a critical issue that most programs aren't dealing with right now looking at medical management and long-term outcomes.

Laboratory Working Group, also a fairly diverse group from Florida, Massachusetts, Oregon, Wisconsin, Texas, Minnesota, and California with oversight by again, Marie and I, and Harry Hannon from CDC. Donna Williams also joins this group from our organization.

The laboratory group is a little more boisterous. We talk about black-eyed PEAS in that one.

So in laboratory pre-analytical, heelstick blood collection is an issue, specimen transport is an issue, and then at the laboratory we are looking at training issues, safety issues, specimen issues, also looking at acceptability of blood specimens, transport processes, specimen quality, including the data that is submitted with the specimen.

Then getting into the analytical process, there are several more PEAS here. So in terms of analytical processes, this group has dealt a lot with whether to go through and enumerate these processes, or just to say this laboratory needs to be CLIA-approved. They have decided it would be more important to go through and actually delineate those elements that need to be approved. So they are going through right now expanding this list. You can see it's pretty voluminous right now.

In terms of instrumentation, there are issues there about calibration, operation, and maintenance. In terms of supplies and reagents, quantity, quality, and storage. In terms of environmental conditions, what about the environment? What effect does it have in terms of information systems looking at the laboratory computer information system.

Post-analytically, also looking at screening test results, looking at acceptability of the assays, the reporting, the validation of the accuracy, and the validation of the test reporting itself. What do you do with corrected reports? Looking at archival record keeping, and also dried blood spot management.

Looking at clinical feedback, which is missing in many programs, and looking at contingency planning. So you can see it's pretty overwhelming when you get down to the many different aspects of newborn screening systems that you can look at.

We are also developing a compendium of resources that we'll draw from to help states with these indicators. We are, again, looking at the different types of electronic media to use in this project.

So as I said, it is a project that is ongoing. We are about halfway there. By the end of the next year, we hope to have developed the electronic process and be in the process of evaluating how it works.

This is from Marie or Michele. "Just give PEAS a chance."

(Laughter.)

DR. THERRELL: Thank you very much.

DR. HOWELL: Thank you very much, Brad, for your nutritious lecture here.

(Laughter.)

DR. HOWELL: Are there questions?

DR. BOYLE: Brad, are you going to actually do some kind of pilot test at the state level?

DR. THERRELL: It depends on the timing.

DR. BOYLE: Okay.

DR. THERRELL: We plan to do that. If we don't have enough time in the project, then we'll make suggestions as to how that should be done, and we'll talk to HRSA about extending the project perhaps. But we have volunteers on the group who would like to try these out in our states, so I don't think that's going to be an issue. We do plan to do that.

DR. HOWELL: Piero, and then Joseph.

DR. RINALDO: Brad, I have two comments. The first one is I don't know how many members of the committee are familiar with CAP accreditation. But what you have there is remarkably close to the CAP checklist.

So I wonder if this could represent a step towards really considering for numerous screening labs if these are successful, to consider becoming CAP accredited. CAP is the College of American Pathology. Sorry. Now, that I would like you to comment on.

The other point is I think this is truly an exhaustive, very complete list. It seems to me that perhaps one thing is missing, and really it is assessment of performance.

You have really a systematic way to approach and document every single aspect of the laboratory activity. Perhaps I missed it, but I didn't see anything except a reference to proficiency testing to how the lab is performing. So can you comment on that, please?

DR. THERRELL: Yes. First off, this is more than laboratories. So CAP is the laboratory part, but it wouldn't apply to the rest. Whether the labs are CAP-approved, CLIA-approved, or have some other approval, the issue with the laboratory people was there needed to be some sort of approval, and they weren't going to be prescriptive as to whether it is CAP, CLIA, or whatever.

They agree that that listing and the way to do it is similar to some of these other organizations. But they are listing out more specific indicators, which I didn't show you here, which we're in the process of sort of modifying. We just had a meeting last week, and so this is sort of fresh off the argument stage.

But it will be very extensive. CAP is of course a possibility, but I don't think we're going to be prescriptive and say you have to be CAP certified or whatever. You just have to be certified in some sense.

Your other question was?

DR. RINALDO: Performance.

DR. THERRELL: Performance. Built into some of the details are some performance elements. They did not want to go to the extent of saying is your false positive rate greater than .1 percent or .05 percent at this level. They felt that it was more reasonable to say are you meeting the CLIA standards, and are you doing the things that need to be done there.

So I know your feelings on this. I don't want to debate here, but we will take it back to the committee and we will discuss that, I promise you that. We will bring that back as an issue and let them talk about it.

DR. RINALDO: Because I think it is directly relevant to the discussion that we had before with the question that Dr. Edwards had. There must be a deliberate effort to minimize the unnecessary load on the follow-up activities.

I really think this is key to the success of expanding screening. So I am just pleading not to make it an afterthought, but perhaps one of the most critical things that should be accomplished.

DR. THERRELL: I think there is a deliberate effort now. You have to remember, however, that the laboratory is part of the system. The idea about screening is to not miss any cases, but also not to have so many false positives that you overburden the system.

So lots of programs have developed their follow-up laboratory algorithm, if you will, in terms of what the system can bear without missing any cases. So sometimes to a laboratorian like you or like me, that cutoff may not be where we would put it if we were doing it statistically, but it is where the program wants it so they don't miss any cases.

So I agree with the overall concept. It is just tough to do it in the system.

DR. RINALDO: Sure. I think it is sacrificing the specificity for sensitivity without any real data, that indeed is the case. I think, again, it is important. It is like carrying a heavy load that perhaps is not necessary.

DR. THERRELL: Right. That's why we have a big data collection effort, and that's why it's critical for people to submit data so that we can evaluate program against program, I think.

DR. HOWELL: The math is very simple. If you are having a 1 percent false positive rate and the incidence of the condition is 1 in 10,000, obviously you are following up a huge number of persons for every positive. That of course can be paralytic on a system that's stressed. I think that's the point you're making.

DR. THERRELL: Yes.

DR. HOWELL: Joseph, you had comments.

DR. TELFAIR: I do, but I'll yield to Coleen.

DR. HOWELL: Coleen?

DR. BOYLE: You can go. I was just going to follow-up on Piero's comment more from the follow-up perspective, because I think this is an issue that came up last week. I actually attended a PEAS meeting last week at the invitation of Brad and Marie.

I guess I asked the question of why there couldn't be specific standards with regard to follow-up. I'm trying to understand the system here. I was told that states don't want specific standards, they want to have general guidelines.

So I thought one of the discussions that we could have, both within the subcommittee as well as a larger committee, is just that whole issue. You are smiling, but clearly from my perspective if we have standards, they should be standards. That might help push the system a little bit.

DR. HOWELL: Well, the Follow-Up Committee you chair obviously is the perfect place to have those discussions.

Joseph?

DR. TELFAIR: Yes. My question goes back to actually a link between the previous presentation and what you just said. The previous presentation focused on the quality assurance issue as it relates to some of the issues that were discussed on quality assurance.

In your presentation, I didn't see a list of objectives that were linked to that. I'm looking at that, and also the question that is sort of on the same line as Dr. Rinaldo had mentioned, which is the whole assessment of performance.

It seems to me that in the form that you presented, you only are asking one part of that, which is yes or no did you do this. The other piece that is missing seems to be are you making progress towards achieving that objective or indicator link to that objective.

I didn't know maybe in the conversations and the things that you all are working towards whether or not you are going to do that, because that seems to be important given what you are focusing on.

DR. THERRELL: Yes. This is intended as a self-assessment tool. So the program presumably, they have asked actually if we come up with a form, if there would be a comments box with each section so that the state could write those kinds of things in if they wanted to keep this as their own record and look at it from time to time.

What I also didn't show you is, I mean, if you look at the indicators with all of these PEAS, you would see about probably 10 or 15 pages of them. There are literally 20 or 30 indicators. Some of them get very specific about evaluating different issues in follow-up and laboratories.

DR. TELFAIR: Well, I understand that.

DR. THERRELL: Yes. What you are talking about would be in their comment, I mean, that is what they wanted to do, but they wanted to do it in a comments box. So they would mark in prep, and then in the comments, they would talk about far they are along.

DR. TELFAIR: Well, I have more questions, but I'll get with you another time about it.

DR. HOWELL: And Bill Becker has some comments. This has obviously been an excellent discussion, but we need to start winding down after Bill's wisdom.

DR. BECKER: Thanks, Rod.

Brad, Piero does raise an incredibly important point on the issue of certification or accreditation. First of all, for background information, all state public health laboratories that are performing clinical human testing are at least certified by CLIA, and I am aware of some that are CAP-accredited.

By the way, CAP stands for College of American Pathologists, not Pathology.

DR. RINALDO: Let the record show that.

DR. HOWELL: Would you like to confess any relationship there?

DR. BECKER: And I am a card-carrying member of that organization.

I do believe, though, that accreditation of organizations, that there is particular interest right now in accreditation of public health organizations. NACHO, you may be aware, is actively considering it. At some level, and I don't know how well developed this is, there is actually discussion at the level of ASTHO and perhaps a little bit at CDC about accreditation of state health organizations, not unlike the model of the Joint Commission, which also accredits laboratories as well. So there are a number.

I think, Brad, your perspective in your group is appropriate that there are several different particular models that could be used for accreditation. There are several different models that are potentially being proposed for public health, but Piero's point is one that has to be on record that until we get to some standardization of the methods, some standardization of the way we look at the results, and some standardization perhaps of the cutoffs, I think we are going to continue to have these conversations about the impact of false positives widely across the system.

DR. HOWELL: Let me thank Dr. Vogt, Ms. Tuerck, and Dr. Therrell for an excellent presentation.

Derek has a parting word.

MR. ROBERTSON: Just for clarification. Some of the acronyms that you were just using — ASTHO and NACHO — if you could just clarify some of those.

DR. BECKER: ASTHO is the Association of State and Territorial Health Officials. That is the state health officers. NACHO is the National Association - it is the local health - I won't try to do this for the record because I'll get it mixed up. It is the local health officials national association.

MR. ROBERTSON: Thank you.

DR. HOWELL: Thank you very, very much.

Now, we're going to move, as everybody is aware at the last meeting we appointed three subcommittees to address areas that were deemed to be a priority for this committee. Those groups have been meeting by telephone and so forth, and have had some time here at this meeting. We're going to now have actually the first round of presentations from these committees.

Again, as I said in the outset, although these committees have been discussing priorities and areas of interest, they are still in the process of development, both as far as their mission and memberships.

We're going to start off by hearing from Dr. Howse, who chairs the Education and Training Subcommittee.

DR. HOWSE: Thanks, Rod.

The Education and Training Subcommittee consists of Bill Becker, Steve Edwards, Greg Hawkins, Jim Collins, and myself. Our assigned HRSA staff person is Penny Kyler.

We have just really begun the process of coming together by telephone, beginning to sort out, as Rod says, a mission for the subcommittee. We've had two telephone calls. They have lasted each an hour.

What we have done generally obviously is to reaffirm the broad goal of identifying existing education and training materials, as well as gaps in those education and training materials across five different groups. Health professionals, parents, screening program staff, hospital and birthing facility staff, and the general public.

That's a tall order. We're very humble about the amount of information that we don't have and what we don't know. But we are proceeding to begin a broad review of existing materials, particularly with respect to health professionals and parents, which we felt was the place to start, to kind of begin to dig in and start.

We are very aware that the model for our review is a kind of a funnel with a very broad cone. That is all the parents need to have their babies screened, and that's 4 million babies a year. We're very mindful that that's a broad swath and that it's not necessarily simple to reach that swath of the population.

Then the funnel gets very, very narrow with kind of a long neck to it. That's the parents, the health professionals, and all the associated support for the small number of children and babies who get a positive screen and a confirmed diagnosis of one of these conditions.

There, the situation changes dramatically of course for the parents, family, and the associated health professionals, because they are now dealing with a very serious, and in most cases, a long-term kind of condition. So we are sensitive to those two dimensions, if you will, to health information as we begin our discussions.

We're also very respectful and mindful of the tremendous responsibility of the states to not only provide the outreach and information, but also to provide the technical services and be responsible for the quality and provision of the technical services around screening.

So with that kind of preamble, we've had the two meetings. We began with actually what is like a preview of what our afternoon presentation consisted of yesterday. We have reviewed in a very basic way some of the materials that Terry Davis has put together. We have looked at preliminary kind of readability assessment of newborn screening materials.

We have reviewed a larger prepublication piece from Terry Davis and her group, consisting of recommendations for effective newborn screening communications which really reflects focus groups across parents, providers, and an array of experts. We have reviewed a sample of the ACT sheets that have been put together for the recommended conditions.

Brad Therrell's group has been very helpful in providing us with survey information from the states regarding their information brochures, and then kind of a broad overview of the array of state material that has developed. So we're just beginning to get a preliminary picture.

The other piece that we're quite interested in exploring with regard to materials and training for health professionals is the current stance of some of the key health professional societies, medical and nurse societies regarding newborn screening. So we are just beginning to kind of dig into that subject, and we're starting with of course the American Academy of Pediatrics, Academy of Family Physicians, College of Nurse Midwives, ACOG, AWHNN, the Association of Women's Health Obstetrics and Neonatology Nurses, and the Society of Teachers of Family Medicine.

This is also the group that Terry Davis and her team have been quite interested in. They are the groups that have been kind of in the information stream with ACMG in this whole screening process.

But basically we're interested in the question of alignment between the stated public policies of those groups around newborn screening and the connection to the recommendations of ACMG. You see, if the policies of those medical societies are not in alignment with or different from the recommendations from ACMG, then it naturally flows that the training materials, the newsletter content, and CMUs will also not be in alignment with the recommendations of ACMG. So we're just beginning to explore that question, and we'll be following along there as well.

One of the conclusions of our, again, very preliminary discussions was we got quite impressed with the array of material from a number of states, including California. So we are trying to get a better sense of best practice, if you will, from states. We're going to be collecting some of the material from California and others and just kind of see what it looks like, get a sense of it, again, to try to better educate ourselves.

The other piece that we were interested in bringing back to this committee was a very important question that Bill Becker brought up at our last phone call, which has been touched on a bit this morning already. It has to do with this somewhat delicate question I think of interface between the medical home and the state and private laboratories. It is kind of central to this whole policy and set of protocols around follow-up. This was an area where we felt we needed some additional discussion and perspective from the committee.

Bill, I'd like to call on you to just outline that from your perspective in a bit more detail, and perhaps guide the discussion to see if we can get some help from our fellow committee members.

DR. BECKER: Yes, thanks. This is an issue that I think most of the states have to deal with at some level. Obviously with increasing levels of confidentiality in medical records and patient information, there is sometimes resistance being cited in various regulations, HIPAA being probably the most common one being cited, about the provision of information and getting information from the medical home back to the newborn screening program.

If that happens to be centered out of the laboratory, then that's the laboratory making the request, or sometimes just even identifying what the medical home is. I think Brad has outlined that on several occasions, so it is sort of a two-way problem.

One, finding out what the medical home really is for the infant, and that may be the bigger issue, and number two, getting information back from that medical home to the newborn screening program. I think states are struggling with those two issues on a daily basis.

DR. HOWSE: Any comments on that issue from committee members? I don't know if that's a subject that you all have taken up in some of your preliminary thinking in the other subcommittees, or whether you all have views on that subject.

Certainly the issue that Bill raised was joined by Steve Edwards. The concept of the medical home is quite important and really fundamental to pretty much all the policies of the American Academy

of Pediatrics. So we didn't know if you all had any other views or any other perspectives that you'd like to share with Bill and with the rest of us.

DR. HOWELL: Are the rules and regulations governing the communications of the state laboratories that enjoy certain privileges as far as privacy and so forth, are the regulations governing their correspondence with the medical home and so forth, are those clear legally and so forth around the country?

DR. BECKER: I'll try to answer that. Actually, that was sort of a subject of our breakfast conversation this morning. A lot of it, to be honest with you, Rod, depends on the state's interpretation of, let's use HIPAA as the prime example.

DR. HOWELL: Okay.

DR. BECKER: A lot of it depends on their interpretation of HIPAA. Some states have interpreted it as that particular newborn screening disorders, particularly if they are described as part of the newborn screening health program, it is public health information in one of their administrative rules, or even in state statute, it is considered public health information that can be reported by most interpretations of HIPAA.

Other states don't interpret it quite that way, and then there creates a problem for states to get the information that they feel they need.

DR. HOWELL: Piero?

DR. RINALDO: This is obviously a problem everybody has to address. One option that seems to work well for us is we have clearance from the HIPAA police to use a secure website with a restricted list of people that can access it.

The way it works, it is actually a commercial product from IBM. What happens is that when somebody posts information about a patient on the website, an email is sent to, again, that defined and approved list of individuals that only says go to the website. Then we can start there a string of information about that patient.

That was reviewed by lawyers from the Minnesota Department of Health, from the University of Minnesota, and they all deemed it acceptable. That is now our primary and very effective means of communication.

So perhaps in our cases it could work, because we have two screening labs, two really follow-up centers, and two laboratories. So it is more a number of individuals. But this has really served very effectively the purpose of keeping the screening laboratory in the loop of what happened in the follow-up of a patient.

DR. HOWELL: Dr. Edwards has a question or comment.

DR. EDWARDS: I had a concern relative to the action sheets, you remember the one-page action sheets that have been developed.

I think basically they are excellent. But it is a little bit unclear. I'm trying to think like somebody would think in an office on Friday afternoon when you get the message that you have a patient that needs to be followed up.

It says immediate consultation from metabolic specialists. I think that's fine. But at the bottom on each of these things it says report findings to state newborn screening program.

Now, what I heard Dr. Rinaldo saying is that in Minnesota, that they're having the subspecialists report their follow-ups to at least have computer access. So I have no problem with asking the primary care, the medical home, to report the findings. But I think that some are going to fall through the cracks if that's the only way that the reports are done.

I think in most states it will be a very small number of subspecialists who are looking after these patients. So that if the subspecialist could communicate, or wouldn't take the onus away from the medical home, I would say that you probably would get more reliability by having the subspecialist tied into the system as part of reporting back.

The other problem with the medical home is sometimes they don't get those reports, or sometimes like with universities, the subspecialist may have dictated a report. That report may go out two months later. So I think that what I would like us to look at is tightening the systems.

The other thing, even when you look at the word "report the findings," that could be interpreted to say that you are supposed to report this back to the newborn screen. I think what you are reporting is a follow-up back to the newborn screening program. It is a little bit confusing when you first read that.

Again, if you are reading it in your office at 4:00 in the afternoon and trying to get a lot of other things done, you might say why am I supposed to let the newborn screening program know about this. It is a follow-up really that you're looking at.

DR. HOWELL: Well, Jennifer, it's perfectly clear that there is great interest in your committee, and specifically this particular area and so forth. It seems to me that some of the questions — Denise, do you have a comment?

DR. DOUGHERTY: No, not on this.

DR. HOWELL: Anybody else on this specific area? It seems to me that this ties in also the question of communication, HIPAA, and so forth, it ties into the issue of informed consent that will obviously come to this discussion at some point in time.

But deciding about these communication lines, how they should be done and so forth, is obviously an important area and one that appears the committee would be very interested in having you continue to study.

DR. HOWSE: Yes, and we thank you for the opportunity to share our preliminary discussions. We're very mindful that we give advice on these matters.

I think the other aspect for us has been the great array and variety of materials that are already there, and that are already available. So that has been a very interesting, I think, learning for us so far. So this concludes our report.

DR. HOWELL: It seems an interesting time to mention this. That is that one of the things that has been very interesting to me is that I've had a tremendous number of people contact me and so forth and express interest in this committee, and in what they're doing.

Some of the people have very specific expertise. One person that has recently written to me is a young attorney in Chicago. He is working on a Ph.D. in genetics in medical ethics who is very interested in perhaps doing something related to this. This may be something that she may be able to be a

resource to the committee on. I might discuss that further with Michele during her career. It seems to me that the questions would center around her interests greatly.

Steve?

DR. EDWARDS: One other thing that I'm sure that Jennifer and all the committee members would appreciate is as Jennifer pointed out, there is an awful lot of information going around out there. We don't know about all of it.

DR. HOWELL: Yes.

DR. EDWARDS: I'll give you an example. As a result of our conversation last week, I was to communicate with family practice and OB/GYN. Well, I got a communication back from the person who was identified as a contact person at the family practice. This is scary in a way. He didn't know what we were talking about.

Now, I'm sure somebody else in the organization got the report. Doug Henley is their Executive Director. He had indicated that this was a person that I should communicate with about newborn screening. Well, he didn't know anything about the report, having come to family practice.

So if you look around the country, there is a lot of difficulty in communication, no matter how hard you try. But then the other thing that he did know about that I didn't know about, he knew that they were field testing some materials from Terry Davis. Our committee didn't know that.

So if there are those sitting around the table who know about activities going on in the field of education, I think the most important thing for us to know to start with is where we are starting and what is already being done. We are certainly trying under Jennifer's leadership very vigilantly to get that. But if you know about something, please let us know.

DR. HOWELL: Well, let me complicate matters even further. I'm aware of at least two groups working with family practice on modules on newborn testing at the current time. So it's very interesting. It seems like there is a lot of communication that we need to do.

Jennifer, do you have additional reports from your committee?

DR. HOWSE: No.

DR. HOWELL: Thank you very much. I think you all are making great progress.

Denise?

DR. DOUGHERTY: Can I just plant a seed? I don't want us to go there today, but it actually follows up on what you were saying and what Coleen said yesterday about a public education campaign. I have been thinking about that.

With all the web and Internet stuff, patients very often will go to their doctor, for better or worse, and we always would prefer that education materials go to pregnant women during the visit and so forth.

But I was thinking there were these huge chains like Wal-Mart, Target, and Buy Buy Baby where pregnant women go a lot, or their families go. They might be willing to have a little brochure that says ask your doctor about newborn screening, with maybe a little bit of information.

I don't know if they'd be willing to do that. I bet the March of Dimes has tried something like this before. But it is just an idea to think about.

DR. EDWARDS: Wal-Mart did immunization information for the AAP. So I think something like that is possible.

DR. HOWSE: I think that is actually a great idea, and we need to go to that place today, except to say that somewhere at a more mature level of our discussions and our committee work, there will come the question of distribution of material, what and where, and certainly the retail outlets have worked with us, with AAP. They have been really good about getting family-oriented health information out.

I do believe that at the right time, we're not quite there yet, but at the right time, we'll be able to have that discussion. We would really welcome, again, full participation of the committee.

DR. HOWELL: I think the idea of a public education information program at the right time is a wonderful idea. That's going to be very important so that everybody at least is aware that this program exists and so forth. Then when it comes up in their own personal life, they will have at least some background and so forth. I think that's a terrific idea, and we need to pursue that.

Joseph?

DR. TELFAIR: Just one thing. One comment to add is the what and the where, but I would actually add on the who is doing it as well. You had two folks yesterday that presented on the development around literacy and that sort of thing.

It seemed to me that they would be helpful to your committee, because they seemed to have a lot of work that they were doing with other people. So that's just an add-on to that suggestion.

DR. HOWELL: The committee and the subcommittees will certainly identify experts who can serve as consultants and so forth to the committees. I think that that will enrich the committee, and also provide a lot of information.

Thank you, again, very much, Jennifer.

Now we'll go to Coleen, who is going to address the small issue of treatment and follow-up.

DR. BOYLE: Well, actually, that's a great lead-in to my introductory thoughts. I think, just like Jennifer, I feel like our committee is just sort of getting its feet on the ground. We've had, similarly, two one-hour phone calls.

I should introduce the subcommittee members. They are Peter van Dyck, Joseph Telfair, Denise Dougherty, and Derek Robertson.

We have been working under the guidance of Marie Mann, but we'll now have a new direction from HRSA. I have to say that for many of us, this seems like an enormous task. So actually yesterday at our subcommittee meeting, there were a number of you who participated, and I found it to be very, very productive and very helpful in terms of trying to provide a charge for the committee.

I think in our initial phone calls, what we had talked about was really trying to get a sense of what the standards were in terms of both short and long-term follow-up, and also more of a feeling for sort of how broad or how narrow the charge for this committee would be.

In our initial conversations, thinking about standards for short and long-term follow-up, one of the issues that came up was that there is a lot of information out there in terms of guidelines and possibilities for state standards.

The two presentations you heard this morning on the PEAS project and on the NCCLS, I'm not sure I got those initials right, by Judy and by Brad, were clear indications of the types of projects that both HRSA and other agencies are supporting and trying to develop standards and guidelines in that area.

Another issue that we talked a lot about is really why aren't these standards adopted. Since you ordered the barriers, what are the things that are perhaps keeping state programs from adopting these standards? Really I guess there is no formal accreditation or certification process maybe beyond what is done at the laboratory level.

So one of the issues that we have been tossing around is could we as a committee not only develop some type of product relative to standards, but could we also help with the accreditation or certification, in perhaps moving that process along.

So after our subcommittee meeting yesterday, I actually took a stab at it. Actually, only Joseph has seen this on the subcommittee, so obviously this is a draft. Actually, the initial reaction is it might be a little too broad, but this is my sort of draft charge for the subcommittee in light of what I had just talked about.

The initial one would be really to establish standards of practice for both short and long-term follow-up. What you heard from Judy this morning was really focusing more on short-term follow-up. But I guess there is a sense from the subcommittee members, as well as the public input we got yesterday, that long-term follow-up is really very critical and very important, particularly in terms of establishing the knowledge base as we move forward in this field.

Then in terms of the logical sequence here, obviously once we've established those standards, the next logical step, and thanks to Joseph for helping me through this, is to really establish a mechanism for the dissemination and the education of key stakeholders in terms of these standards. Then perhaps the next logical steps would be testing models that would lead to the adoption of those standards.

Those two steps, both in terms of the dissemination and the education, as well as the testing models for adaption, would be really complimentary activities. Finally we would think of somehow establishing a mechanism, a formal accreditation process through some recognized body for establishing accountability to those standards.

That is my attempt from what we talked about yesterday to actually put some type of guidance to the subcommittee. It is quite broad, and I can see some frowns around the table, so clearly that is something that we need to talk about further amongst ourselves, as well as in this larger committee.

But to give you an example, this is what we had talked about yesterday in terms of just understanding and trying to clarify the initial bullet, which is to establish standards. We heard this morning that there is a lot going on, and there has been a lot going on in terms of trying to identify guidelines for newborn screening.

So what we thought we needed to do first, just like what Jennifer talked about in terms of the educational component, is really to understand the science. What has been done already? What is currently being done in terms of the current projects that you heard this morning? What will their products be? As well as a number of other activities that are going on.

From yesterday's discussion, this includes a number of different activities in terms of both treatment guidelines, financing-related issues, and I know there are specific projects that are looking at that, as well as would have to be complemented by some type of inventory of what states are actually doing, what state practices are.

We talked in our subcommittee about the impediments of what were perceived as well as the real impediments at the state level in terms of implementation of short and long-term follow-up. I just outlined those that were mentioned specifically yesterday in our discussion of the financing aspects, the availability of the expertise, both at the laboratory and at the clinical diagnostic level.

Then very importantly, a third component in terms of trying to understand the state of newborn screening follow-up is really the perspective of the parent and the caregiver in terms of this. I feel like that's a critical perspective that needs to be included in understanding really what is out there before we can actually get to the step of developing standards.

Helping to develop standards is another idea or another issue that was offered as an idea of looking at models that work. We have talked about sort of the idea of best practices. Clearly there are exemplary programs or exemplary components of programs that we really want to sort of touch into that. So really identify the common features or the key features in those programs. That could help obviously go into the development of these standards.

Other issues that came up in our discussion yesterday. Some of them fit under what I have just currently outlined for you, but just some other ideas. I'm not quite sure how they fit right now. One of them was obviously with the implementation of the recommended panel that this committee has put forth to the Secretary. That is clearly going to impact sort of the day-to-day practices in state newborn screening programs.

One of the charges of this committee could be to try to understand some of the struggles in terms of the actual implementation of that recommended panel.

I think this goes under the issue of developing standards. But what came across in our discussions yesterday too is really clear definitions of follow-up, particularly long-term follow-up. Now, who is responsible for long-term follow-up? What is the responsibility of the state health department for children? Obviously we use the PKU example.

Children should be followed up through their entire lives, particularly through their reproductive age in terms of the proper guidance and proper nutrition to make sure that their children don't have any increased risk of adverse effects. It's obvious I'm not saying that the state health department is responsible, but someone is responsible when we in fact have a universal program of identification.

Then financing was a big issue for discussion. I did mention that already in terms of the ideas of the standards and the implications of standards. It was expressed that in many state programs they can't adequately deal with follow-up for the children they are currently identifying.

Then finally we heard I think last time about the uniform child health record. I'm not sure if I'm saying that quite correctly, but the fact is that there is a larger effort to create a child record by linking information from various programs that are under public health purview, immunizations, newborn screening, both hearing and blood spot screening, and children with special health care needs. Clearly this is thinking in terms of a broader context here when we think about follow-up, and not just thinking in isolation for this particular program, but trying to put it in context.

So those are just some other issues that I thought were particularly relevant that came up in our discussion yesterday. I thought I would share them with the committee and with the larger group as well. Those are really my thoughts.

DR. HOWELL: Dr. Edwards, then Dr. van Dyck.

DR. EDWARDS: I don't know if this follows exactly in your purview or not, but a question that I would hope that you could consider is the whole question of communication.

One of the problems is if we do get electronic records for children, and we do have the state's programs having this information, one of the problems that physicians have is like when a new patient comes into their practice, it is very difficult to get their old information.

It becomes even more difficult when it is from another state. Especially if you are accustomed to assuming that all of your kids have been screened for thyroidism, for example, and another state — that's probably not a good example, because all states do thyroid now. But you understand the point.

So with the whole HIPAA thing and the whole idea about confidentiality of information, it is a large problem with the mobility of our population now, and especially even a lot of people don't have to move to change health care providers. Their company changes insurance companies, and they change.

So the whole business of transformation of information is something that I don't know if that follows exactly in your purview or not, but I hope you'll look at it, because I think it is a tremendous problem.

DR. HOWELL: Peter?

DR. VAN DYCK: I think that captures nicely the discussion we had.

I only had trouble, and I'm glad you got the first slide up, with the word "establish." I'm not sure that we as a committee or as a subcommittee want to establish the standards or establish models. We might want to encourage, facilitate, review, and recommend it to the Secretary or something. But I just have a little concern with the word "establish" as the verb.

DR. HOWELL: So you would put a word such as "recommend" or something of that nature?

DR. VAN DYCK: Well, something other than making the committee itself responsible for the development or the establishment. That's all.

DR. HOWELL: Yes. I appreciate that.

Denise, you had your hand up earlier.

DR. DOUGHERTY: Yes. We did have a good meeting yesterday, it was a great discussion. I think Coleen captured it very well. I have two questions that occurred to me.

One, what is the general expectation of states or HRSA about long-term follow-up? Is it kind of a nice thing that should happen, but nobody really does it? And the other question is are there any examples for other conditions, infectious disease tracking, where there is a good relationship between the health care delivery system and the state public health?

I mean, I thought of HIV, and then I figured maybe that's really worse because of the confidentiality issues. But are there any examples from other conditions or laboratory examples?

DR. HOWELL: Peter, why don't we ask you to comment about HRSA's responsibilities, or Michele, in this area?

DR. LLOYD-PURYEAR: A lot of states do long-term follow-up. I think that's the desire of all states probably to engage in long-term follow-up. But there are financial requirements for that. To finance those follow-up programs has become increasingly harder, including short-term follow-up. So it is not just something nice that will happen. It is realized that it is something that is very necessary to happen.

DR. DOUGHERTY: So it's in a standard somewhere for guidance?

DR. LLOYD-PURYEAR: It's in the guidelines. It's in a lot of guidelines. The most recent would be the Newborn Screening Task Force report that we did with the AAP. It is in those recommendations.

DR. HOWELL: Bill has a question.

DR. BECKER: Yes, from the states' perspective, I certainly agree with Michele's comments that it is in the guidelines that have been published. Certainly those are goals to be aspired to, but under increasing fiscal constraints that all states have, some states are making decisions that perhaps short-term follow-up is as far as they can go, and long-term follow-up, some long-term follow-up activities might not be fundable at this point in time.

There are still some states that very aggressively do long-term follow-up. Brad and Judy could certainly describe those for us if we need that information.

But it is certainly something that all states are having to relook at, considering the current fiscal environment.

DR. HOWELL: Wouldn't it be an appropriate interaction for the newly funded HRSA regional cooperatives, HRSA has recently funded — these folks can explain much better than I, but basically it has divided the country up into regions so that there are regional cooperatives.

One of the things that might be integrated into that would be to have the newborn screening materials flow through there so that there is a mechanism to follow them up. That also, again, thinking in a cooperative way, it also would be a great way to network into the NIH research centers that focus on rare diseases.

So that if you have a patient in Montana with a urea cycle defect, there is a special center funded by NIH here in Washington on urea cycles. It would be nice to have the opportunity to have those experts work with everybody so that everybody gets that same level of expertise.

As those centers go around the country, that might be a specialty center that could be a consultant to the regional cooperative. Did you discuss the regional cooperatives? And do they have a role?

DR. BOYLE: No, we have not discussed them, but I think that's an excellent idea to consider what their role is. As part of this I think data gathering aspect, we see that as our next step. That's an appropriate group to be thinking about as well in terms of what roles they can help in terms of bringing forward our recommendations.

DR. HOWELL: And obviously the CDC-funded program that Judy reported on before where the persons are being enrolled, and a mechanism is being developed to follow-up on some of the patients, that seems to be a logical thing that would also fit.

DR. VAN DYCK: That's true, Rod.

That's an important role, I think, that the collaboratives are exploring. Clearly you can take an example which would be a region. There may only be one specialist or two specialists for some particular disease which all states need to use. Well, a regional collaborative can clearly facilitate the referral mechanism from all states to that one or two specialists, thereby decreasing the burden on all the states by gaining efficiency.

I mean, you can go on and on with these kinds of examples of facilitation across a region for very rare conditions that we think will lessen the burden on states.

DR. HOWELL: I think that's a terrific opportunity. Since they are just formulating their programs, it's a great time. Again, HRSA has been very wise in having a coordinating center that is working with everybody that they can help facilitate some of these things. I think that's a great opportunity.

Bill?

DR. BECKER: Denise, you also asked sort of a second level question. Are there other reporting mechanisms that interface between medicine and state public health. You used the HIV example, but I would broaden that out.

There are infectious disease reporting mechanisms. Surprisingly enough, we do get HIPAA concerns about reporting infectious diseases to the state health departments, so HIPAA isn't just involved in newborn screening by any stretch of the imagination.

There are other reporting mechanisms that we learned about at the last meeting, like the Birth Defects Registry and some of the other medical and public health information databases that sort of reside at the state public health agencies.

In the infectious disease model, it is a little different, and the reason why I bring it up is it may be something we want to consider. The CDC establishes, if you look at the MMWR, the National Notifiable Infectious Diseases, Reportable Infectious Diseases, it is the table that's at the back of the MMWR every week.

Now, states take a subset of that, and largely I believe they probably use all of them and maybe customize them to what's endemic in their area, but it might create a model for newborn screening to create a list of what we consider national notifiable or reportable newborn screening disorders, or something like that.

That is not to say, and I'll say again, that is not to say that I don't get calls or questions about reporting that information because of some kind of HIPAA patient confidentiality concern.

DR. DOUGHERTY: And people are working on bioterrorism-type reporting activities and early alerts. Those are kind of one-time things though, rather than long-term follow-ups. But they might be good people to talk to.

DR. HOWELL: Greg has a comment.

DR. HAWKINS: Just a quick comment. Just listening to your presentation, it really dawned on me that one part of follow-up has a strong education component to it. In other words, you are going to be doing post-education of someone after maybe a parent is notified that they have a disease, versus pre-education.

I wonder if there is a separation of maybe duties here between committees to make sure that we're not doubling up our efforts between the Education Committee, or maybe whether we should concentrate more on pre-education.

Then with that in mind, the question that comes up is you have materials for pre-education and post-education, making sure that the materials reflect the same type of information. Don't give two different perspectives on the disease.

I mean, just any comment that anybody might have on that.

DR. TELFAIR: I would just comment, if I can, that this is actually a point of overlap that actually should be there. A lot of what goes on in follow-up, part of that is education. Part of that particular long-term follow-up is that you have to have ongoing stages, and I'll give you an example.

Within the hemoglobinopathies, a lot of the discussion if you're looking to define follow-up as was defined in long-term follow-up earlier as moving from birth throughout the lifetime, there are things that come up in terms of education and all the other issues related to that. Also ongoing education of providers in terms of a role that they would have. Those all come under the issues related in education, and it should be intermittently.

So that is, to me, a point of overlap. Particularly in certain areas, and with families as well.

DR. HOWELL: Derek?

MR. ROBERTSON: I guess where we could probably distinguish it is in the Follow-Up Committee. We'd be looking at the issue that there needs to be education, the actual developmental materials and how they are presented, like the presentations we saw yesterday, would fall more in the Education Subcommittee role.

So we would be recommending that there be education, and the materials be culturally diverse and readable. The actual techniques and working to get to that would probably fall more under the Education Subcommittee.

DR. BOYLE: But how do you do it?

DR. EDWARDS: I would agree with that.

DR. HOWELL: It's interesting, having privy of being on the other committee that we are here for after our break, is that there are clearly materials that will come forth from Amy's committee that are education in nature.

But I think that Amy's committee is going to need to kind of come up with some content-type stuff. But then putting it together and getting it in the right format I think is going to need to go to Jennifer's group for preparation and so forth.

Dr. Howse?

DR. HOWSE: I just wanted to kind of join Peter van Dyck's observation about the distinction between establishing the role of the committee to establish standards as differentiated from identifying best practices and using all available methods to promulgate a variety of best practices. So I want to join that.

The other question that is kind of sticking in the back of my mind is whether or not we should make a distinction, and I guess, Bill, you sort of touched on this. Make a distinction between what is on a state-by-state basis legislatively mandated with respect to, or legislatively authorized or required with respect to the newborn screening program.

That's basically the tests and the reporting requirements. Once you get beyond most state's legislation, it then really does go into this realm of best practice, appropriate practices, professional society, and guidelines. I'm wondering if we ought to consciously make some continued distinction between legislatively authorized requirements and how we can best educate and forward those as contrasted with the best practice approach which really seems as a general matter to apply more to the follow along and treatment.

Once the kids go into the realm of private medical practice, it's a different world. It's a different situation in terms of how we might choose to give advice and be involved.

Just a thought for maybe to take up on an ongoing basis. Thanks.

DR. HOWELL: That certainly is a clear definition when you get into the world medical practice and so forth. You do get into societies and best practices.

Are there other comments for Coleen?

(No response.)

DR. HOWELL: Thank you very much, Coleen. That was an excellent presentation, and Jennifer.

We are right on the money for our break. So we're going to take a break, and we'll be back in 15 minutes and hear from Dr. Brower and her committee.

(Recess.)

DR. HOWELL: Ladies and gentlemen, let's come back to our seats, please, so we can start with our next program. We are going to proceed with our review of our third subcommittee as soon as everybody finds his or her seat. Obviously there are many areas of interest circulating around the room and so forth, so let's get circulation moving to your respective seats.

We are going to have to send a posse out for Dr. Edwards back there, but we are now going to go and have a report from the third subcommittee. That is headed by Amy Brower. That's the Laboratory Standards and Procedures Subcommittee.

I happen to know that her information is absolutely up to the minute, because they were just changing slides. So it is hot off the press.

Amy?

DR. BROWER: As chair, I am always responsive to my committee members, so we do have some additional slides.

Thank you, Dr. Howell.

So I'm going to go over some of our initial ideas for the Laboratory Standards and Procedures Subcommittee. Members of the subcommittee that I'm joined by are Duane Alexander, Peter Coggins,

Dr. Rodney Howell, Marie Mann, Piero Rinaldo, and we are very gracious to the support that we've received from staff of Kerry Diener in Michele's office to help us with the initial getting together and formulating some ideas.

Since our January meeting, we've had three conference calls and some follow-ups in between by email. The charge of our subcommittee is really to assess laboratory methods and standards for testing panels of inherited disorders in newborns and children.

Our first focus areas are going to be process definition for the addition and deletion of conditions to the uniform panel, evaluation of new technologies, and a focus on infrastructure services. So I'd like to start with the focus on infrastructure services.

This is a pyramid that's familiar to you all that was presented by Dr. van Dyck at our last meeting. We're really focusing as a subcommittee initially on infrastructure of building services.

What we mean by that is that we're really focusing on some specific issues related to laboratory methodologies and standards, particularly nomenclature, testing strategies, cutoff values in reporting, and performance matrix. I'll step through each one of those with the subcommittee's initial ideas of focus areas, realizing that we're just in the beginning stages.

So in the nomenclature, we think that it is going to be important to provide guidelines for standardized counting of conditions, and really with a focus on clinical phenotype, how the group conditions, the primary marker used to determine whether the condition is present or absent, the testing platform that's currently being used, the response to treatment, the number of loci, gene, or analytes that we're targeting, and an ad hoc criteria to be established by the subcommittee as we go farther along.

We think that this nomenclature fits very nicely with some things that the Education Subcommittee is going to be dealing with. So we anticipate that we'll be able to help facilitate communication to professionals and consumers by communicating some of our recommendations to the Education Subcommittee, so we'll give them actually some tangible materials and suggestions of what to include in their work.

Testing strategies are really going to focus on the evaluation and standardization of pre-analytical, analytical, and post-analytical practices. We especially want to focus initially on time of collection, second collection, second-tier testing, interpretation, profile evaluation, and specifically timing of confirmatory testing. Not whether or not confirmatory testing is done, but the timing of the confirmatory testing.

We are going to be looking at cutoff values, thinking about disease range and normal range, use of analyte ratios, monitoring of abnormal results, especially for true positives reported abnormal, false positives, and those interpreted as not significant. So we think that it's important to start to establish the parameters around cutoff values, and these are the areas that we're going to focus on.

We also want to be able to compare apples to apples, so we're interested in normalization so that we can start to take the abnormals. Using some models that Piero has developed in his regional collaborative, we are really following their model and are going to understand the model that they're implementing so that we can start to compare laboratories to laboratories. We also want to look at the impact of second-tier testing.

We are going to be looking at reporting, particularly the standardization of the required elements. So when you get a report, what are the elements that each practitioner can expect to get in a report, and how do we make sure that they understand all of those elements, and that every state and every laboratory is including the same element?

We want to look at the quantitative results, the cutoffs, the prior experience, the range, the interpretation, which is the differential diagnosis, if it is applicable, and recommendations for confirmatory testing.

We are also going to be looking at performance metrics, including the definition of targets. In there, there is a wide range of things that we're going to be looking at. Detection rate cumulative by condition, false positive rates cumulative by analyte, positive predictive values cumulative by analyte, and proficiency testing beyond QC. So this fits with some of what Brad was talking about this morning, really starting to get a measure of what laboratories are doing so that we can compare results from laboratories across the board. So how do we start to get the data that we need to start to understand how to compare laboratories and understand how well they're doing.

The cross-cutting focus areas are really areas that all of the subcommittees are going to be looking at, but we feel that there are some ones that are particularly important for us to focus on initially as we get into these laboratory subcommittee issues. I just wanted to highlight evaluation. So the cost-effectiveness of testing, the assessment methodology, clinical validity and utility, and health outcomes.

Of course tied hand in hand with the laboratory information is information technology. So how do we start to integrate diverse data sets? How do we provide data access not only to clinicians, but consumer groups and public health entities, and how do we ensure privacy and financing?

So for us as a subcommittee, we're going to try to learn more about these areas and understand who is working on them in the communities, and how do we understand what they're doing, and make recommendations for improvements.

Another big focus area for the subcommittee, as discussed yesterday, was really to consider a process for the addition and deletion of conditions. We really wanted to focus on a process evaluation, and this is open for discussion. We are going to make it dynamic and an open-ended process so that as we learn more about new and existing conditions so that we can take advantage of that information.

We feel strongly that this is driven by the following stakeholders. Consumer advocates, clinical investigators, researchers, both basic and transitional, providers of laboratory services, and industry. We hope to include all of those stakeholders in our subcommittee meetings as we go forward.

We would like to propose the use of a prospective evaluation tool. We looked to the ACMG report, because it really laid out their procedure for identifying the condition on the current panel, as well as you can see in red, our subcommittee is really focused on the red box.

So right here, this is the red box blown up bigger. How do we start to look at secondary targets and conditions that currently aren't on the panel? So we are really going to base some of our initial ideas on the ACMG report, review of the report recommended, and then make additions to that report based on our subcommittee members and outside consultation with our subcommittee.

This is a prospective evaluation tool that was included in the ACMG report. We think that this tool is going to aid us in trying to understand what information do we need to capture on a go forward basis so that we can understand when we need to add a new condition, or when the state of the knowledge is enough that we can consider it.

This is just an example of the current condition evaluation tool, and the current diseases or targets that are currently included on the uniform panel. This is an example of what can be done for near-term testing. So there are some conditions that we feel are going to be sort of on the short list to be added, and then there are some that are going to take more work to explore that we'll be adding to the list as we go forward.

We want to create an outline and guideline for the process. We want to start to collect survey data from local groups, providers of services, and consumers. We want to help calculate the scores of the current testing. We want to apply the evaluation flowchart, modify this from the ACMG report, review updated literature evidence, and make recommendations for additions to the uniform panel.

We also as a subcommittee think it's important to focus on new technologies. So the types of new technologies we're thinking about are molecular, genomics, trying to take advantage of our recent learnings from the Human Genome Project, expression targets, and proteomics.

The uses for these new technologies will be new approaches to conditions that are on the current panel, as well as testing of additional conditions, as well as identification of new conditions that currently don't have any testing available.

We also want to address some other issues that are sort of floating around in the public and professional arena. That's multiplex testing, point-of-care testing, and direct-to-consumer testing. So we think that all of these things are going to impact testing not necessarily in the newborn phase, but maybe in child and adult onset genetic diseases. So we want to start to consider those issues as a subcommittee.

Point of care is where you have point-of-care testing. They currently do it for diabetes and other things in the hospital. You take a test right there and you get the result. There is no laboratory. It is just really point-of-care testing.

Direct to consumer is really the offering of genetic or molecular testing direct to the consumer. You order a kit over the Internet. Some of those companies and agencies operate outside of genetic counseling and physicians, and some of them operate in consultation with that. So we think it is important for us to understand how our stakeholders and consumers are being tested today for some of the conditions that our Laboratory Subcommittee will talk about.

We have currently invited participation from the following members for the subcommittee. I want to emphasize that our subcommittee is going to be an evolving group, and that as we go to different focus areas, we'll be inviting different participation from different folks.

I'm pleased to say that we have accepted participation from the following people: Dr. Don Chace at Pediatrix, Dr. Harry Hannon at the CDC, Gary Hoffman from the Wisconsin Newborn Screening Program, and Jana Monaco, a parent who you all are familiar with. We're excited to have her on the subcommittee. Larry Sweetman from Baylor, and John Sherwin is currently considering participation in the subcommittee. As many of you know, he is going to be the incoming President of AACC, so he may have a full plate. But he is excited to participate if he's able to.

So thank you for your time today. I'll take any questions.

DR. HOWELL: Are there any questions for Amy and her very thoughtful presentation from the Laboratory Subcommittee?

Bill?

DR. BECKER: Amy, that was a great presentation. You guys certainly have a lot of work ahead of you, as do all the other subcommittees.

Just a comment. I wanted to take a moment to make the committee aware of an ongoing project that didn't come up in the earlier discussion this morning, but is incredibly important, particularly to Amy's

subcommittee. That is CLSI is working on developing a protocol or standard document for MS/MS testing.

In fact, Dr. Chace is the chair of that subcommittee. So having him involved with the Laboratory Standards Subcommittee will be a particularly valuable addition. The NCCLS documents, or CLSI documents, I'm still in the old standard, are incredibly useful. Every antibiotic that gets prescribed based on susceptibility testing in a hospital uses NCCLS guidelines.

They really do set the standards. Not just nationally, but also as Bob mentioned earlier this morning, internationally through their affiliation with the ISO group. So it will be a valuable addition to the field to have an MS/MS testing NCCLS or CLSI document in the field.

DR. HOWELL: Any other questions or comments for Amy? I think one of the questions I have is that this is an enormous plate that is out here. As you think about it, and you quite correctly pointed out, it is an evolving effort. How would you kind of put some priorities on the first thing out of the barn?

DR. BROWER: Well, I think there are some things on the list that are a little easier to start to tackle than others. I think with just assessing the work of the regional collaboratives and other groups, like what Don Chace is doing at CLSI, I think there are some things that are near term that will be in the public domain soon that we can start to adopt and understand.

But our first focus is really going to be the laboratory standards and methodologies. But I think in parallel, we're really going to start working aggressively on the evaluation of new conditions to add to the uniform panel.

As we pointed out yesterday, some of these conditions are in limbo. They sort of have enough scoring, but they didn't have a test. Now they have a test. So we really want to address that issue. So as a committee, we are going to be discussing in the next week dividing into working groups so that we can really start to focus on these two areas. So those will be the two priorities.

DR. HOWELL: Derek?

MR. ROBERTSON: I guess I just have a comment again going back to yesterday's discussion about the suggestion that Denise had made about somebody coming in and presenting on the process that we're looking at.

It just, again, seems to me that, or would it be more useful that this presentation be made to Amy's subcommittee before they start going into depth about reviewing?

Again, it just seems to me that if you're going to be looking at the model, or a process as to how to add conditions, do you want to do that twice? Do you want to do it under the existing process that has been suggested by the ACMG report, and then hear something else from somebody else as a possible difference that you then have to go back and add those parameters in?

Or should the subcommittee hear from those personal persons, consider their comments, and then look at it as one thing, and then make that recommendation to the full committee saying, we heard from these experts, this is what they said, we accept it or don't accept it, and here is why. Then make that recommendation to the full committee.

It seems as though we're setting ourselves up to possibly be doing two sets of work.

DR. HOWELL: I have some clear thoughts about that. But let me hear from the other folks around the table.

Denise, you were the pillar of that earlier recommendation. What do you have to say?

DR. DOUGHERTY: I agree with Derek. I'm just not clear about the timing of all of this. Yesterday I think we decided that we wouldn't have somebody come before the whole committee and use the ACMG method to recommend a new condition, that we would wait until after we heard from an expert on using some different approaches.

So I'm not sure what the timing is of that subcommittee, when they are going to do things.

DR. BROWER: We also decided to have the Laboratory Subcommittee come back and report to the committee as a whole on how we think that model looks. So the current ACMG model, we as a subcommittee, I thought we had decided yesterday to evaluate it and make recommendations for additions to that.

DR. HOWELL: Coleen?

DR. BOYLE: I guess my understanding was you were going to give a potential condition, not actually go through the whole process. I guess I go back to we need to work as a committee. We need to come to some consensus around this.

The ACMG report was something. I feel like we need to move beyond that and feel like we're working together. We have explored options together as a committee, and then we come to a consensus and we say okay, go ahead, go forward.

So I personally would like us to stay on track with what we had agreed upon yesterday. I think you can flag some potential conditions and tell us why those conditions might be potential conditions.

DR. DOUGHERTY: Or we can share with your subcommittee some of the literature from which we know that the presenter will be drawing. Except we're asking the presenter to pull it all together in the context of the needs of this committee, so you won't get everything from the literature.

DR. COGGINS: The intention was to make a recommendation. Not add to the list, but to go through the work, and then come out with some recommendations with validation behind that recommendation for presentation of the full committee.

DR. DOUGHERTY: It is really doing the same work twice.

DR. HOWELL: Steve?

DR. DOUGHERTY: Well, there's no doubt that we'll ask whoever comes before the committee to look at the ACMG method and have that as a context for thinking about what else could be done. It really does sound like doing the same work twice.

Sorry, Steve.

DR. EDWARDS: I forgive you. I may have missed this, but I was impressed last time at the last meeting with the report about the second test and about, I think it was Oregon maybe that was doing, or somebody was doing a second test, and about the number of positives that they were picking up on a second test.

Is that one of the charges of your committee? Is your committee looking at the question of doing a second test?

DR. BROWER: Yes, it is. The confirmatory testing and the second test are both included in our purview of the subcommittee.

DR. HOWELL: That's a very complicated area, needless to say. A number of states do second tests. There are clearly some things that have been picked up. Some other things have been picked up, and it's not completely clear why they were not picked up in the first place.

But anyway, that's a complicated issue. That second test needs to be looked at very carefully, and really very good data, because there is lots of information on both sides of the street there.

Jennifer, you look like you've had something to say for quite awhile.

DR. HOWSE: Well, I just wanted to join Coleen. I agree with Coleen about the method by which the committee should approach this question of additional tests. I think we need to do a lot more laboring as a committee around consensus for criteria for this before we jump to the conclusion that this is now the next list of tests that needs to be added.

I just think we need more work there. That's to follow-up on what Denise said, and also to pick up on some of the recommendations from Amy.

I just will go back to the point that the current list of ACMG-recommended conditions has no federal standing at this point in time. We are still in the public comment period, and we don't have a single federal agency that signed on to that list. I just don't want to lose sight of I guess triage. I guess I'm making an argument for triage here.

For gosh sakes, let's get through the public comment period, review the public comments, make our case to the Secretary for which recommendations, what this committee recommends just from the report, and then turn our attention to the state inventory of what is going on out there, which is still pathetic in terms of the number of kids reached by those 29 tests.

I mean, I do think we need to devote some time to the coverage issue. I'm making triage arguments here. That's not to neglect the question of what needs to be added, but I do think we need to labor more collectively about the criteria.

Is this the right group? Is this even the right group to be recommending additional tests? What's the responsibility of the public health authority to establish criteria? CDC. What's the obligation of CDC? Where does NICHD weigh into this?

So I just think we've got stuff that we need to consider and sort through before we leap to the enticing subject and essential subject of adding additional tests. Just a thought.

DR. HOWELL: Piero?

DR. RINALDO: I agree completely with Dr. Howse. I think we have clearly a lot to do with what has already been accomplished. Also I don't have a problem sort of tabling any activity in this regard until we hear in July about this presentation.

At the same time, though, I wonder, I'm getting curious about what expectation is exactly we can develop about this presentation. What exactly will happen in July? Because it is not clear to me at this point.

Going back to the discussion yesterday, I believe there were a number of opinions, but somebody has to take ownership of, again, making sure that the process continues. Again, a child affected with SCID or Pompe's disease is no less important than a child with PKU. So we really cannot sit on this and have a long and extensive academic discussion and letting basically children go without screening where possible.

So I don't see a problem saying this can easily wait until July when we meet. At the same time, I hope that we will get something tangible out of this presentation in July. Perhaps it would be helpful to knowing events exactly. Also perhaps it could be an element where we could request these presenters, whoever they are, to address. That was part of the report, in the end it was a modification of the survey into a prospective tool that could be used.

Remember, there is an advantage in using it because that will give us a baseline evaluation of some of the conditions that didn't make the panel. So we can see how things evolved and treatments become available if there is really a progression.

So if only for historical and evaluation purposes, I think what was done shouldn't just be put on a shelf, but it was meant to be a baseline point for future evaluation of progression improvement.

DR. HOWELL: Denise?

DR. DOUGHERTY: Well, I actually wrote a note to some colleagues at AHRQ this morning, to the Director of Clinical Prevention who does the U.S. Preventive Services Task Force, and others who know people in the evidence-based world and who have thought about it a long time, and one of them could probably make the presentation.

But I can read to you what I wrote about what my expectation is. It might be good to hear back from this committee whether they agree with this expectation. Or I can go to the business center and print it out and we can look at it later. Which is your preference?

DR. RINALDO: I think you can circulate it. I think it would probably be easier to have it in writing and digest it.

DR. HOWELL: Well, I have a suggestion. Do both. Why don't you read it quickly, and then you can circulate it?

DR. DOUGHERTY: Here's a tentative title: "The Role of Evidence and Other Factors in Decision-Making." The presentation will focus heavily on the current state-of-the-art and science of evidence-based decision-making focused on screening.

Number two, what approaches are being taken in the absence of evidence?

Number three, how cost burden of disease, and I should put natural history, test characteristics are being addressed systematically in these efforts, and a subtopic, but I think it's very important, if expert opinion is used, are there systematic ways to obtain expert opinion, with the requirements that the person be knowledgeable about genetics and newborns and children.

So what do you think?

DR. RINALDO: Sounds great. But again, I hope that we could ask these presenters also to use specific examples. And if possible, again, provide an evaluation of the tools used in the report. At the same time, if they can possibly focus, and I think still there is a value here of providing a short list of

conditions, especially those who didn't make the panel, and ask them how they evaluated the Pompe disease, Fabry, Wilson, SCID, and the Fragile X.

So that will remain within the common frame, because we start talking about asthma, but we lose the continuity of the process.

DR. DOUGHERTY: Yes. It may actually take more than one presenter, because people have widely different views on this, not just in this committee, on evidence and other factors to be used in decision-making. So we may have to have a couple of presenters.

DR. HOWELL: Well, it sounds like we might. What I hear coming around, there are a couple of things.

One is that perhaps Amy's committee could also provide some thoughts and ideas, because they have already started thinking about this process. If they can give some specific comments to the speaker or speakers as far as the kinds of information they would like to be sure that they get. But I think that's a very good list.

But what I hear around the table is that number one, Amy's committee is very busy and has a lot on their plate. So I don't think it is going to be a huge issue to wait until after these persons present in July, and then having seen the ACMG recommendations and seeing their comments and so forth, I think Amy's committee is certainly an excellent place at least to develop thoughts about new conditions and so forth. They would always come to this committee.

But I think that these subcommittees are logical places to do it. So after July, they can start looking at some specific things. I think it would be critical that we not draw out this process, because we need to move along. We need to hear additional comments about this.

Obviously the ACMG committee deliberated about this for years, so it is not a new subject to hear that and have some additional input and so forth.

Amy, is that agreeable with you to sit tight with your committee on that particular area?

DR. BROWER: Yes. Yes, I think so.

DR. HOWELL: You've got plenty to do in the meantime.

DR. BROWER: We do.

DR. HOWELL: But I think that your committee would also, I really would appreciate your thinking about some processes and so forth that you'd like to be sure that these people address. It would help move this effort along.

DR. BROWER: And we can offer any help that you need, Denise, in kind of prepping the speakers, or we can work closely with them.

DR. DOUGHERTY: Yes, I think having a conversation with your committee and with the speaker to make sure that the speaker is covering what this committee needs to hear about.

DR. HOWELL: I think that conversations with several folks will be helpful to get the gist of the things that we would like to come out.

Derek has comments, and then Coleen, I see you have something.

MR. ROBERTSON: I guess I'm wondering if it wouldn't be useful for the presenters to present to the subcommittee. The subcommittees, as I see them, are representative of the full committee. Personally I would give deference to what a subcommittee comes up with in terms of recommendations.

So in terms of I think in the interest of time and in the interest of moving things along, it would seem to me that if they presented this, because again, the subcommittee seems to be the subset of expertise within the larger committee that forms each area.

So you have a subset of expertise within this group that has been formed to look at this. If they were to hear those representations, then I would, again, give deference to Amy and her group to think about it, because that is what I want to do anyway. When they come to present in July, I am going to give deference to what the experts think about it. Certainly I'm not an expert. So would that move the process along if they could get that?

Then there is a subcommittee report back to us as a larger committee that they heard this, and this is what was presented to them. They considered it, and this is what they accepted or didn't accept.

DR. HOWELL: Do you want to comment on that area? Or do you have a different area, Coleen?

DR. BOYLE: I can comment on both.

DR. HOWELL: Okay. Comment on both.

DR. BOYLE: I guess I personally would like to hear their talks. I feel like it brings us together as a group, a decision-making body. So that's my personal preference. My personal feeling is this is going to continue being a thorn in the side of this committee unless we come to a consensus about this process.

DR. HOWELL: It is a persistent thorn that we need to have surgically removed by some thoughtful speakers and so forth, and get that thrown away.

Now, one of the questions that I'm also thinking about is is there a way that we could do both? In other words, I'm thinking about it would really be nice to move this along, and would there be any value in having the subcommittee meet with these people beforehand and give some thought to it?

I really hate to wait until July and then everybody will kind of have to reconvene, and then everybody goes away in August, and then fall is here. Maybe we could have the folks meet with the subcommittee, at least discuss it, so the subcommittee can be thinking, and then have the folks come and present their thoughts here formally.

DR. DOUGHERTY: Well, how about if we form sort of an ad hoc group of members with Scott Grosse, Coleen, and me, and maybe somebody from my agency, to the Laboratory Subcommittee.

DR. HOWELL: Well, Scott is not a member of the committee, so that would not be possible.

DR. DOUGHERTY: Yes, but the subcommittee is inviting other people.

DR. HOWELL: Yes, but those have been very formally deliberated things and so forth, and they have been percolated upstream. They didn't just happen out of the blue.

DR. DOUGHERTY: Oh, I see.

DR. HOWELL: But the point is if you wanted to do any other thing, that would be fine.

DR. DOUGHERTY: I mean, we could have a couple of conversations with the conference calls with your committee, the people who are most knowledgeable about who the names might be, and give you some literature and things like that. Would that help?

DR. RINALDO: Everything helps. Whenever you talk with communication, I think it is always an improvement.

So this includes a selection of the speakers? I'm still unclear about who exactly. You mentioned a name that I didn't catch. But we are hunting for speakers?

DR. DOUGHERTY: I think we've got a lot of very good candidates. We may need more than one. So I think we really need to think about who would be the best. I think it also needs to be somebody who can speak plainly about these issues, and not be deadly boring. Because I think that is what Derek is afraid of.

(Laughter.)

DR. DOUGHERTY: It can be deadly. I mean, when you start going through these algorithms and things, it can get really boring.

DR. HOWELL: Denise, if you recommend someone deadly boring, you're toast.

(Laughter.)

DR. DOUGHERTY: Right. I know. I want to get Terry Davis back to coach.

DR. HOWELL: Let me move this along. We should not discuss people at this meeting and so forth. But the thing is in preparation for the next meeting and so forth, basically I can work with Denise, Coleen, and Michele, and we can decide about who would be able to comment, and then we can have that group move along.

MR. ROBERTSON: Yes. Speaking seriously, I'm always concerned about that. But I think really in terms of process, I really give a lot of deference to the subcommittees that are formed.

To me, when the subcommittees come back with a recommendation, I would have to hear something really different to not give that presumption to the subcommittee. So I don't see the subcommittees as separate. I see them as being an extension of me doing my work as a committee, just another area of expertise that I don't have.

So when the Lab Committee goes off and does their work, if they have heard a presentation, then to me, the committee has heard it. They would report back on that, and basically I'm going to trust that they have heard it, and they're going to give a fair assessment of it and report back on it fairly.

Likewise, if somebody approaches the chair with an issue and the chair reports back, I don't have to hear it from that same person, because the chair has said, I heard it. This is what was said. So to me, the subcommittees are simply doing the specific work of the committee.

So to move things along, I think to build a consensus if we have particular issues that individuals on the committee who are not on a particular subcommittee, then you raise that with the subcommittee chair.

So if I have an issue with education and maybe diversity and something, I would simply send an email to Jennifer and say, could you make sure that this is considered. I don't want to get the impression that we can't really work with and trust the findings of a subcommittee.

DR. HOWELL: Would anyone else like to comment on Derek's position there? Yes?

DR. TELFAIR: Yes. Yesterday in the conversation, I think one of the suggestions that came up was — actually, this is sort of the middle ground that allowed for both concerns, which are pretty strong, to be heard. There is clearly an express need by many members of the committee to hear the speakers. But then there is another express need to have the subcommittees do their job.

It seems to me that maybe one of the things to do would be what is currently being suggested, which is have whoever is being thought about as experts on these areas to provide maybe the big picture to the subcommittees, and let the subcommittees help them distill it to a key point, a report that would go to the regular committee.

But then they come and they present on a version that is much more targeted and much more relevant. They would already have information in hand based on the subcommittee's report, but at the same time, these members would come and just hear a more targeted thing like some other people have done, which is give a big picture, maybe a more targeted picture or presentation based on feedback from the subcommittee and whoever their designees may be.

DR. HOWELL: So what you are suggesting is that the persons who are identified meet with the subcommittee maybe at some length, maybe over a period of time to present their positions and discuss that with the subcommittees.

Then after that, distill down that conversation and then kind of present to the whole group?

DR. TELFAIR: Yes.

DR. DOUGHERTY: I'm wondering if this issue should be part of the Lab Subcommittee. It seems like much more than a lab issue. I guess I haven't heard, well, you had a lot of charges for your committee and a lot of things you want to take on.

But just as a committee, I think we were going to discuss whether the charges of each subcommittee were appropriate. All of this work needs to get done, but I'm just wondering whether in fact revisiting the criteria that we want to use as a committee or whoever may take this on in the future, should be under the aegis of one subcommittee.

DR. HOWELL: Peter?

DR. DOUGHERTY: With no offense to anybody on the subcommittee, I'm just wondering since we're having this discussion, I think that is really a main point.

DR. HOWELL: Let me make a general comment. That is that I think that the subcommittee's business in all cases is the business of the whole committee. I mean, what Education is doing is also the business of the whole committee. I don't think it would be restricted to the point of origin or something.

Peter?

DR. VAN DYCK: It seems like we're making this awfully complicated.

(Laughter.)

DR. HOWELL: It is awfully complicated.

DR. VAN DYCK: I mean, we have an issue, and we've already agreed that we would have speakers come at the next meeting to lead us through this discussion. Determining the speakers should be a joint activity, that's fine, between whoever is interested in the subcommittee, and certainly you, Rodney, and us at HRSA.

I think recommendations on who those speakers should be from whomever wants to participate on the committee is wonderful. Why can't we just move ahead and do that, and then move as a committee once we hear what the presentations are, then we make recommendations as a committee on what we've heard.

MR. ROBERTSON: I think that will just add another meeting into the process. If the presenter comes in July to the full committee and hasn't really, to me, fleshed out those concerns or whatever, methodologies that they came up with with the Lab Subcommittee, then we all have to then process that.

Then the subcommittee that's working with that would then take those suggestions and then go back and deliberate further until the fall.

DR. VAN DYCK: I respect that position, but I, for one, would like to hear the presentation as well. I think for an issue that has, and I don't want to use the word paralyzed, because that is too strong, but for an issue that has concerned the committee so deeply for several meetings, I think it is our responsibility as all members of the committee to hear that and be able to firsthand discuss our feelings on it.

I think it can then be, after the discussions, there can be a lot of work done around the issues by the subcommittee that then come back to the full committee to discuss where then the subcommittee would be more involved.

But I really think that this is an issue that the whole committee needs to hear.

DR. DOUGHERTY: I don't want to overpromise on a set of presentations that by the end of that presentation, this committee will be able to agree on an old direction, a new direction, or whatever. I just don't see that happening.

I guess the purpose I'm thinking of this presentation is to give the committee as a whole a sense of the environment out there about how decisions are made for other conditions, other topics, and how people use cost and other things in decision-making. Just to give a sense. And then it's up to the committee to take or leave whatever they want, or to ask questions.

Is that fair? I don't want to think that we're going to have the answer.

DR. RINALDO: They should try.

MR. ROBERTSON: Yes. I'm not going to belabor the point. I mean, I was just looking at it from the context of first, and I think we've addressed this. First doing two sets of work, which that has not been addressed because we agreed to table that. That was the first point.

Then the second is a time line in keeping with Piero's comments in terms of the disorders that you want to address as quickly as you can. I'm fine. I think it is always good to hear things firsthand.

But again, with my comment, if a subcommittee hears it, then I've heard it. I want to defer to their opinions. But I think that's fine. I'm not going to belabor that more than I already have.

(Laughter.)

DR. HOWELL: You haven't belabored it Derek, not at all.

Joseph?

DR. TELFAIR: No, I don't think you have either, Derek. I appreciate the comments. Also what Denise has said, and Peter's perspective.

Having been through a similar process on some other committees I have worked on, the back and forth piece, which is what I'm really appreciative of in terms of actually adding to this thing to make it much longer, it seemed to me that if the subcommittees are represented in the committee, I think it is pretty clear on some of the issues that the committee has to more directly cut to the chase on this by doing an interim step, and by the time July comes around, you would have something more targeted to listen to. That was just my point on that.

DR. HOWELL: Is there any further comment on the subject?

(No response.)

DR. HOWELL: No comments whatsoever. So the bottom line is that as I understand the sense of this group, that the persons who will be speaking on the subjects, who had better not be dull, will be identified and will present at the July meeting. After that, the subcommittee will then look at those recommendations and so forth and come back with some plans and so forth.

Bill?

DR. BECKER: If it's okay to go back to Amy's report. Amy, I was just curious. Assuming that these charges are acceptable, and I believe there is a consensus that they are, have you guys decided on a prioritization of what you are going to tackle first?

Obviously this is going to be one issue that you're going to be working on in the interim meetings. What are the major issues of the extensive list you have that you'd be working on?

DR. BROWER: Honestly, I think the prioritization is going to fall out over the next few weeks. We are still working as a subcommittee and adding new members and invitees. I want to get their perspective as well.

DR. HOWELL: I think that one of the things that Michele had spoken to me about, that is that an important issue will be to let Michele know the persons that the subcommittees would like to have as consultants in July, if there are individual people.

Amy has listed on her slide the people that the committee has discussed, and we've discussed with her. But the other committees will need to identify any and all persons so that they can be done beforehand and so forth. The thing is that, and Michele will let me know and we'll look at them, they have to be approved by the chair and by HRSA. Ordinarily, that should not be a major issue, hopefully.

DR. BOYLE: Is that both consultants and —

MR. ROBERTSON: So I think you could hear the presentation first and determine if they are dull or not.

(Laughter.)

DR. HOWELL: I will be listening very carefully.

DR. RINALDO: We'll do it like a diving contest.

(Laughter.)

DR. HOWELL: We have a brief period of time before lunch for any other areas of committee discussion that you would like to bring up. Are there specific issues about the subcommittees that should come to the group, as far as what they are up to and so forth?

I think the thing that's impressive sitting here looking at the subcommittee's plans and so forth is there are an awful lot of things on the list. I think identifying the most helpful, prudent, and profitable areas to embark on is going to be a big issue.

We need to be sure that the committee gets things done and so forth, and that we don't have things that go on forever. We need to identify things that are profitable and that can really make a difference, and make recommendations to the Secretary.

Peter?

DR. VAN DYCK: I'd like to make a recommendation, and it has come up a couple of times in the meetings, that there be a process by the committee as a whole to approve the final agenda of each subcommittee. Agenda may be not the right word, the overall goals of each subcommittee, or charges of each subcommittee and those priorities so that we all together recommend and approve those directions.

I think that's just a good order of business so we all know what is happening.

DR. HOWELL: Well, actually, it has been stated that is the official charge of the subcommittees to identify areas and so forth that should come back to this committee for approval.

I guess we will need to get those back. Can those be sent to Michele with some prioritization so that the committees will have those?

DR. RINALDO: I have a question. I just want to make sure this will not delay the process. I hope that it can be done outside of face-to-face meetings.

In other words, if we wait until July to approve the agendas of the subcommittees, it will be quite a disappointing waste of time. So is there a way we can do this sort of electronically getting this agenda, similar to what Amy presented for both committees, and approve or disapprove it? Is that possible?

DR. HOWELL: There's no reason we can't approve it electronically, is there? I was seeing if there was any "legal" reason we couldn't do it electronically. I know that there are certain conditions is some committees. Apparently we can do it electronically, but we'll need to have the ability for people to comment on them and so forth.

Michele needs to get them, and then Michele can distribute them and then ask each of you to comment about the agendas. That will be a good mechanism. We should not wait until July, that's just a huge amount of delay. The subcommittees should really be proceeding on their priority areas, and not waiting longer and so forth.

Derek?

MR. ROBERTSON: Yes, since the subcommittee is a committee and the committee is a subcommittee, Coleen, should the Follow-Up Committee take a look at what we should place on follow-up in the decision-making process for whether a condition is added to the panel or not?

I know that that discussion came up a little bit yesterday in terms of let's say there is a test, but there is no treatment or effective follow-up. Is that a criteria that should be considered if an item is added as a condition or not?

DR. BOYLE: I think that criteria is already there in the scheme. I thought the issue that came up yesterday was more if the resources weren't there at the state level in terms of being able to handle the demand for follow-up. That's an issue that is not included within the criteria.

MR. ROBERTSON: And is that something we should consider.

DR. HOWELL: Steve?

DR. EDWARDS: My comment is different than the discussion so far. I don't have a clear idea about what the total process is now for the ACMG report.

We have recommended it to the Secretary. It has been made public. There is a 60-day period for public comment. But then what happens? Are we going to comment back to the Secretary on the comments that are made as a committee? And then when does action occur? Or does action occur? What is the next step?

DR. HOWELL: Let me respond to the first part of your question, and I'll ask Peter about the second part.

Michele has committed that we will get copies of all the public comments. She will send those at the conclusion of the period. I think then this committee should indeed send a note to the Secretary at that time commenting about any further deliberations that we have on the document, and we should comment about the specific public comments. I don't think we should go through every one. But if there are formidable issues that are brought, we should respond to those, and we should make a comment about them I think as a committee.

We probably should have I think a draft of something before we get here in July. I'll be interested in thoughts of the group of how one would think that could best be prepared. I think that rather than having us sit around the table thinking about it, I think that we ought to perhaps work on that, Michele and I could work on some drafts.

I have seen a fair number of the comments. Not because HRSA has given them to me, but people have just as a courtesy or whatever, sent me copies. The comments have been very similar. If someone says that we really need to focus on follow-up, we agree with that, and I think we can comment about that.

There are some remarks that have been made that are absolutely incorrect. I have every intention of commenting on those. I might come back to that later today. But there have been a number

of comments made in writing, and particularly in the press, that are just patently false. I think we need to comment to the Secretary about those. At least I will comment to him if I have to call him at night.

But anyway, and then Peter will have to tell us what will happen with our comments as they go to the Secretary and they percolate through the federal programs as far as what will happen at that point.

DR. VAN DYCK: Well, after the public comment period, there will be an internal process in the department that involves all the agencies who have an interest in coming to some agreement on response to the comments and on response to the ACMG report, which will become part of the department's information to then inform the department on what product or decision will then be forthcoming.

DR. EDWARDS: And then when do we expect some action?

DR. VAN DYCK: Well, all I can say is that we have a process we go through. Clearly we'll try to make it a timely process of reviewing the many, many comments and making final recommendations.

I can't give an exact time frame, other than to say that we'll try to make it as timely as possible. That's the same thing I promised getting the comments out to the public. I think we did a pretty good job of getting those out fairly rapidly after the last meeting.

DR. EDWARDS: I'm not asking for an exact time. I'm not asking for that. But are we talking about six months, a year, two years? Can you give us some sort of feel for when we can expect something to be happening?

DR. VAN DYCK: I can't.

DR. HOWELL: I think one thing that at least I look at it as a fairly optimistic thing, some of the major agencies, the federal agencies, have been very heavily involved with reviewing this document and so forth. So it is not going to come as a surprise, certainly not to the NIH or to HRSA. Certainly the CDC has had involvement and review opportunities, as has AHRQ.

So at least folks will have a considerable knowledge of this document, which I would think would be helpful as far as coming up with a community recommendation.

Dr. Howse?

DR. HOWSE: You know, Peter is being absolutely honest about saying I can't give you a time line, and I can't commit that the Secretary will do one thing or another. That is just life.

The Secretary's office receives a ton of reports, recommendations, and special letters, and some of them are acted upon, and some of them are never acted upon. It kind of depends on the issue, its relevance, and the departmental priorities, and a whole variety of calculations and assumptions.

So just sort of coming back to the excellent question that you raised as what might the committee do. I mean, the letter that Dr. Howse sent on our behalf before said we hadn't reviewed the final report yet. So after the public comment period is over, we would have had a chance to review the final report in light of public comments as well.

We went on to promise four things in that letter. I think two things we still need to do. One is we need to draft a letter from this committee to the Secretary that says we have looked at the final report, we've considered the public comments, here is our advice to you. We'd really like the department to do these things.

I think we heard Rod and Michele say that they'd have a shot at a first draft, which we can then look at and discuss. I would hope that we could move that letter forward as a result of our deliberations at the July meeting. I think that's where our responsibility rests at this point.

So I hope that we can put a fair amount of energy into articulating the urgency and importance of requesting action on the part of the Secretary of HHS to accept certain recommendations in the report, and to move them forward as departmental advice, or departmental guidelines in newborn screening. That's the best that we can hope for, I think, in terms of where the report goes from here.

So I agree, Rodney, with what you're saying that it's very important for us to move this letter forward, look forward to getting drafts. Peter is being four square about this.

DR. HOWELL: It should certainly lead this committee in July. I think the other thing is a committee of this nature, just the recommendations of this committee and the acceptance of it obviously will be watched by a lot of interested parties. I think people, as the ACMG report has been out there, folks have been looking at it, reading it, and finding it is helpful to them individually, forgetting anything about its official status and so forth. I think hopefully we can expect that to continue.

I think that there are many people that are passionate about newborn screening and realize that newborn screening does indeed save babies. They are I think working very hard to try to keep these things moving along, which is helpful. Extremely helpful, as a matter of fact.

MR. ROBERTSON: I guess Peter and Michele, are you guys obliged to respond to the public comment in writing for this particular notice? You're not, right?

DR. VAN DYCK: We are not.

DR. HOWELL: And it would seem to me that this committee should not respond to the comments, except to amplify them, or if there is a misinformation or something, to try to make some effort at correcting some of those. But I don't think that we should try to make a huge litany and so forth about every little thing that comes along. That would not be appropriate, and I think it would not help our cause.

Joseph?

DR. TELFAIR: I have a comment on a different subject, if I could.

DR. HOWELL: Anybody else on this subject? I believe that, again, Peter has been very clear about not knowing exactly what will happen once all this percolates uphill. We will certainly keep our eyes out.

Joseph?

DR. TELFAIR: Just a comment that kind of goes back to a little bit earlier. I was waiting for the comment period on this.

In the efforts, just a recommendation to this committee in terms of one of the things that is kept in mind. In the efforts of looking at in the follow-up, and I'm referring mostly to the talks that Judy did, and earlier, Brad.

The role that NGOs, community-based programs and individuals' efforts related to this in terms of their passion, in terms of their input and expertise, I think that one of the things that really is important to keep in mind is that as these deliberations go, even on the subcommittees as well as the processes, that their role is something that is strongly considered.

It's not much of a discussion that was had earlier on this, but it is just a recommendation to kind of keep that in mind. I know there are a lot of other things going on, but these groups and individuals play a major role in just making it happen. So when we consider these things, I think it's important to really do that.

I didn't know if Judy had any comments on that, because I was curious from her perspective what she thought given the level that she works. But I'll leave it at that.

DR. HOWELL: Thank you very much.

Any further comments before we adjourn for lunch?

(No response.)

DR. HOWELL: Let's go to lunch. We'll be back promptly at 1:00. We have a group of folks presenting publicly.

(Whereupon, at 11:58 a.m., the meeting was recessed for lunch, to reconvene at 1:00 p.m.)

AFTERNOON SESSION (1:05 p.m.)

DR. HOWELL: Ladies and gentlemen, let's see if we can find our seats. We have a number of distinguished commentators for this afternoon in the public session.

Dr. Howse had to leave because of a commitment with the March of Dimes. It's the onset of their major walk-a-thon. It is coming along. She had to leave for that. She sends her regards and so forth.

But what I think I would like to do is perhaps our public commentors could sit at Dr. Howse's desk here, which has a microphone. That way we'll be able to hear the person well.

The first person on my list is Dr. Frances Downes from Michigan, who will be speaking on behalf of APHL. If you'd be good enough to punch the little green button the microphone, that would be terrific.

DR. DOWNES: Thank you. Good afternoon. My name is Frances Pouch Downes, and I'm the Director of the Michigan Department of Public Health Laboratory. I'm here representing the Association of Public Health Laboratories.

I'd like to thank the Chairman of the committee for inviting us for this comment period, and the members of the committee for your attention.

The Association of Public Health Laboratories represents public health laboratories in the 50 states and six territories, linking them with federal partners such as the Centers for Disease Control and Prevention and HRSA, as well as county, local, and international laboratories.

Public health laboratories have been responsible for newborn screening since the mid-1960s, and currently conduct approximately 97 percent of all newborn screening tests in the U.S. In fact, all current public newborn screening programs operate through the auspices of state public health departments.

In most states, the state public health laboratory performs the testing, while in others, a contract laboratory performs the testing, which may be another state laboratory, or a private laboratory.

APHL commends HRSA for its leadership in development of this report on newborn screening, the American College of Medical Genetics for providing organization structure through which the report could be developed, and to the Secretary's advisory committee on heritable disorders and genetic diseases in newborns and children for putting forth recommendations for state screening programs and identifying a core panel of conditions.

The state public health laboratory, as the home for most newborn screening programs in the U.S., is aware of the details involved in providing a quality newborn screening system for its state. Each of these programs is state initiated, state supported, and tailored to the needs and resources of that state, as indicated in the report.

Limits on the content of the screening panel, its follow-up procedures, data collection activities, or system evaluation are often due to legislative restrictions on the maximum fee charged to support testing, or the scope of testing.

While this report makes a strong case for the uniformity across screening programs, the solutions offered may not be with those within the control of the screening laboratory without federal legislation and funding.

APHL supports standardization of test reports and the criteria used to classify a result as screened positive. APHL further endorses the concept of classifying the conditions within a screening panel by categories, rather than by listing each condition separately. Every newborn screening laboratory recognizes the benefits of multiplex testing. APHL believes a more thorough discussion of multiplex technologies beyond tandem mass spectrometry would strength this report.

The report emphasizes the current underutilization of information technology, and APHL agrees that the implementation or utilization of appropriate information technology to enhance programs should be pursued, and is willing to assist the advisory committee in this area.

Laboratories have responsibilities dictated in federal regulations, CLIA, for pre-analytic and post-analytic phases of testing. In the second section of the report, recommendations are put forward relating to aspects of newborn screening that lie beyond laboratory operations, however.

Since in many cases these activities interlock with laboratory functions, APHL would like to provide input on these recommendations. Because of the angst caused by false positive reports, all programs work to reduce such reports.

However, from a laboratory perspective, a false negative is even worse. Given the suboptimal nature of the dried blood spot specimen provided on each newborn, the lack of medical history and the need for swift testing and reporting, the goal of newborn screening programs is to optimize analyses to generate the fewest number of false positive reports while minimizing the danger of generating a false negative report.

With full communications on patient outcome between medical care providers and the laboratory, the test performance can be refined even further. Stronger language on the need for this clinical feedback in the HRSA report would provide much needed support for laboratories trying to improve testing algorithms and establish relevant normal values.

APHL recognizes the importance of collecting national data for evaluation of newborn screening programs. However, as with discussion on the use of residual specimens, state laboratories need assurances that state-specific data are used only with their foreknowledge, consent, and proper acknowledgment by the user of the state's role in collection of such data.

Newborn screening programs were established by each state to serve its population. APHL agrees with the HRSA statement that states must also retain their significant roles and responsibilities. They have clear authority with regard to oversight and evaluation, as well as enforcement.

The report notes elsewhere that there is also a potential expanded national role in oversight enforcement, data collection, program evaluation, and the development of educational materials to support newborn screening.

Screening laboratories would welcome national support for educational materials both for parents and clinicians. Numerous states have participated and support the external evaluations of their programs. For example, as initiated by the Council of Regional Networks and the National Newborn Screening and Genetics Resource Center.

Current discussions regarding accreditation of public health agencies and licensure of laboratorians could result in enactment of federal legislation that could change the nature of the current Federal-State relationship, whereby a national oversight role in newborn screening might be possible at some time in the future.

Today the guidance from the federal government on mechanisms by which newborn screening programs could perform an ongoing self-assessment, guidance regarding the mechanisms with which a condition can be evaluated for placement in a screening panel, guidance in making sure all components of the system are integrated and functioning properly, and the provision of national quality assurance programs as is now operating at the CDC are all welcome, and we support these in newborn screening programs.

APHL appreciates the need for national leadership and education, but is not convinced that such leaderships can be achieved by enforcement. As the organization representing laboratorians providing newborn screening in all states, APHL has the role to play that leadership, especially in developing any further legislation implementing strategies.

Because of the potential implications of the report, there is a need for ample discussion of how public health laboratories and the entire newborn screening system can begin to implement the recommendations. We propose a wider vetting process for the recommendations from the report, perhaps in the form of a consensus conference or similar mechanism.

Finally, APHL thanks the authors of the report and is grateful for the opportunity to provide comments today. I would also like to extend APHL's commitment to provide input and participate in committee and subcommittee activities. I would be happy to take any questions now.

DR. HOWELL: Thank you very much, Dr. Downes. Obviously a number of the comments you made fit very well with some of the subcommittees of this group as far as their plans going forth. We always appreciate the input of an important group such as APHL. We appreciate your coming.

I think that it is known to everybody, but the persons who comment today, their written comments will be appended to the minutes and go forth as an official part of this record.

Coleen, do you have a question?

DR. BOYLE: I'm just curious about your last comment about a vetting process and the consensus. Can you just elaborate a little bit more on that idea?

DR. DOWNES: The concept that we've been discussing is a process by which we would actually have a form to discuss some of the differences in states and develop not so much consensus on what specifically the action would be, but at least at a process to approach a more standard method by which we reach those decision points.

I think your subcommittee actually addressed several of those important decision points that each state currently is making individually. Because of that, we have of course a diverse level and types of services in each state. That would be our proposal.

APHL has provided that leadership for national consensus conferences in the past. Particularly successful were the Western blot HIV consensus process, which has been the standard in laboratory practice now for over 15 years.

DR. BOYLE: Thank you.

DR. HOWELL: Thank you very much, Dr. Downes.

Our next person presenting is Ms. Jennifer Sullivan, who is representing the National Society of Genetic Counselors. We have got to be sure that Jennifer gets out of here to catch her plane. I know that you've got a tight schedule, and we appreciate your being here.

MS. SULLIVAN: Thank you very much.

Just by way of introduction, I actually work at Duke University Medical Center. Over the years, I've had the pleasure and the responsibility of coordinating our metabolic clinic, especially during the clinical expansion in 1999 of newborn screening using tandem mass spectrometry.

I have also worked with Dr. David Millington in the training of state representatives about the clinical implications of expanding newborn screening in a particular state and seeing enzyme replacement therapy for Pompe disease progress from basic laboratory science down the hall from my office to a multicenter, multinational clinical trial. So just in the time that I have been at Duke, there has been a tremendous expansion.

Today I'm representing the National Society of Genetic Counselors. The NSGC represents approximately 2,000 genetic counselors worldwide, and is the leading voice, authority, and advocate for the genetic counseling profession.

For many years, the NSGC membership has contributed significant experience and expertise in the implementation and coordination of statewide genetic services and clinical follow-up of positive newborn screening results.

The NSGC applauds this committee for spearheading evaluation of current newborn screening protocols in this country. This evaluation is especially important because of the service inequalities that can develop between states with the expansion of technology and knowledge.

The NSGC endorses the rationale for and the designation of cord disorders for newborn screening as recommended by the American College of Medical Genetics. Given the lack of long-term follow-up for many of the conditions endorsed by the screening recommendations, we commend the committee's dialogue yesterday regarding this aspect of newborn screening.

We urge the committee to consider that such evaluation includes two important components. Number one, a system for regular reevaluation of the core panel of diseases for the addition or removal of diseases as the depth and breadth of knowledge in newborn screening, genetics,

and medicine in general expands. And two, a mechanism by which researchers, state programs, and other interested parties can provide new data regarding a disorder or disease for possible inclusion in a revised core panel for newborn screening.

Further, the NSGC high values the disclosure of all relevant medical information, and we agree that overall medical knowledge and care would be enhanced through the reporting of all abnormal newborn screening results for these core disorders, provided that adequate psychosocial and coping resources are also available.

We support the call for comprehensive and timely reporting of screening statistics, short-term follow-up of screening results, and long-term follow-up of affected individuals.

The NSGC agrees that such reporting will collect critical information to guide present and future newborn screening initiatives.

Since the NSGC represents health care professionals closely affiliated with both the reporting of newborn screening results and the coordination of patient care and clinical follow-up, we respectfully request that this committee recommend careful evaluation of each state's resources to support the clinical follow-up and necessary long-term monitoring of any national recommendation made in regards to the standardization of newborn screening practices.

State systems that already have expanded newborn screening have experienced increased demands for clinical follow-up services, stretching already limited resources.

We know firsthand the burden that genetic disease places on families, particularly with the initial diagnosis. It is critical that the evaluation of each state's clinical genetic resources include how these resources will need to expand, along with their newborn screening program.

Further, the NSGC recommends that discussion of funding issues for anticipated services on all levels of the newborn screening process be included in any final recommendations related to the expansion of newborn screening services.

The NSGC also requests that any recommendations regarding a national policy for newborn screening include the stipulation that newborn screening requires the provision of comprehensive medical services incorporating primary care providers, genetic professionals, dietary professionals, and other disease-specific medical specialists.

It is essential to ensure that high-risk infants and their families that are identified in newborn screening programs receive high quality and standardized medical care regardless of geographical location or ability to pay.

In conclusion, the NSGC enthusiastically supports the efforts of this committee to address the issue of newborn screening. The NSGC encourages this committee to recommend periodic evaluation of the national and state directives regarding newborn screening to ensure that availability, accessibility, and efficacy of such programs and their adjunct follow-up services.

Committee guidance regarding such reassessment may help avoid situations such as we have presently with rapid disparities between state programs. The NSGC continues to be at your disposal, and we are pleased to work with the committee as it continues to consider these issues.

Thank you.

DR. HOWELL: Thank you very much, Jennifer. It's very important to have the genetic counseling group represented here today. In the spirit of full disclosure, some of us are always particularly glad to see people who do care.

But I'm not the only Duke alum who is a member of this committee. One might say that there is some partisanship of that. But anyway, we're delighted to have you here today.

Are there questions of Jennifer, other than about basketball or something of that nature?

MS. SULLIVAN: Also in full disclosure, I actually went to a Big 10 school.

DR. HOWELL: Well, some of us don't even know what those are, so you'll have to tell us later. Thank you very much.

We are next going to hear from Dr. Philip Vaughn, who is representing Pediatrix Medical Group.

DR. VAUGHN: Thank you, Chairman Howell, members of the committee, for the opportunity to address you again today.

I am Philip Vaughn, representing Pediatrix Screening. On behalf of Pediatrix Screening, I would like to congratulate and commend the committee's work to date in endorsing and promoting the ACMG report. In no small way because of your efforts, the nation now has a standard — a benchmark, if you will — against which newborn screening programs can set their expectations for future program development, both standardizing the nomenclature, as well as the scope of the disorders tested I think has been incredibly valuable.

Even though the process is still ongoing, I want to emphasize to you all how important the implications have been as a result of your work to date.

So much has evolved, as I'm sure you're aware, in many different states already just as a consequence of bringing this topic to the floor and promoting the report as you have. Just in so doing, the national debate over newborn screening has been energized to the point where many states are now not considering the if question any longer of should we expand our screening, but the how and when questions of actually getting it done. A very important progression in the public debate.

Pediatrix has remained involved in this public debate as it has evolved over time. Our message has been very consistent. We'll continue to advocate for comprehensive quality testing using the most sophisticated technologies available to date to ensure that children have access to a broad scope of testing capacities. Preferably not only the ACMG uniform panel, but the report only as well.

In addition, we will advocate for prompt implementation of these programs, as has been discussed, the capacity exists today to have every infant screened. I think there is an excellent impetus to get that done as soon as possible.

In addition, while waiting to get that implemented, or even as that gets implemented, we will continue to endorse parent and physician awareness to promote a better knowledge base, both in families and for professionals to encourage more screening to get done.

Finally, we will continue to encourage that this gets implemented when it does get implemented in as cost-effective mechanism as possible. As representatives of the broader health care community, all of us have a responsibility to make sure that not only better and more health care gets performed, but that we own the responsibility to provide that health care in a more cost effective fashion.

Finally, we will continue to look for constructive ways to become an active technology partner for programs as they develop and evolve their programs.

Again, thank you very much for your continued efforts in building awareness. We can all work together to increase the access to expand the newborn screening. For our part, we'll continue to work aggressively to ensure that high quality most comprehensive cost-effective screening is available to as many infants universally as soon as possible.

Again, thank you very much. Very important work you all are doing to ensure the health and welfare of our future generations.

DR. HOWELL: Phil, thank you very much for being at the meeting, and for commenting today on behalf of Pediatrix. We appreciate those remarks.

Any questions of Dr. Vaughn?

(No response.)

DR. HOWELL: Thanks very much.

Dr. Carol Greene representing the Society for Inherited Metabolic Disorders is our next commentator.

DR. GREENE: To the committee, I would like to start by saying thank you for your dedication, your excellent work, and this chance to speak. I am Carol Greene, I'm a clinical geneticist currently at the University of Maryland.

I have two comments. The first is for myself as a private person, SIMD has not discussed this issue. The second is on behalf of SIMD in follow-up to Dr. Vockley's statement from yesterday.

So first, earlier today the committee discussed problems with HIPAA interpretation and issues of communication to and from public health departments. This is also an issue as I know far too well, regarding communication between primary M.D. and specialists.

I'd like to refer the committee to a JAMA article from just last week from April 13th. I hope I don't do injustice to the article, but I think it is extraordinarily useful and helpful.

The article focuses on HIPAA. It does not address issues of state loss. But having said that, for HIPAA, the review article discusses the inappropriate implementation by an interpretation of HIPAA by many states and institutions, it points out that in some cases, more clear guidelines are needed, but it also says that in some cases, there is inappropriate implementation even in the presence of absolutely clear guidelines and clear FAQs from the HHS Office of Civil Rights, which is responsible for the implementation of HIPAA.

Specifically the article states, "HIPAA explicitly exempts required public health reporting. HIPAA, and a very clear HIPAA FAQ, explicitly states that no patient authorization is needed for a clinician to talk to another clinician. HIPAA explicitly states that a primary goal of HIPAA is to not interfere with quality medical care, and that doing so, interfering with quality medical care, can be a HIPAA violation." So not all HIPAA violations are interfering with privacy, and interfering with health care in the name of HIPAA is a HIPAA violation.

The authors of the article suggest that public health providers, clinicians, or families — they don't say that specifically, but they say when anybody encounters problems, we should consider making

reports to the Office of Civil Rights of a HIPAA violation when that is appropriate, when you feel a violation has occurred. For example, when there is interference with patient care by activities not in accord with HIPAA in its guidance, or at the very least to ask the OCR for clarification when needed.

I submit as a private person that if we begin routinely to report HIPAA violations when they occur, behavior would change. I suggest this committee might want to hear from the Office of Civil Rights on this subject.

Secondly, and this is putting on my SIMD hat, and in the spirit of the formal SIMD comment yesterday, I appreciate the excellent report and the very interesting discussion around the Treatment and Follow-Up Subcommittee.

I note that the draft charge of that subcommittee does not anywhere include the word "treatment." Dr. Boyle certainly did raise under discussion of the definition of follow-up the question of whether long-term follow-up might include issues of who is responsible for funding treatment. The committee did discuss briefly and explore in its discussion the importance of addressing this very complex issue.

However, in an earlier presentation, Judy Tuerck offered what appears to be a clear and useful definition of follow-up, specifically of long-term and short-term follow-up. That definition makes a distinction between follow-up and treatment.

That definition would fit with, and I don't know the rationale, but that definition fits with the formal name of the subcommittee as Treatment and Follow-Up. I refer therefore back to SIMD's statement yesterday. I hope that the charge of this subcommittee should explicitly address treatment.

I'm not suggesting a specific change. I'm certainly not suggesting to establish standards, but I am suggesting that inclusion in the subcommittee charge of the word "treatment" in whatever way this committee feels is appropriate would help to assure that issues of the need for efforts to assure treatment and funding of treatment are explored by the appropriate subcommittee.

I thank you.

DR. HOWELL: Thank you very much, Carol.

Are there questions of Dr. Greene? Greg has a question.

DR. HAWKINS: Offhand, you don't have the reference for that article, do you?

DR. GREENE: I so wish I had left it in my briefcase, but I will be happy to send it along. I will be happy to fax it to Michele.

DR. HOWELL: That would be helpful and so forth. If you could send it to Michele, she is an excellent and reliable distribution point. Thank you very much.

I would like to next welcome Dr. Marilyn Jones, who is President of the American College of Medical Genetics. We particularly appreciate Dr. Jones coming from San Diego today to address this group.

DR. JONES: Dr. Howell and members of the committee, it is my privilege to be able to speak with you today to encourage you in your efforts to move forward this whole process of a national newborn screening agenda.

As you are all very, very well aware, the American College of Medical Genetics received a contract from the Maternal and Child Health Bureau of the Health Resources and Services Administration to assess the scientific and clinical evidence regarding the appropriateness of 78 conditions for newborn screening.

This effort stemmed from the 1999 recommendation by the American Academy of Pediatrics Newborn Screening Task Force that suggested that HRSA should engage in the development of a national screening process. The college has been very pleased that represented on our steering committee for the project were members of the American Academy of Pediatrics, the March of Dimes, the CDC, MCHB and HRSA, the Agency for Healthcare Research and Quality, and importantly, the Genetic Alliance.

The project was organized, as I suspect most of you know, around several workgroups, each comprised of members with extensive knowledge and experience in newborn screening, 24 individuals whose expertise encompassed science, law, health policy, and ethics constituted the expert group charged with the development of the framework for the project, evaluation of the materials from other groups, as well as the final recommendations of those things that would be brought forward.

There were two additional specific charges to workgroups that included 24 additional experts. These were focused on diagnostic and follow-up aspects of the national program, and the uniform criteria for screening. You have seen some of the templates today, and I know before this.

In addition, nearly 75 acknowledged international experts in individual conditions contributed their time and expertise to the process of attempting to evaluate conditions for inclusion. There were three opportunities for public comment during the expert group's deliberation. I review what is really well known to this audience, to emphasize the amount of thought and input that preceded the recommendation.

Throughout the course of the project, the Board of Directors of the college was apprized of the committee's activities. Since the leadership of the colleges represented the breadth of clinical and laboratory activities in genetics, there are some on the board like myself who do not directly and personally become involved in newborn screening. So this review was yet another opportunity to have parties who are educated but perhaps not invested themselves have opportunities for input.

The final report was received in December of 2004 at the conclusion of our board meeting in October of 2004. All 17 members of the Board of Directors unanimously endorsed the report. The board recognized that the complexities involved in evaluating and comparing the conditions were considerable, and that the issues raised by new technologies were significant.

However, these considerations did not mitigate the fact that the 29 proposed conditions were often devastating, that the natural history of these conditions was well enough understood, that the screening tests had strong enough performance characteristics, and that they were treatable with significant benefit to the affected individuals identified through screening.

Thus, the board felt the issue should move forward. The board recognized that other conditions may be appropriate for inclusion at a later date. As technology changes, the natural history of the conditions is better understood, and treatment improves.

The board also appreciated the expressed concern that other clinically significant conditions could be identified for newborn screening, either by virtue of the multiplex capacity of the testing, or by biochemical interrelatedness of the conditions.

The great majority of these conditions are already identified in the clinical setting. The board agreed that it is appropriate to acknowledge the secondary conditions that are identified while screening

for the core conditions, even though the natural history in response to treatment may be less well understood.

It is for this reason that the board felt very strongly that concurrent with screening, systems should be established for collecting information about outcomes of identified newborns, such that this new knowledge informed future changes in newborn screening programs. This is really a critical piece.

We have already seen how this type of activity can impact a screening program. I will just give you the example of the cystic fibrosis carrier program which was developed through a consensus process. About two or three years into the program, it was identified that one of the mutations that had been listed in that was in fact a polymorphism, and not a disease causing mutation. The structure was there to go back to change the panel and make modifications. We would hope that this is the model that this committee is considering developing.

We expect that our report will set the stage for a number of initiatives that will establish a stronger national role in newborn screening to ensure that the outcomes expected from a child evaluated through a screening program are in fact realized.

To this end, we hope that the committee will establish an ongoing process by which conditions already included in newborn screening and candidate conditions are reviewed and evaluated on an ongoing basis. The leadership and the membership of the college hopes to be contributing to this effort.

As you are also aware, the college has ongoing projects directed to the development of management guidelines for primary care providers to help them understand what to do for a screened positive baby. The establishment of confirmatory algorithms for those identified in the screening process, identifying those activities in the screening laboratories and the diagnostic service providers, and the development of guidelines so as to minimize referrals of those who are false positives.

The American College of Medical Genetics is pleased to have been offered the opportunity to develop the National Coordinating Centers for the Genetics and Newborn Screening regional collaborative groups through a HRSA-funded cooperative.

The advisory committee for the NCC recently had its first meeting, and has recommended the development of a national network of genetic and other specialty service providers involved in the diagnosis and follow-up of those identified in newborn screening, as well as those at risk for all genetic conditions.

Complimenting this will be related projects from our partners, to both address the genetic services that have been accessed through screening, and to evaluate capacity needs that we know to be of limited availability.

A second set of projects are targeted at the development of the business case for genetic services through efforts to document the value that genetic service providers bring to health care.

Further, there are projects that focus on pilot testing of management guidelines, the so-called ACT sheets. I will take your comments about how unclear they are back through our primary care providers, and a set of projects focused on improving disease information that can in turn improve the delivery of screening and diagnostic follow-up services.

Medical genetics is a rapidly moving field. Its integration into public health programs and newborn screening offers an opportunity to further our goals of improving the quality of life for affected individuals, as well as for disease prevention.

It will only be through the organized efforts to understand the outcomes of these individuals and their families that we will really move this process forward. The American College is delighted to have had the opportunity to participate in this project, which we believe makes a significant contribution to the healt h of America's newborns.

I would hope that you would not get stuck on the panel, but set in place a process, a structure, and a method for reevaluating it that we can try to move this forward. It is really critical.

Thank you.

DR. HOWELL: Thank you very much, Dr. Jones.

Are there questions of Marilyn?

(No response.)

DR. JONES: I came from a school without a basketball team.

(Laughter.)

DR. HOWELL: Well, Marilyn, thank you very much for being here and presenting today. We appreciate your comments.

That is all the folks that I have on the list for this afternoon. So I think, having completed the public comments and so forth, that we can move into the next part of our agenda entitled "Setting Committee Priorities."

What thoughts do you have about that subject, or any other subject? I'd like to have a discussion of anything that you would like to wrap up before we leave today. We are scheduled to leave at 3:00. I know some of you want to leave before 3:00. Dr. Edwards is very concerned about that road toward Raleigh tonight on a rainy night out of the District.

Let's hear from you about the things that we should move along, settle, plan, and so forth before the next meeting.

DR. EDWARDS: I would raise one point that several speakers mentioned, and that is the financing. I don't think we've discussed financing among our meetings. Yet the question about whether the legislation would be needed and financing were points that came up.

Financing came up in at least two of the comments that we heard. So are we going to discuss financing in this group?

DR. HOWELL: I don't see why not. Is there any reason we should not discuss financing?

DR. DOUGHERTY: I believe that when we broke into subcommittees, one of the options was a Financing Subcommittee. But then we decided that financing, IT, and evaluation would cut across all the subcommittees. But maybe you're not hearing enough about financing in the subcommittees.

DR. EDWARDS: Well, remember, we're just getting started in the subcommittees. But I really wasn't even sure if financing was among the things that we should be looking at. It certainly makes sense, but I don't recall any discussion at this level.

Our subcommittees are, as you know, just getting started. So I assume then that financing is something that we should be discussing.

DR. HOWELL: I think so. And again, I think it is a cross-cutting issue. Would you like to consider that as an agenda item or not?

I mean, among our things we need to consider this afternoon are agenda items and so forth.

Coleen?

DR. BOYLE: I think I recall, I didn't check the minutes, but last time I had made the suggestion that we actually would maybe have speakers or talks around the specific cross-cutting issues. I don't know if we want to revisit that or not.

DR. HOWELL: Well, this would be a cross-cutting issue and so forth.

DR. BOYLE: Well, the other two are evaluation and IT. I mean, obviously to keep us all grounded in those principles as we consider it.

DR. LLOYD-PURYEAR: We had a presentation with Kay Johnson.

DR. BOYLE: We actually identified some.

DR. LLOYD-PURYEAR: I need help here to identify what you mean by financing. We did have Kay Johnson present the state financing issues. If you mean something other than that —

DR. EDWARDS: Well, I think that one of the commentaries, and I can't pull it out right now, talked about federal legislation and federal financing as a part.

I'm pretty positive that that is what they were talking about. Now, I don't know that we need to do state, federal, or whatever. I think if we just discuss the general topic of financing, if it is relevant for this committee, but that was the question I had, was whether the financing is relevant.

I thought you said yes. So then I think that we should look at both state and federal financing.

DR. LLOYD-PURYEAR: Do you mean reimbursement?

DR. EDWARDS: No. Well, reimbursement would be a part of financing. What I interpreted that to mean is that financing to the state health departments for the services, the follow-up for the testing for all the things that we heard. It takes twice as many personnel now to do the follow-up and the resources available to the states. We have recommended, or at least the report recommended that there be some interstate collaboration with them.

I notice we have already got some districts, which I assume probably coincide with the interstate efforts that are ongoing already. But financing is not something inconsequential, and it is probably going to be integral to getting this program up and going, or I guess it's already up and going, but to moving it along.

I think it is something we just can't put our heads in the sand and say we hope it's going to happen. My point is it is an important point, and we should address it.

DR. HOWELL: Any further comments about financing? I mean, I guess one of the questions is a very big issue, and the question is what sorts of things would be helpful to hear about or to discuss that would permit us to move that along and so forth. I'm not completely sure about that. Maybe some other people have a bit more wisdom in that area.

Derek?

MR. ROBERTSON: I don't know about the wisdom, but I guess the thing with financing is it just depends on how much detail you want to get into. We can make broad recommendations that we think that it's important that a particular area be financed, or that funds be appropriated for this area because it is so important.

Or we could get into a level of detail where we are talking about how much financing is needed. I think the difficulty with financing is when you have so little control over where it is coming from. Beyond recognizing the issue that it could be a potential barrier to implementing and then emphasizing how important the particular issue is, if it doesn't happen and doesn't get financed, I think you would address it.

I don't know if you could get into more detail other than that.

DR. HOWELL: Joseph has a comment.

DR. TELFAIR: Yes. In the minutes it stated, or it was discussed last time, around financing in the minutes, if I can just read it.

DR. HOWELL: Why don't you read it to refresh everybody's memory.

DR. TELFAIR: It says, "In regards to financing, not just for the expansion of newborn screening, including expansion of newborn screening service infrastructure and development of new paradigms of working relationships."

DR. HOWELL: I'm still trying to get something to grasp onto that we might do in the area of financing that would help. Does anybody have a concrete thought and so forth? Obviously we will have no substantive impact on how the world finances newborn screening.

But I guess the question is what could we do as a committee to emphasize the importance of resolving the financing issue to let it go forward.

Is there anything we can do, Peter, from an administrative point? Is there anything that we could do that would be helpful in this arena?

DR. VAN DYCK: I think it is always helpful to have an idea of how states finance their programs just in general, so we know we did some of that. But the committee moves ahead and gains new information each time.

I don't think it hurts to go back and revisit some of this, because everybody is in a different place than they may have been at the first meeting.

DR. HOWELL: Well, maybe the solution would be to, again, put it on the agenda with an idea of looking again at the current question of financing. How it is financed, and the process of that, and try to make a completely clear statement to the committee about the importance of financing that would include a system and not just a test.

I think still people are thinking of a test. You fund the test and you fund the laboratory, and not much else. I know that's a problem in some areas.

Bill, do you have a comment?

DR. BECKER: Yes, Rod.

Maybe what we could do in keeping it in line with what Peter suggested, Brad did provide some information to us previously of how states generally finance newborn screening.

DR. HOWELL: Right.

DR. BECKER: But it may be to get to another level of detail which will help our understanding, maybe get to what Steve might be suggesting, is to in addition, maybe have Brad review his presentation to us, as well as perhaps invite some insurers to discuss how well newborn screening is reimbursed.

I'd be interested in hearing from a person representing a hospital or a hospital association, because it is my understanding from our hospital association that newborn screening fees are not reimbursed at a very significant percentage. I think that we could gather some more specific information about how newborn screening is financed in the state by getting at maybe some of those details, if I could offer that suggestion.

DR. HOWELL: Piero?

DR. RINALDO: As we are speaking of fees, would it be possible and of interest to the committee to have somebody trying to explain to us how come the fees are so different from state to state? What factors are incorporated?

I certainly, when you look at it state by state, clearly we go from zero, and I know that's a choice of certain states to one hundred and something. So I really would like to hear about that, and if there is a way to define what is a valid component, and what is actually a way to raise funds.

My understanding is there are states and programs where some of the money collected will actually be used for other purposes not immediately related to newborn screening.

DR. HOWELL: Derek, and Bill.

MR. ROBERTSON: Well, I just got an idea from Peter. I was going to ask, if we hear these presentations, what are we going to do with information other than just understand it? Maybe one thing we could do is to look at funding mechanisms for funding newborn programs. Then you can make recommendations on that.

For example, fees, that is probably one very simple way of saying okay, that is how you could fund it. But maybe there are other innovative ways that are out there that people are doing to fund their newborn screening programs, because just to hear what the cost, or just to hear whether it is insured or not, that provides you background information on what may or may not be a barrier. But then what do you do to help?

All of the other work that we're doing, whether it's in follow-up or whatever, we're doing it to provide the government with advice, to say okay, this is how it should be done, this is how you should be doing follow-up with this, or you should be doing testing.

In the finance area, you still want to come up with a product and say okay, what are we doing in this area? Maybe one area is fund a newborn screening program adequately. Maybe then you could look at some of the best models that are out there. Maybe there is a particular state that does it particularly well, and one that does it particularly badly.

So you could do that. But I think anything we do in any area should be to an end, not just kind of FYI.

DR. HOWELL: Steve?

DR. EDWARDS: I agree with what he said. But I think what I would look at is how does funding relate to a good quality program? Are there states where there would be difficulties in having a good quality program because of the question of funding.

So I would look at it from the larger perspective, rather than the specific one about why states vary in fees. I think that's an important question, but I'm not so sure that that is not right now, micromanaging from our standpoint.

I think what I would like to see done is us to assure that states have the resources to provide good programs, good high quality programs.

DR. HOWELL: Bill, and Piero.

DR. RINALDO: I agree. But then again, I understand it is to be practical. So have we ever tried, or has anybody ever tried to define the unit costs? Has anybody ever tried to define what is the cost for a generic follow-up? Short-term, because long-term obviously has time variables that are difficult to control.

You know, we have heard time after time that the resources are not adequate. But it would certainly help to have at least an estimate of what kind of resource we're looking for. Everybody asking for more money, but nobody seems to say how much.

DR. HOWELL: Who could provide such information? Where would you go for such a source of material?

DR. THERRELL: May I? There have been a couple of studies done. For instance, Kaiser has done a study. Jerry Berry has done a study. California has done a study. So you might want to look at those sources.

Not only the program expenses, but also how it relates to parents and the follow-up costs.

DR. LLOYD-PURYEAR: But not what Piero was talking about.

DR. THERRELL: They've actually done some of that.

DR. RINALDO: California, I believe, presented something. I remember when we met it was September. We had a presentation from New York and California. I think it was apparent to all of us that when they touched on the issue of the cost of follow-up, there were fairly radical different figures.

So when you are comparing two things, you wonder who is right, who is wrong, or where is the truth. I think it would be valuable to start putting some dollars and cents as a ballpark. Then you can tie it up to all those other issues about false positive rates. You say well, when you define the variable, the number of cases that a program has to follow-up, and you have a credible figure, then you do have an estimate of this cost.

Again, I think it would be easier to start with a short-term, which I think has been defined. Short-term is from a normal result to a moment that the result has been confirmed or ruled to be a false positive.

So without the huge variable of treatment. But I think it would be a start. Then we could go back and use whatever leverage we have from a professional association or legislators to say this is what is needed to support short-term follow-up.

Again, I don't know, but we can look at Judy for somehow the people who are involved with follow-up could be asked to propose presenters, but really with a practical purpose to say come and tell us what is a current range, and what was a reasonable target.

I don't have anybody in mind, but I think we can certainly ask who might be able to provide us this information. I really think that we have to have an objective deliverable. I think it is our job here to come up not with fairly vague recommendations of what is good and what is bad, but we should really come up with things that can be recognized as a tangible, practical, and deliverable.

DR. HOWELL: Peter has a comment, and then Derek.

DR. VAN DYCK: Yes, I think that can be valuable. I think one way to approach that, and the reason I think financing is a cross-cutting issue is that as for example, the Follow-Up Committee tries to establish a set of elements or guidelines that are required for good follow-up, it might be easier to put a cost onto that and do it that way going from some set of standard than to try to pull it out.

So each of the committees I think has that opportunity to put a cost on some set of standards, guidelines, or recommendations that would make it more uniform perhaps.

DR. HOWELL: Derek?

MR. ROBERTSON: I guess I still think it would be — because if I'm sitting, and maybe Bill could answer. If I'm sitting in a state and I saw the cost, I don't know how it might help to the extent when you are putting together a budget.

But my guess is that most of these states are already grappling with financing their programs and finding a way. So just knowing, okay, this is what it costs, it might show that they're inefficient or not, but I don't know if there is somebody out there who would be able to do a presentation which would be entitled something like "How to Fund Your Newborn Screening Program."

So here, some innovative ideas. Here is what they did. They did this amount of fees, or what fees. I think the issue of what the fee is is important, because if that's a main source of revenue, are there other sources of revenue?

I mean, you deal with that. Unless you really start thinking about innovative ways to address your budget concerns, are there particular ways to address your legislator or should you really be working more with the stakeholders so that they could approach legislators?

I mean, if you give the state something as a recommendation as to how to fund it rather than just telling them this is what it costs, I mean, this is what it costs is just half of it.

DR. HOWELL: Bill?

DR. BECKER: Yes, thanks, Derek.

I'll respond sort of tangentially. But I am aware, and this may be a useful discussion to have at the next meeting, that several states have, for example, Kentucky.

The legislation that would have allowed them to expand their newborn screening program has actually been on the books since 2001. However, there was no funding tied to it immediately, which obviously creates a problem for the public health department to either fund it out of other resources that they might have had available which they couldn't do at the time, or wait until the legislature appropriates the funding.

So some states it would be interesting to hear, and I don't know that we have to go state by state, about what, as you suggested, what legislative activities are needed generally speaking, in order to accomplish expanded newborn screening from the financing perspective.

Now, in terms of California, many of you are aware that there is a mass spec project. Once that funding for that research project was over, they did not have the authority to raise their fee at that time, so they had to discontinue doing expanded testing for a short period of time, but definable period of time until they could obtain the funding authority.

So there are two states, a very large one and a reasonably small one from a population standpoint. Both had funding issues as it related to a barrier for expanding newborn screening. There is probably another dozen or so that we could also learn about as we try to identify the models, the barriers, and what then get to what you're suggesting, is what the potential solutions are.

Then finally in terms of what the states do down at the devil of the details, and Piero is right, there is a range of how people approach either the laboratory component, the follow-up component, both, or one or the other in terms of establishing the fee, and then half of that goes through the administrative processes through the states and again adds a whole new layer of complexity to financing of newborn screening.

I think understanding that process may be generally speaking, again, not 50 states, might be helpful for the committee to get some awareness of.

DR. HOWELL: Piero?

DR. RINALDO: I agree. In fact, I was thinking it would be interesting, and not from a position of judgement, but more as a fact finding. I would invite a representative of a state that doesn't have a fee, asking how they handle it, and then I would as a representative of a state with the lowest fee and the state with the highest fee, and ask them to tell us how they came up with those numbers.

I think we certainly can learn. It's about not being afraid of the truth, I guess. You want to learn these things and see if there is a barrier or if there are certain components that should be reevaluated. I think you have to start somewhere.

MR. ROBERTSON: I think maybe one thing that's come out, and maybe I'm thinking way ahead. But it seems as though a recommendation that would be down the pike is that in developing your program, one, the folks in newborn screening programs need to have an understanding of the legislative process. Giving them tangible things so that they don't forget that they need to understand how the process works.

They probably need to identify a champion in the legislature who will then be able to carry it through, understanding that some states only meet once every two years. So if you do something in year one, you don't have any hope of funding beyond that.

So I think that is the type of recommendation that I think they would be looking to from this group. In other words, understanding the legislative process, understanding how to work with your legislators. Those are key things.

In the funding aspect, how did California handle it? How did Kentucky handle it? Use that. I'm just saying that I think if you just stop at the cost without giving them any guidance as to how to then get that money, how much it costs, and how to get it, then I think that would be most helpful.

DR. HOWELL: Everyone's interested in financing. That's clear and so forth. We've had a myriad of suggestions about how to approach that. I guess that having heard so many potential commentaries and so forth about what to do and how to proceed and so forth, would someone like to take a stab at boiling down what we should do at this point? Total silence.

DR. BECKER: Rod, I'll try.

I guess I'm back to my earlier suggestion. I really think Brad gave a nice overview a couple of meetings ago about the general funding strategies. It may just be that the committee really just wants to dissect a bit more detail out of that.

Then maybe Brad is right here, he has tentatively listened to all of our input and our comments. I'm sure he could take that information, if I'm not overspeaking for him, and maybe create a presentation tailored to some of the points that have been made, or the requests for information that have been made by the committee.

I think his resource center has a lot of the information, or at least background information that we could benefit from at our next meeting. That would be my suggestion.

DR. HOWELL: I think that obviously can work with Brad to formulate a plan. It probably won't happen by the July meeting, but to develop a plan to discuss financing perhaps at the October meeting. We've got a lot of things already coming up in July.

I think we can include in the plans some of the things that we've heard about the variations that states have to try to provide some specific, not just a litany, that this charges a lot and this one charges a little bit, to get some insight in of what has gone into that and so forth, and some specific information along Derek's line about how states have approached funding, how they have been successful, and the mechanisms that they have used and so forth.

Some of those we have heard from over the past and so forth. We've got a lot of notes here. Why don't we plan to do something in financing. If it should mature more rapidly, I guess we could consider July, but I think October is a more likely possibility at this point in time.

What other issues would you like to have as far as a future agenda or priority area and so forth?

DR. RINALDO: We certainly have many already.

DR. HOWELL: Well, but we're planning for the next year. What other things are at a priority area that we should really try to move ahead rapidly?

DR. BECKER: Rod, question.

At the next meeting, and this is speaking from the chair, what would be your request or wishes for the reports from the subcommittee? What would you like the subcommittees to have accomplished?

DR. HOWELL: Well, I think the subcommittees will have hopefully continued to meet by teleconference, and if necessary, in the flesh several times, and have come up with substantial plans and results by July, quite substantial.

The thing is that we should hear from the committees about recommendations for consulting persons to serve on those committees to flesh them out, because that we will have to hear from Jennifer and Coleen, and I think Amy has a core group already on board. Clearly I think that should be a substantial effort for the July meeting.

Again, as a committee to start to work, I think that we've already talked about the fact that we anticipate that the committees will provide their perceived charges to Michele as far as what they have decided so that they can be circulated and commented on by this group. We'll do that electronically.

Also, don't forget in July, we're going to be reviewing the draft letter that we will have composed related to the comments on the report. So that will be a substantial effort, and that's an important effort that we want to get cooking ahead. So there are really a number of things that I think that are out there.

Denise?

DR. DOUGHERTY: I'm probably channeling Jennifer Howse since she's not here, but I'm wondering if there is an opportunity to have an update on where the states are in terms of implementation.

She's right, there is no official status to this report yet, states are acting on it. It might be good to have a more systematic report.

DR. HOWELL: Denise, it's my impression, looking at the rapidity with which the states are changing and so forth, that that should be kind of a permanent part of our agenda. We hope that the changes will be so brisk that there will be a lot of information. But we need to know what is happening in the states, and Brad's organization can certainly continue to do that, and anybody else that has new information.

DR. LLOYD-PURYEAR: It's online on the website.

DR. HOWELL: Yes, it's online of course, but there is nothing like having it in the flesh.

DR. RINALDO: How often is that updated?

DR. THERRELL: Whenever we hear from the state. Usually at least monthly, if not weekly. We did put online Wednesday the translation from the previous way of counting to the ACMG way of counting. So that went online Wednesday morning. So you can go now and look at the 54 conditions and see how the states handle it.

DR. RINALDO: Are you also including determination of a percent of birth that is covered for condition?

DR. THERRELL: The way it is is if you get a dot, it means that it's mandated on all babies. If you get the letter A, help me Donna, the letter A means it is universally offered to everybody, and the letter B means it has been mandated, but you haven't done it yet. So you can tell that way.

DR. HOWELL: Do you want to go to the microphone, Donna? We are going to get the facts here now.

MS. WILLIAMS: A means testing is done on select populations or a pilot, again, not on the whole population. B means universally offered to all children, offered to all babies, but not mandated. C means mandated but not yet implemented.

There is a little discussion about B when we talk about universally offered. We don't go into what percentage a state has to meet to be considered universally offered. Even states that mandate on everyone, we really don't know what actual percentage of children actually get screened. So just to keep in mind.

DR. HOWELL: Do you not have that information? Or is it just not on the Internet?

MS. WILLIAMS: You mean the percentage?

DR. HOWELL: About what they are actually doing. You say it might be mandated, but you don't know exactly what they're doing.

DR. THERRELL: The states don't know.

MS. WILLIAMS: The states don't know.

DR. HOWELL: The states don't know.

MS. WILLIAMS: Most of them aren't linked to birth records.

DR. HOWELL: Oh, that is a problem.

DR. THERRELL: Even the ones who offer it to everybody, it doesn't get offered to everybody. So usually they tell us it is offered to everybody, but we don't know exactly. We think it is probably 90, 95 percent. But when they make that argument to us, we put down that it's offered to everybody, but we don't really know.

DR. HOWELL: And they are not confident about that? Okay. Thank you.

DR. EDWARDS: Do you know how many states now, Brad, who mandate the package that has been recommended in the ACMG report?

DR. THERRELL: Look at our website. It just went on Wednesday, and we've been fighting for the last week to get the —

DR. HOWELL: Donna, do you know the answer to that? Do you know how many states are currently requiring, mandating the panel that is on the list here?

MS. WILLIAMS: Well, like Brad was saying, it was hot off the press Wednesday morning. I think I put it online at nine and left at ten to catch our flight. Twelve states. Do you mean counting across, they do everything? I haven't had a chance to count it myself.

DR. RINALDO: Are you saying that 12 states are already testing for CF?

MS. WILLIAMS: Including CF?

DR. HOWELL: Well, it's perfectly clear we'll need to have a little elucidation of that. Dr. Vaughn has a comment on the subject.

DR. VAUGHN: Just real briefly about the percents that are screened in some of those B category states. Nebraska, for example, does actively track that. They have, as you probably are all aware, a parent opt-in to an expanded program. They track that actively.

I think most recently in our update this year, they reported 96 percent of parents are electing to have their babies expanded. In Pennsylvania, some of the programs that screen expanded a full comprehensive program is over 99 percent, 99 point something. So there are states that do track that.

DR. HOWELL: Thank you very much.

But again, Denise, to go back to your thing, I think that a formal presentation about the state of the states is always a good thing. Hopefully we can have some kinetic information so that we will know that in April, the number was this, and when we meet in July, that there has hopefully been some upsliding and not backsliding and so forth.

DR. DOUGHERTY: Can I make one more?

DR. HOWELL: Please.

DR. DOUGHERTY: I was wondering about given all the discussion we had yesterday about the importance of OBs in getting newborn screening done, why we don't have an ACOG representative or an AWHNN representative on the committee. I checked the charter. It is allowed to have them as a non-voting member.

DR. HOWELL: Right. Yesterday I made a rather ambiguous comment about this, because the bottom line is that the mechanism of exactly that is the charter. Now HRSA has to decide the mechanism.

But again, I think it would be very valuable to have a leader in obstetrics and gynecology serving as a non-voting member. But again, that's jumping ahead, and we'll have to see what happens with that.

We would assume that there will be 5,000 plus or minus people plus or minus interested in serving on the committee.

DR. RINALDO: I think it is an excellent point. Perhaps we can start inviting them to come here and give presentations just as a first step. I would like to have a representative of that organization to tell us where do we stand in newborn screening with a perception that is fairly diffused that they aren't too involved is true.

DR. HOWELL: I think it's fair to say they have increased activity with leaders and genetics, so I think that's an area of movement within the community.

Denise, I'm very sympathetic to that. I think that's a very good suggestion. Any further comments?

DR. EDWARDS: I'll comment once on that. Actually we have a query out to ACOG right now as to what their current position on it is as far as recommending newborn screening. So my guess is they probably do not have a policy, and if so, then I think it would be very helpful to incorporate them into deliberations.

From the education standpoint, it is pretty clear if you look at Terry Davis' materials, that we're going to have to depend on the obstetrical community to pass the information along in the prenatal period.

DR. HOWELL: I think we're extremely sympathetic to that position and so forth. I think Dr. Jones mentioned the prenatal testing for cystic fibrosis. Again, the obstetrics community has been a leader in offering that. So they have certainly had recent experience in doing that.

Are there other issues? Let me bring up one thing to the committee that has been very much on my mind for some time. That is that there has been a great deal of lay press about newborn screening, which I think has been very encouraging, because it has increased the public awareness.

There has also been some controversy, which I think is also valuable, because that makes people more interesting than if it was not controversial. I realize that might strike somebody as strange, but the fact that there has been controversy raises the awareness and so forth.

One of the things that has happened is there has been a considerable amount of press about newborn screening that contains information speaking personally now, and I'm not speaking as chair of this committee, but I have been in newborn screening for over 40 years. I'm unaware of more than a handful of adverse effects that have directly resulted from newborn screening. I'm not talking about pediatric practice.

There has been a considerable amount of press about the fact that there has been lots of adverse effects, and parents in particular have spoken with me and find it very scary. If thousands of babies, which is what is in the press, have died as a result of adverse effects of newborn screening, that's a problem.

I have done a literature search in earlier days, and more recently, and the literature is just not there. I have talked with a number of people informally. But one of the things that I would like to accomplish, and I would like to hear the response of the committee, I would like to work with Michele to see if we can get an expert who is an authority in how historical things are done in medicine and so forth to look back and do a careful look at newborn screening and see are there data on adverse effects that we don't know about, but do a systematic thing and get it published.

Now, you say well don't we already know that? Yes, we do, but the problem is that there is no really refereed paper that I can say well, I have not seen that, and I have talked to Selma Schneiderman, who is 90 and who started the newborn screening program, and she's not seen it and so forth.

But the thing is I think it would be very valuable to have a thoughtful, systematic paper by someone who is versed in this area and so forth to look at this and to try to categorize adverse medical outcomes in this area. Jennifer has been talking with me about this. She is very enthusiastic about this. I don't know whether other people would think that would be — we're not talking about a major opus, but basically to get someone to look at this and try to get a paper in the literature.

DR. BECKER: Rod, that's a great idea. You might also want to contact Dr. Hannon, because Harry was particularly interested in this issue when a particular publication came out a couple of months ago. I believe he has also done something similar to what you did on the side, was looked into the literature to try to see if these reports could be substantiated in some kind of way. I think his findings were similar to your observations.

DR. HOWELL: It would be my thought to have such a person who is formally trained in doing things like this to do it, but they would need to talk with people like Harry who have been involved since the beginning, and other people that have actually been running programs and so forth, and then do a careful literature search of anything in the literature and other personal communications.

I see noddings about this, so we'll see if we can move along on that, if that seems a sensible thing to do. Again, I'm not talking about some huge effort, but I think it would be interesting to get that done. I

think it would be comforting to folks to have something published in the literature, rather than commentary off the side.

DR. BOYLE: I guess I'd have to think about it a little bit further, but just my off the cuff reaction is it might be helpful to have it maybe a little more generalized in terms of risks and benefits associated with newborn screening.

Also encompassing sort of the detailed literature review associated with that, rather than just focusing on specifically potential risks that have been identified. There are always risks, and they are weighed against the benefits.

DR. HOWELL: Right. I would think it would be important to not get carried away with trying to measure certain things that would be tough to measure. That's the reason I was thinking somewhat concretely about clearly defined adverse effects and so forth.

I was just thinking of something you could measure and say this is what has happened.

Derek?

MR. ROBERTSON: I mean, I agree. My question is more general. Is there a protocol you want us to follow in terms of if we are contacted by the press? I have actually been contacted once before. I think I called you, Michele. The reporter never called back. But do you want all press to go through you? Or do you want to follow a particular protocol with that?

DR. HOWELL: This committee serves as a part of HRSA.

So Peter, would you like to comment about that?

DR. VAN DYCK: Well, it's part of the Department, but you're free to comment to the press, as is certainly the chair of the committee and other people as long as they keep their comments in general and to the public record.

DR. HOWELL: I have never hesitated to comment to the press, and I will continue to do so.

(Laughter.)

DR. HOWELL: But the thing is is that I think that if we could focus the comments as much as possible, I think that would be helpful. I'll be glad to respond to anything you get, Derek.

MR. ROBERTSON: Yes. Because my one suggestion would be I think it always works best when you have one message, and maybe if a reporter were to call me, unless they were specifically trying to get a parent perspective, my preference would be to say here is the chairman Howell, he is going to take all press inquiries.

That way it is consistent, we're not saying anything in conflict or something like that.

DR. HOWELL: And I have been extremely reticent to comment about other people's comments. I think that's a very risky business. I try to stick specifically with our message and what we are doing.

But I think it is not the role of this committee or the chair to take on the public dialogue with what you said or somebody else said. I have avoided that assiduously.

MR. ROBERTSON: Because I think it could go in reverse. In other words, you could also probably refer, if there was an area, you could say well, why don't you talk to Piero about this or something.

DR. HOWELL: Yes. Certainly many of the members of the committee have certainly been contacted extensively. Certainly if there is something specific about a laboratory aspect or something else, I would certainly feel free to recommend that.

Piero?

DR. RINALDO: Going back to the risk and benefit issue. Can we learn anything about false negatives? I know the CDC had a study, or somebody was trying to collect data, but I don't know what happened to that.

DR. THERRELL: That study, finally, after three years, got IRB approval at CDC. Our institution now has to go back and get IRB approval. We had approval, and CDC didn't. So it is a joint study between CDC and our institution and Ken Pass. It will be questionnaires to parent organizations and to state health departments about any known misses. Excuse me, not misses, but late diagnoses of the things that were required by the state during that period since 1986. There is in the literature a study before 1986.

DR. HOWELL: You know, I think one of the things that Piero is probably going to bring up is that when you see data from a large state that has not discovered a given condition, we may not know whether the instance is 1 in 30,000 or 1 in 50,000, but we certainly know it is not in 1 in 250,000. If they screened 250,000 babies and hadn't found one, the answer to the problem is crystal clear, that they have been missed. That's tremendously concerning.

It is a problem to have too many false positives, but it is deadly to have any false negatives. We will never be perfect, but that number has to approach zero.

DR. RINALDO: Brad, any idea when that study might have something that can be sort of presented?

DR. THERRELL: It's going to be at least a year.

DR. HOWELL: The false negative issue is very good. Are there other issues that should come before us? You have worked hard, and I think you have accomplished quite a lot. The subcommittees are on the way. We have a number of things in the wind for July. The report is up, and we're going to have the feedback from that, which you will get.

That feedback is done May 9th, is that right?

DR. LLOYD-PURYEAR: Yes, May 8th.

DR. HOWELL: So that you have a little time to prepare that, so you should get that in several weeks. You should get copies of all the comments, and then we will start working on a draft of that in the meantime.

The subcommittees will be working assiduously in the accompanying weeks.

Amy?

DR. BROWER: I just have a quick note for the subcommittee, since we identified the three cross-cutting areas. I would propose that each subcommittee and each reporting of the subcommittee activities include those cross-cutting issue, even if you haven't done anything in your committee so we don't forget about IT, evaluation, and finances.

So even if you are not addressing it yet, I remember what APHL said about the Informatics and things. We want to make sure that stays on everybody's radar screen.

DR. HOWELL: Ladies and gentlemen, I think we're through. Thank you very much for your attention.

(Whereupon, at 2:30 p.m., the meeting was adjourned.)