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CENTERS FOR MEDICARE AND MEDICAID SERVICES
Medicare Evidence Development & Coverage Advisory
Committee

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Centers for Medicare and Medicaid Services
7500 Security Boulevard
Baltimore, Maryland

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Panelists

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Panelists (Continued)

Guest Panel Members
Barbara M. Alving, M.D.
Diane Bild, M.D., M.P.H.
Lisa A. Lang, M.P.P.
Richard E. White, Jr., M.D.
Sean Tunis, M.D., M.Sc.

Executive Secretary
Maria Ellis

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PANEL PROCEEDINGS

(The meeting was called to order at 8:31 a.m., Wednesday, April 30, 2008.)

MS. ELLIS: Good morning and welcome, committee chairperson, members and guests. I am Maria Ellis, an executive secretary for the Medicare Evidence Development and Coverage Advisory Committee, MedCAC. The committee is here today to discuss evidentiary priorities for the Medicare program.

The following announcement addresses conflicts of interest issues associated with this meeting and is made part of the record. All panel members have been reviewed and there are no conflicts of interest.

We ask that all speakers please adhere to their time limits. We have numerous speakers to hear from today and a very tight agenda, and therefore cannot allow extra time. There is a timer at the podium that you should follow. The light will begin flashing when there are two minutes remaining and then turn red when your time is up. Please note that there is a chair for the next speaker, and please proceed to that chair when it's your turn.

For the record, the entire panel will be submitting their scores today. I ask that all panel

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members please speak directly into the mikes, and you may have to move the mikes since we have to share. If you require a taxicab, there is a sign-up sheet at the desk outside of the auditorium. Please submit your request during the lunch break. And lastly, please remember to discard your trash in the trashcans located outside of this room. And now I would like to turn the meeting over to Dr. Barry Straube.

DR. STRAUBE: Good morning and welcome, first of all to the MedCAC committee members, but also to the public and others in the audience, I want to welcome you here to this second in a two-part MedCAC series. I wanted to paint kind of a high overview here and then turn it over to Steve to continue on with the meeting here, and why we're doing this particular MedCAC meeting as follow-up to the one we held late last fall. I think that we're trying to make a point that our coverage process fits into a much higher process that CMS has embarked on, which has a focus on quality and value in health care. About two-and-a-half years ago we published what's known as the CMS Quality Road Map,

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and we're currently revising that and bringing it up to date and we will be issuing a new version relatively soon. The key tenets of the Quality Road Map for CMS, however, won't really change very much, and in particular the main mission, which is to obtain the right care for every person every time, that's our vision and our goal. We have five strategies, if you will, that we will continue to focus on, we may revise these slightly.

The first is working through partnerships and collaboration with multiple stakeholders across the country. We don't believe that we can do this by ourself, and this meeting is one of the reasons and fills that strategy in the road map.

The second strategy is, we believe very strongly in making public and transparent quality, efficiency, value, price and cost information to the American public. And again, I think that the output of this particular meeting will fit into that strategy also.

The third area, probably not directly related to the meeting today but very important to the Agency, is reforming our reimbursement system to pay for quality rather than quantity as we've done over time. So there's a lot of activity, as you're

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all aware, a discussion on the Hill and elsewhere about how we can reform our payment systems. The fourth strategy is to focus on and promote and push the adoption of health information technology, and that we believe is very important to be able to enable providers at the various provider sites to be able to deliver the highest quality and most efficient health care, as well as gathering evidence to be used in the delivery of care and making coverage decisions, and collecting quality and efficiency information. But our last strategy, the fifth strategy is perhaps the most related to the MedCAC and to the work that's going to be done today, and that has to do with how we're wanting to bring to the, be made available to Medicare beneficiaries and to the providers who take care of our Medicare beneficiaries new and innovative technologies, services and treatments as rapidly as possible so that these don't languish and are not made available to healthcare providers as well as beneficiaries. And that's what our coverage process is striving to do and what this meeting will contribute to as we go forward. Now in the past you may remember that before the mid 1990s we basically, anything that FDA

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deemed as safe and effective ended up being covered by Medicare. But as the '90s went on and in particular with the past decade, we have refined our statutory authority and responsibility, which is to determine once something is determined safe and effective, whether it's reasonable and necessary, and this is a very difficult area which the MedCAC and many of you and others will need to help us with as we try to further refine our definition of reasonable and necessary going forward.

But what we do know is that reasonable and necessary, if you look at the statutory language of the Social Security Act is linked, and our guidance documents have defined at least to some extent that reasonable and necessary entails two components. One is that a treatment or a service has to lead to improved outcomes, so it has to make the health and outcome of the Medicare beneficiary better. And two, it has to be relevant to the Medicare population. So many, many population-based studies which we've used in the past may not be specific for Medicare beneficiaries, and we are increasingly looking at the relevance to Medicare beneficiaries.

So in that vein we've decided, and we went through our first meeting the last time, and this is

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entirely new for us so we have, I think it's an iterative process where we're learning how best to do this. But the major goal of that meeting, and now today much more importantly, is to try to go back and identify where there are gaps in evidence in topics that are most relevant to Medicare beneficiaries and topics that will ultimately lead to improved outcomes for those beneficiaries, so that this MedCAC today will build on some of the discussions and evidence that we gathered for the first meeting.

We've had a second meeting which you will hear described momentarily, that gave us some more information, and today what we will try to do is to identify those gaps in evidentiary background that all of us feel are important for all of us to address so we can make better evidence-based coverage decisions and bring new technologies to Medicare beneficiaries more rapidly.

Some discussions I just want to close with, there has been concern in some quarters that the purpose of this MedCAC is to set the national coverage determination agenda for the next year or two. That is clearly not the case. Again, we are looking to identify where there are the largest gaps in evidence to make coverage decisions in certain

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areas, but let me send a message and be clear also that these topics are not just short on evidence, but they involve critical topics that we feel are important for Medicare beneficiaries. So I think that we want to promote evidence development in these areas, as well as we would like to see product development in these areas that we can apply that evidence to, and hopefully it will meet criteria that we can provide coverage to Medicare beneficiaries in those areas.

So having said that, I think I will turn this over to Dr. Pearson and you may proceed.

DR. PEARSON: Thank you, Barry. Good morning, everybody. I'm sorry we're a little bit late, but part of my job is to help keep us as on time as possible going forward, and I do think we will be able to do that.

Just a few brief words from my perspective. One is that this is not the first meeting where this process has been attempted in terms of setting priorities. It's obviously not easy. It's not a very clean and precise process but it's very, very important, for all the reasons that Barry laid out. And I would add that -- he talked about innovations languishing for a dearth of

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evidence. I would say that the needs for evidence are very broad and I think this panel represents a broad perspective, both on the clinical needs for evidence, on the needs for evidence from manufacturers' perspective and how they want to get products adopted and accepted, and from a population perspective we need to figure out where the evidence gaps are in order not just to make sure that good innovations are brought quickly into practice appropriately, but that we understand how decision-makers can best obtain the evidence they need to make sure that we do get the innovation that we want, that the value from that innovation can be judged in an appropriate time when it's introduced into practice.

So when we talk about evidence gaps today, you can imagine there's a long list that I'm fairly sure many of you will have seen before of specific topics and questions. The panel will actually spend a fair amount, if not the majority of the time today, thinking about evidence gaps in a very broad perspective. And that is not just what are the very specific questions that need to be addressed in a very narrow clinical area, but what types of evidence are needed for decision making, what types of studies

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would best be thought of as in the future providing the kinds of evidence that so often decision-makers feel are lacking. So even when there is research, often sometimes there are many, many evidence gaps, and I think it's that perspective that the MedCAC today wants to discuss, as well as in a sense revisit that long list and try to revisit its prioritization.

So, I know that we're going to have a presentation from CMS on background, and then we will move into the agenda beginning with the panel discussion. Rosemarie.

DR. HAKIM: There's a little technical problem.

I want to welcome everybody to this MedCAC, I think it will be really interesting. The goal of this meeting, which has been already said, is to develop a list of evidentiary priorities focusing on gaps in research. Our ultimate goal is to guide health care decision making for physicians, patients and families. Because evidence for health benefit of clinical services for the elderly is often lacking, CMS would like to establish a list of research priorities to fill these gaps. We would also like to provide guidance to the research community about the

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most significant evidence gaps on health care for the aged, regardless of Medicare coverage. We do want to expand this to all evidence issues, regardless of whether it's a coverage issue.

CMS would like the research community to consider the value of determining the effectiveness of new technologies. We'd also like the research community to assess comparative effectiveness and the added value of new technology. We would also like the research community to evaluate the effectiveness of existing items or services provided to the aged.

When CMS makes a national coverage decision, key evidence is often missing because studies often enroll younger age groups, which in many cases limits our generalizability to the older patients we're looking at. Many studies don't meet the minimal quality standards to be included in a systematic literature review or meta-analysis. Existing studies may not have evaluated endpoints relative to the elderly or have inadequate follow-up. Studies often have too many exclusion criteria to be of value. Studies of diagnostic tests may have only been concerned with the sensitivity and specificity of the test and not the ultimate health benefit of that test.

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We're trying to target, in this evidentiary priorities activity, other government agencies, academia, industry, professional societies and private funding organizations.

You've already heard that we had an evidentiary priorities meeting in October. We had -- sorry, that's a mistake -- we had seven scientists from the following institutes, and what they did was present their institute's view on the most needed research study projects.

Then in February we held a federal workshop and then we had 50 scientists and we invited them from 13 NIH institutes, the CDC, CMS and AHRQ.

We then organized everybody into teams, not necessarily based on their expertise. The teams reviewed the October list and developed new questions and topics.

Before today's meeting the panel received some material which you now have outside on the desk. They received a list of relevant diseases and conditions, most of which were developed in October and February; they received a list of relevant diagnostic tests and procedures, and they received a list of screenings. They also received a list of study designs, research outcomes, and health policies

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that could help direct research. Today in the morning we're going to have an open panel discussion of study designs and research outcomes and then we're going to go to public comments. In the afternoon we will continue the discussion and discuss and revise scores. This is a sample of the evidentiary priority score sheet. After this we will review today's score list and prioritize and finalize it. We will make the evidentiary priorities public via the CMS web site and public meetings such as town hall forums. We hope to keep our priority list current. All of our MedCAC proceedings, including today's, can be found on this web site. Thank you.

DR. PEARSON: Thank you, Rosemarie. All right. So as she described, we as a group have been looking at a long list of evidentiary priorities, and I think going through those will have raised for all of us specific broader thoughts about the types of evidence, what kinds of research we need to try to prioritize for Medicare and other users. So let me just open it up to the panel now, and instead of focusing again at the lower level of what specific topic within diabetes is the most important, let's talk a bit about what kinds of

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research and what kinds of outcomes we feel are the most important for the research across a broad set of clinical areas. Sean, would you like to start?

DR. TUNIS: Maybe picking up on some of the comments Rosemarie made, she identified a number of areas where the existing evidence is oftentimes considered deficient, at least from the perspective of making coverage decisions and, you know, a number of things she identified, including, you know, including the elderly patients or other types of Medicare patients like disabled patients, et cetera, in the kinds of outcomes and interests.

I think, again, one of the key questions that will come up over and over again today as we try to think about evidentiary priorities is, you know, this sort of underlying method that, you know, sort of the different methodologies that are appropriate. And this goes to, you know, whether analysis of existing databases is going to be useful for coverage decisions or whether registries are ever going to be particularly useful for coverage decisions, whether done under coverage with evidence or otherwise, or whether what we're really talking about is, you know, so-called real world clinical trials.

And you know, one of the bullets in

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Rosemarie's slides talks about that the quality of existing evidence frequently doesn't meet, you know, the standards for being included in a meta-analysis. And you know if you look at most of the systematic reviews that AHRQ will do, for example, to support CMS coverage decision-making, you know, oftentimes right out of the bat, what is excluded is anything that isn't a randomized comparison. So, you know, one of the early questions we will have to sort of talk about and decide is, you know, is CMS potentially considering more openness to nonrandomized designs in informing coverage decisions or are we really talking about how do we get more better real world controlled clinical trials, and is that the kind of evidence gaps that CMS is most interested in. So that's kind of one fundamental issue to raise, and it comes up over and over again.

DR. PEARSON: Yes, Barbara.

DR. ALVING: One of the points that I might like to make is that a coverage decision is actually a very dynamic decision, just as FDA decisions are very dynamic. And certainly FDA is now recognizing the importance of surveillance and really following what is approved, and I think that CMS

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probably needs to make some coverage decisions that can be followed in a very dynamic fashion. And that's why I like coverage with evidence, or you can say we're making this coverage decision but we're going to reevaluate it as new therapies are, you know, found, or as we see there is too much, let's say morbidity with a decision made on a drug, for example, as it pertains to the Medicare population. I think we've seen with EPO, for example, a coverage was made for dialysis which was a very wise decision, and yet a dose crept up. So it shows how we need to have a very dynamic, I think, process in place for coverage decisions and they don't have to necessarily be irrevocable.

DR. PEARSON: Yes, Mark.

DR. GRANT: Getting back to the issue of the types of studies and types of evidence, I'm not putting the horse before the cart. I think the first issue is that, what is the question at hand and what is the decision that the evidence is meant to inform. And I think, I guess from my perspective one starts staring at how much uncertainty is one able to tolerate in the evidence, and sometimes that uncertainty might be okay, let's do another randomized comparison, and sometimes it might not be.

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But I don't think there's any one blanket study design and I think that one needs to be considerably inclusive in the potential alternatives. And I also think that in terms of evidence synthesis, the general approach oftentimes is to throw quite a bit of evidence out of the starting gate, and I'm not sure that's always a wise decision. So in addressing the question about what types of studies, I really, really believe strongly that you start with the question of the decision that we need to inform and that really will dictate the type of design.

DR. PEARSON: Anybody more? Nora, did you have something to say?

DR. JANJAN: I guess I would say that from my perspective as a clinician, there are really two important issues, one is patient outcomes and what are we doing for the patient. And there's a lot of data that's gathered on quality of life and whatever that is not always reported, and I think that needs to have a higher priority that, you know, we might extend survival for two weeks, but is that quality survival and are we accomplishing something. Secondly, I think the extension of technologies, once it's FDA-approved for a given

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indication and then we apply it to other situations, there's rarely any further study, or if there is, you know, it's more limited, and we have to figure out what level of evidence do we need as we extend technologies to different situations or new agents to different situations, how much evidence will be needed to use it in that population.

So those are two issues that I think need to be addressed relative to coverage.

DR. PEARSON: I believe it's Lisa, right?

MS. LANG: Thank you. While we're talking about methods of research I would also like to talk about data, access to data, and I think one of the questions that also needs to be on the table, Sean raised it when he started to talk about registries, is the extent to which the information that CMS collects can be more adequately mined as a source of health services research information for what makes sense and to begin to get to some of these comparative effectiveness questions looking at the population in question. And at the moment there are statutory impediments to access, to outside access to some of the richest of the data sources, which would be the information that comes, the clinical information that is in the hands of the QIOs,

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particularly the hospital quality information. And that's the kind of information that would be of value, and I think one of the things that becomes apparent from a research perspective is that there is not an unlimited amount of money to either conduct research or collect or establish databases, so that we need to also be thinking, as we do our thinking today, about recommendations that would be relevant to strengthening the sources, access to sources of data when they're available and making sure that we're not excluding meaningful sources unnecessarily.

DR. PEARSON: Sean.

DR. TUNIS: I just wanted to come back a little bit on Mark's comment about the methodology needing to be appropriate to the question, which I think is absolutely spot on, but I want to make sort of two observations about that.

You know, when you actually get down to sort of the nitty-gritty of figuring out what is an adequate methodology for a given question, it's very hard to come to any sort of agreement, particularly among different stakeholders. And obviously, Mark, you know, an experience we came through over the last year regarding an appropriate design for a study of

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CT angiography for patients at an intermediate risk of coronary disease, you know. So there's a specific question and if you say okay, what's the appropriate methodology, you get everything from you need a 10,000-patient randomized trial with major adverse cardiac events as an endpoint, to we have plenty of evidence as it is, it's a proven technology, it's widely adopted and, you know, no problem.

And then interestingly, where Medicare sort of came out was, you know, the current evidence isn't adequate but they're paying for it already so they will continue to pay for it, which I think, while it may come out of this group that that's an important scientific priority, I think there's very little chance that that study is ever going to get done. So I don't know where we put that on our list today of important research priorities for Medicare.

But the primary point is, you know, whether, you know, a group like this, as we try to identify important unanswered questions, you should just recognize that going the next step towards what's going to be a methodology that's going to be adequate for clinical decision-making, reimbursement decision-making, whatever, is not a simple scientific -- there's no scientific answer to that,

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that actually is a sort of mix between methodology and policy in terms of what is so-called adequate.

DR. PEARSON: Yes, Mark, you had a comment?

DR. HLATKY: Yeah, kind of a general one. The first, I guess one of the observations is that the clinical research that's necessary to provide evidence on these things is very expensive, it's difficult to do and it takes a lot of time. And so one of the two conclusions from that, one is I think it would be good for various funders and so on to develop ways to make it more efficient so that we can do more of this kind of research. And the other thing is to say that in times when research budgets are under pressure as they are now, NIH budget is flat, we have expensive clinical research, that there may be a lot of pressure not to do these kind of large studies.

And I would think it would be important for Medicare, for us to say this is really important, because this is what's going to translate evidence from fundamental research, which is in the NIH portfolio, into things that matter to taxpayers, to everyone else to say it's going to affect medical care. So I would argue that we especially need

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research to figure out things that maybe are not necessarily done by regulatory or for regulatory reasons.

I think we have a lot of research done on pharmaceuticals by industry very appropriately, it's great, a little less so perhaps on devices because of requirements to develop that evidence. But we have much less evidence for certain classes of things like diagnostics or rehabilitation or procedures or other things, simply because there's nobody who comes forward to do that. I would hope that the public agencies like NIH or the private ones like the disease associations or professional associations can stimulate the kind of research we need to fill these gaps, because I sort of see some of it as structural, that there's nobody there to pay for, or has the incentives to do the research to fill some of these gaps and that's why some of it is there.

And I think it would be very important to say to the other government agencies that I hope they continue to put a priority on funding patient type research, even though it is expensive, so the NIH, the VA and other organizations.

DR. PEARSON: Would other people like to comment on that particular point? Yes.

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MS. DAVENPORT-ENNIS: Thank you for the opportunity to comment. I would like to certainly agree with the comments that have just been made. I think as the dollars are shrinking we've received several letters of public comment about the fact that we need to be certain that we are engaging the specialty societies, we need to look at the body of evidence they're already collecting, whether through a guidelines process and the publication of those, or at the studies that are already being done so that we can also leverage against that.

When we look at some of the Medicare evidentiary priorities, I think for our organization representing patients, we're constantly aware that whatever this agency does, it becomes a role model to establish reimbursement guidelines in the private sector also. And so as we're looking at Medicare evidentiary priorities, I think we need to remain constantly aware that whatever we do in this regard for this agency, it will have a direct impact in the for-profit and in the private pay and reimbursement community.

That being said, I think not only do we need to look at collaborations with the other agencies that have been called out, NIH and NCI, but

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likewise we need to be turning to the Department of Defense and to VA, who have strong bodies of evidence particularly around subjects such as wound care, skin disease, that could be used to well inform some of the evidentiary decisions that we're trying to make here.

Sean cited earlier the role of registries, and I think certainly if you poll a hundred people, you may have a hundred different ideas on the value and how you integrate that information. But I think there is the opportunity to look at lessons learned from registries that have been used to this point and determine if there is a constructive process moving forward that could be used in using registry information.

So as we look at the global issue of what studies and how do they need to be convened, I think I would like to end my remarks by saying I feel we have a moral obligation not to be redundant in the studies that are being addressed and not to be duplicative in the dollars that we're spending for studies that may have already been completed.

DR. PEARSON: Richard I believe is next.

DR. WHITE: Thank you. From a clinician point of view, I think the whole concept of

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randomized controlled trials and its strengths cannot be questioned. But I think it may be field-specific and also even a procedure-specific thing.

I think the best example is total joint replacement. All of our randomized controlled trials that usually extend up to five years don't begin to really suggest some of the difficulties with those procedures. The registries that we've worked for several years to try to establish in orthopedics now and have not been successful in doing, for a number of reasons that are beyond the scope of this panel, are really a shame, because the registries that are very valuable, such as Norway and Sweden and Australia, have provided such tremendously valuable treatment decisions.

Now it's of interest that in this country we now still fund certain procedures in orthopedics in the geriatric population that registries have allowed us to no longer use, because they're ineffective at long-term follow-up that can only be really accurately done with registries. So at least I can tell you generally in orthopedics, but specifically in the geriatric total joint patients in orthopedics, registries are extremely valuable. As valuable and as accurate as RCTs, of course not, but

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they each have their strengths in various particular procedures. Without registries, we would be doing things that are clearly ineffective, which our randomized controlled trials would not have picked up.

DR. PEARSON: Yes?

MS. FRIED: I just had three very quick comments. One is that we need to remember that there's a sizable disabled population that's eligible for Medicare as well, and some of the comments are really reflecting aging, and we just can't forget that there's a sizable under-65 disabled population. Second is the issue about the FDA approval of certain drugs has become very important currently under the Medicare prescription drug benefit where many people are actually denied access to certain drugs which have been prescribed because it's off-label use. And so I think we do need to look at that issue and how there would be additional research for that. A lot of important drugs are available to our Medicare population even though they're considered off label and not on a compendium. And finally, reflecting some earlier comments, we've seen statistics and we've I think been provided them, that 95 percent of Medicare

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beneficiaries have chronic conditions, multiple chronic conditions, and so if there can be somehow research that reflects those Medicare beneficiaries as a whole, that would be especially important.

DR. PEARSON: Let me ask you a question. If I were trying to sit in the shoes of a manufacturer and I knew that coverage of evidence development was a growing possibility at CMS, I might be hearing from this that we need to do more studies of people with multiple comorbidities, of the elderly, and I'm sure they would hear that they need to do it in multiple racial and ethnic subgroups so that the broad generalizability findings could be established. Or they could do it in a healthy 40-year-old population, get good quick efficacy data, and say why don't we get coverage under CED and explore how it works in the elderly population. So I wonder, what would we say about that trade-off in the thinking about evidentiary gaps, how much is it worth to go out to get the data in the elderly beforehand versus, you know, the trade-off of -- how do we help prioritize that evidentiary gap given it's always easier to get the evidence more quickly and efficiently from smaller, more narrowly defined patient groups, and then look at the

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registries or other vehicles after adoption.
MS. FRIED: Well, many people know I'm not a doctor, I'm not a researcher, I'm a lawyer, I'm a patient advocate, but I think some -- and I may be wrong and it would be interesting to hear other comments, but that's somewhat a little bit of a local coverage policy, where some folks go out, get local coverage policies, they get it covered. And then it seems you have claims data and maybe some of that claims data can be searched and there can be, this is my ideal world, and people would probably say I don't know what I'm talking about, but there would be claims data then for people who are Medicare beneficiaries getting a certain service.
They could look at that claims data, see when people had certain multiple chronic conditions, do you think ICD-9 or ICD-10 data, and that might be a way to gather more evidence and look at outcomes.
I know that some manufacturers or services, they go for the local coverage policy first in certain regions, and then see how it's working in the Medicare population.
DR. PEARSON: Nora.
DR. JANJAN: I would just say that from the IRB perspective, when we have a clinical trial

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that comes before us, we want the cleanest patient population possible so that everything that can be controlled, that the outcomes won't be influenced by other factors. So when you go through the IRB process you've got this one tension of having a very clean patient population so that you know what the drug is doing, or the device. But on the other hand, what's the demographic of the application of this new technology or agent?

And so it would seem to me that from, we need to put those two tensions, we need to resolve that tension between the IRB and the clinical trial and how this thing is going to be applied. And perhaps one of the criteria should be look at the demographics of where this is going to be used and that your clinical trial must include that demographic and allow certain ranges within your patient population. If we can come to some consensus on that, I think that would be helpful in getting IRB approval.

DR. PEARSON: Mark, then Barbara.

DR. HLATKY: Which Mark?

DR. PEARSON: Go ahead.

DR. HLATKY: We shouldn't have put the Marks next to each other here.

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(Laughter.)
Just a general comment about research design. As a cardiologist, I think in my field we've seen a really good dynamic between the different kinds of evidence, which is to get clinical trials in perhaps the more ideal selective populations that you have described, but also have some registry data which actually has been funded by professional societies and by industry at various times that extend that data into broader populations and more practical settings. And I think that that complement, you know, sort of having both covered to say, you know, not just the trial data and not just the registry data, but actually both are helpful because they have complementary strengths and weaknesses in many ways. So I mean, you have more validity with the trials but narrower groups, and then in larger registries we can see how well things are working in broader populations.
And it may be especially important for those populations covered by Medicare because many of them are either older or have chronic conditions or disabilities that may make them less ideal in terms of entry into trials. That being said, I do think it's important to make sure that the trials don't

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exclude unnecessarily the target populations that we're talking about here where, you know, back in the day we had something where somebody over 65 was considered to be too old to get cardiac procedures, and that seems vary fairly ludicrous now, but back then it seemed appropriate. So I think, you know, we need to make sure that we have the entry criteria broad enough, but I do see a complementary role where we use both types of evidence without over-reliance on either type, that could be very helpful, and I'm sure that would work in other clinical specialties as well.

DR. PEARSON: Barbara, did you have a comment?

DR. ALVING: I would very much support doing the studies in the Medicare population. And then I think we also need to think about the old old, because, you know, many of us think 65 is the new 45, and so the Medicare population really extends across a broad range of health. But I think if you see this is used primarily in the Medicare population, we should definitely include that population and think about including the range of that population with the appropriate safeguards, with the appropriate monitoring, and these are actually the individuals

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who in many cases have the time to participate in clinical studies and the extraordinary interest. And I think we saw this, for example, with the Women's Health Initiative. These were very dedicated participants who provided tremendous amounts of information for our country.

DR. PEARSON: Linda, did you have a comment too?

DR. BERGTHOLD: When MedCAC started we put together a paper on effectiveness, clinical effectiveness in which we, as I recall, sort of established a hierarchy of evidence of what would be acceptable, all the way from the most desirable to minimally acceptable. And, you know, I think we've forgotten that that paper exists and I would suggest that maybe we might go back and take a look.

But I would be interested in knowing if folks on the panel feel that there are types of studies or methods that are not acceptable, because actually in that hierarchy there were kinds of evidence developments and methodologies that would not be considered sufficient in any case, so I would wonder what the panel would think about what would not be sufficient evidence in any case.

DR. GRANT: What's not sufficient

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evidence? I won't answer that, but I will comment on a few things.

I think the issue of the old old is really much to the point. Taking off my evidence hat and back to my geriatrician's, in many areas not having any evidence to care for those 85-year-old folks is always a problem. I also, I think that absolutely one requires, whether it be direct in the sense of randomized controlled trials or -- and I agree with Mark wholly that the complementary use of various sources of evidence to make inferences about generalizability is probably, is practical, it's efficient, and it may be in some circumstances the best that we have and we have to live with that.

But I think that the, I think having, being able to make some statement about applicability to the Medicare population is absolutely critical, who are you generalizing it to, which patients you're going to use, whatever the intervention might be.

DR. PEARSON: Well, I'll actually answer in one way Linda's question, because for another project I actually had to interview decision-makers at health plans, both public and private insurers. And especially in the area of interventional procedures, and you know, we talk about evidence

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gaps, and that could obviously include drugs as well as many different kinds of health services, but a lot of what CMS has focused on over the years has been interventional procedures.

And in that domain, decision-makers say just give me a control group, any kind of control group. It may not be the randomized type, but give me something I can at least make an argument that there's not some extreme bias in the results that are just a secular trend or just a placebo or something going on. So I think many of the evidentiary problems with IP, with interventional procedures come out of the long tradition that often there were no control groups and surgeons just switched the way they started to do things, and lo and behold people seemed to be doing better, and isn't that the evidence that we usually rely on, so I think the gaps often have to do with the idea that if you can help work in some way to come up with a control group.

And the other key issue that I kept hearing over and over again was the duration of benefit. Many times the studies will show a certain short-term improvement and then oops, that's the end of the study, and it's just so plausible that that, you know, that improvement might not last very long

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or that when we compare it to usual care, the ends might meet again in about six to 12 months. The hard part is there's never a clear boundary of exactly how long it needs to be, because some people will say it needs to be ten-year outcomes or we won't really know what to say about this, and people say we can't do a ten-year study on everything, so what do we do in the interim. But there has to be some meeting of minds in some way such that the duration of outcomes is at least proximate enough to the needs of decision-makers that it can help fill their evidentiary gap.

So as far as kind of basic have-to-haves, I would say some kind of control group and some kind of duration of benefit that matches decision-makers' needs are at least two of the things that they identified as necessary.

Richard.

DR. WHITE: I think your point is well taken. I think that one of the issues that we're talking over and over again is about how can we focus our evidence on the Medicare population. And I think at least in orthopedics, certainly a large percentage of our patients are in the Medicare population, but I can't think of any probable procedure or intervention

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which is performed only in the Medicare population or only in the non-Medicare population. And I think it is so difficult to perform a well-done RCT now anyway, to try to do that only in a -- actually one could probably do it more easily in a younger population, but we don't have that luxury in orthopedics, so to do it only in a Medicare population might be quite difficult.

And certainly if you take an RCT, as you well know and everyone knows, if you then take a subset of that just looking at a certain age group, that destroys the population and the study, of course. So I think that's a very, very difficult challenge, to extrapolate the effectiveness of a non-Medicare study to a geriatric group and vice versa, very, very difficult.

DR. PEARSON: Yes, Ruth first.

DR. BUSH: Just to elaborate on what you said I think, and what else has been said, I think defining what outcomes are and what outcomes are important in terms of functionality, quality of life, what is considered short-term, mid-term and long-term outcome when you're talking about a 75-year-old person who's having a procedure, versus a 45-year-old person who has been enrolled in the prospective

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randomized clinical trial. I think one important aspect of evidence we can gather from is looking at Medicare evidence in itself, in procedures that have been done, and using the Medicare data for filling some of the gaps.

I'm a vascular surgeon. A lot of device procedures which have been FDA-approved based on shorter-term evidence, younger populations, have been extrapolated and approved and are covered by Medicare, for example, carotid stenting. And I think that that's one area where, I might get shot for saying this, I think Medicare has done very well in requiring physicians to keep their own databases, to keep their own registries so that you will then have that outcome data on procedures that were approved in younger, healthier populations to then extrapolate to the older populations.

So I think we can also look at the Medicare data in itself and specifically maybe do more of that kind of auditing of your own data and the individual hospitals and practitioners who are doing it to gather your own registry data. That may be a way to fill some of the evidence gaps.

DR. PEARSON: Karl, you had a comment?

DR. MATUSZEWSKI: Someone on the panel

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mentioned dynamic coverage, and that I was, I think, an interesting term. What we currently don't have in terms of coverage, private payers, public payers, is sort of a sliding scale or conditional coverage. I mean there are a few Medicare examples, but I don't think it's used broadly.

What you have is a situation where for a manufacturer, ten years ago it was FDA approval and now more recently it's getting to payer coverage in their benefit scheme. But this idea of perhaps spurring private research funding, and I think I saw some statistics, about a third of research is public funding and maybe two-thirds is really the private funding, is how can you get, whether it's manufacturers or specialty societies, to begin answering some of these evidence gaps, and answering these evidence gaps because it has a direct impact in terms of the reimbursement for a given procedure or technology.

So you have, some evidence comes out at the time of approval and then perhaps some more evidence accrues, whether it's through registry or perhaps if it's a mandated post-marketing study. But I think that the ability for a payer, a decision-maker to ultimately say given the level of

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evidence that's been generated on this technology at this point in time, this is where it fits in terms of reimbursement, give us higher levels of evidence, give us more evidence, give us longer-term outcomes, and then perhaps we can revisit it and see how that technology falls in the spectrum of all the potential options. So a dynamic coverage, whereas right now it's either on or off for many conditions and technologies.

DR. PEARSON: Interesting. Nora and then Sean.

DR. JANJAN: Just a couple questions. Number one, in oncology, less than five percent of patients are on clinical trials. The cost of clinical trials is extremely expensive. And as was mentioned earlier, some of these clinical trials will take years to accomplish, and sometimes by the time you get those results, you've got something else in the pipeline that might be more attractive or possibly more effective, so from the clinical trials point of view it's very difficult.

A lot of clinical trials are now being outsourced offshore, so you've got different patient populations, different medical infrastructure, and so how applicable are those offshore results to the

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American population, where our comorbidities may be different, where our medical infrastructure may be different. And so I think there are a lot of issues about, you know, how much time, how long, how much money, how are we going to get patients on clinical trials, clinical trials done elsewhere, how are we going to apply those.

Those are issues I think that are pertinent to our discussion, because if we're asking for evidence, how are you going to get that evidence?

DR. PEARSON: I hope we don't have to solve that one today. Sean.

DR. TUNIS: Just coming back around, this was sort of triggered by this discussion of dynamic coverage, one of the things that strikes me that's going to be probably necessary to stimulate the creation of the kind of evidence that Medicare or private payers or others need is, you know, fairly clearly defined standards about what's minimally sufficient evidence, and that's not going to be able to be done on a generic basis, it's going to have to be done on a technology and condition-specific basis. So again, going back to Mark Grant's point about the nature of the study design and the adequacy of the study design is going to be different for a

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cardiac imaging procedure than it's going to be for an orthopedic procedure than it's going to be for a wound healing intervention. And unless the researchers and the product developers know how high the threshold is and what the criteria are for sort of what's adequate evidence, a minimally necessary evidence for coverage with evidence development or minimally necessary evidence for coverage, it's going to be very hard for them to figure out how to design their trials.

And I think what currently happens and we're all familiar with this is, you know, people come with a batch of evidence to Blue Cross Blue Shield Association and say is this good enough, and then Blue Cross Blue Shield Association TEC says sort of after the fact, you know, yes, it is, or no, it isn't. But you can't go to Blue Cross Blue Shield Association, or Medicare for that matter, and know in advance, you know, here's how we would like to see trials in this area designed. That's set up for the FDA, the FDA publishes guidance documents that sort of generally define technology-specific evidence standards for regulatory approval, but if we're talking about reimbursement decision or clinical policy-making, there's no comparable place to sort of

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find that kind of information.
And again, you know, as we're talking about the desirable characteristics of clinical research as part of the discussion, A, it's going to be technology-specific, and B, I think if we really want to stimulate that kind of research, we're going to have to be pretty clear on a technology-specific level about, you know, what kind of patients we want in those trials, what kind of primary outcome we want, how long those people should be followed. And, you know, I don't think it works to sort of, you know, basically send the message that once you're done with the trials, bring us the evidence and we'll tell you if it's good enough then.
DR. PEARSON: Yes, Barbara?
DR. ALVING: I think Sean has very good points but I would like to say, I see more and more that FDA, CMS and NIH can really be a very good and complementary team. And I also liked the comments about knowledge management. In other words, there are already a lot of studies going on that are funded by NIH, that are funded by industry, and we need to really do, we need to assess the portfolio in some of these conditions that we recognize such as Alzheimer's, diabetes, whatever it might be.

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I think the fact that FDA does provide guidance and many people say probably not enough, manufacturers, they may feel they're still trying to guess what is needed for approval, but it would seem that CMS could play into that and say well, we'll accept that, but then we have to make further discussions, so CMS wouldn't have to do all the work that's already been done by FDA.

I think it's also very useful, and that's why CMS and NIH are trying to work together, because often NIH will do the clinical trial and say okay, now you guys, you pay for this. And so CMS can really talk with NIH and say well, if you're doing a certain trial, these are the questions we would like to see answered, this would help us in our coverage decision. And that's why I think the communications across the agencies can be extremely useful as we design trials, registries, whatever.

DR. PEARSON: I wonder if that communication has to happen on a case-by-case basis or if there's a way to make it a little bit broader. I remember there was what I thought was a very effective MedCAC meeting a year and a half ago on age-related macular degeneration in which the focus was not a particular treatment for it, but to bring

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together the researchers, the manufacturers, the clinician community, to say what are the best measures of visual acuity that we should all try to be using across the board in research going forward. They actually did address how long should we be measuring outcomes out from treatment, and it kind of got everybody talking in the same way. So that, you know, there are different kinds of research gaps. One is when the research, there's a lot of it but it's all talking different languages, different outcome measures, different standards, clinician training, whatever it may be. But to the extent that that communication could be framed broadly across FDA, CMS and NIH, I would think that that could serve a very strong purpose in helping to fill evidence gaps by making sure that whatever evidence is generated could be looked at similarly and combined usefully. Mark, and then Mark again.

DR. GRANT: Sort of elaborating a little bit on that point, I think the bar is where the bar is in terms of evidence. The bar is that the evidence that's obtained, it certainly has to have clinically meaningful outcomes, it should have quality of life and those outcomes that demonstrate

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benefit. The bar is set at a place where in terms of, does it inform our care, our decision-making, whether it's a policy level, whether it's an evidentiary level, or whether at the patient level that leads to a benefit, a demonstrable benefit, and are we reasonably certain about it.

And I'm not sure it's entirely after the fact, and I think that when people are designing trials or designing whatever study they're embarking upon, that if they don't keep that in mind, and in terms of macular degeneration, I mean that's where it is, right? It's what is the most meaningful outcome, which will then allow us to make better decisions about the effectiveness of care. And I think the design of it, it's operational, does it serve the purpose of informing our, whatever was the policy level, whether it's -- and otherwise, the purpose being that we're going to improve the meaningful outcomes.

DR. PEARSON: Yes, Mark.

DR. HLATKY: Just a general comment about the kind of -- I hear a lot of things here that seem to say this ought to be tied to this kind of threshold for like a coverage decision or, you know, FDA approval of the drug or something, and it just

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strikes me that a lot of the things that we might need, to go to Barry's point from the beginning about one of the emphases should be on quality of care and what we're doing, is that that black and white thing is really very simplistic, because I can think of plenty of procedures in my own field like in cardiology that should be approved, should be paid for. But then the question is not, you know, should we pay for bypass surgery, but it's like who does it work in the best, what outcomes is it affecting, are there ways to do it better, to improve the quality of that care, get it to be done appropriately and so on. So there's a lot more things I think that are just sort of saying, you know, is the only thing of interest to Medicare whether to cover it. I think if you were to even restrict the things that are already covered, there are still plenty of questions that are important to this population that have to do not just with coverage, but determining the boundaries of how well things work and how to do them better and more appropriately.

DR. PEARSON: Other comments on that part of the topic? We'll start down with Richard and work our way up.

DR. WHITE: One last comment. I think if,

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as Dr. Straube said, one of our goals is to bring new technologies forward appropriately, evaluated to the Medicare beneficiaries, in a sense, at least in theory, the FDA attempts to do that. They attempt to say that something's safe and effective for some short-term basis, so the public could be exposed to it. On the other hand, those FDA decisions may be much different in many cases than coverage decisions, and I think then it's a matter of how we do that. So if we define, if we try to move the bar up for a research point that we want to have a much higher bar than the FDA, we hope that might be true, but nevertheless, there may be a conflict there. From a pure orthopedic point of view, if I were to tell you when it's really been shown that one new total hip replacement is better than the one we were using, probably the real answer is 10 to 15 years after it's been studied. And so if the FDA waits that long to improve it, it will still be obsolete. On the other hand, if we wait that long to pay for it, very few will be done if it's not paid for. So it's a very, to me it's really a conflict here in what we're trying to do, bring the technology quickly but also be certain of what level of research are we going to desire and justify.

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DR. PEARSON: Coming down, we have Karl, or you go ahead first, Nancy.

MS. DAVENPORT-ENNIS: Thank you. A couple of observations to the question from the patient perspective, I think. First, I need to call out the fact that when we start looking at what is the appropriate mechanism for clinical trials and are there clinical trials that may indeed not be appropriate for this population, this population is broadly defined not only as aged and not only as disabled, but also as great diversity in the United States of America, and with that diversity comes great economic diversity. And I think that we have proven now for years that if you cannot have a system of reimbursement for a therapy there are huge sectors of the population, today 35 million underinsured, 47.6 million uninsured, and even within the Medicare population, while indeed they may be insured, they may not be indeed insured with a mechanism for reimbursement for the treatment that they need. So that being said, looking only into the cancer community for a moment, it seems that there is an appropriate opportunity for us to look at trying to accelerate studies within the field of diagnostic testing that can determine through biomarkers whether

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we're going to have an enhanced opportunity for the patient to respond favorably to the particular therapy that is being recommended to them. And that in doing that, we will also satisfy the notion that most patients say to us and to physicians I think throughout the United States of America, which is, I want to do this if one of two or three things are going to happen:
Will I have an improved outcome at the end of the day over a standard therapy? Number two, will I have an improved quality of life if I'm part of this? And number three, will this be a process that may afford for me longer independent living? And in the last discussion that we had around this very evidentiary priority discussion we talked a lot about the needs of the patient to know that whatever they're going to participate in is going to lead to longer independent living and some improved quality of outcomes.
We also had great discussion around should we assign some percentage of every clinical trial that indeed should be comprised of the Medicare population, and we determined that that was not in the greater good of all citizens in the United States of America, that indeed we would not want to reach a

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point where he we had accrual to a trial and we were almost in, but perhaps we didn't have that magic percentage. So if we're trying to answer the question, I'd like to challenge the panel to consider that we do focus time on diagnostic testing within this population that can give us some insight into what is going to be the enhanced opportunity for positive responses to the trials.

DR. PEARSON: Karl.

DR. MATUSZEWSKI: Again, I can't answer your challenge but I'll throw out another one. I heard several times mentioned today quality of life and sometimes in the context that there is that data, sometimes in the context that it would be useful, and I think it is a greatly underrepresented element in research. I think that prolongation of life, surrogate markers, whether it be restenosis or curing infections, I think that's well understood, FDA understands that.

Quality of life is something that's very difficult to get into a labeled indication. I mean, FDA is really tough, and there might just be a handful of devices or technologies that have that. But yet in terms of what happens in the United States and what happens internationally, quality of life is

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much more advanced in the UK and other countries. There are a number of instruments, there's a number of methodologies, those I think are more developed and more used in reimbursement decisions and clinical decision-making in other places that are not in the United States. And I think that is a huge, huge lack of investment in terms of developing research agendas surrounding that issue that ultimately may be one of the most important from a patient perspective, of which intervention is going to get me the quality of life that I would expect. Clinicians very rarely know what, in terms of different alternatives, what will add the most quality to a patient's lifestyle.

DR. PEARSON: Thank you. Mark and then Sean.

DR. GRANT: Okay. I just want to step a little bit back about the issues related to duration of -- generally duration of follow-up and particularly for many procedures, long-term follow-up is required to ultimately define efficacy. I think one thing CMS can do and all of us can do, and researchers as well, is be more explicit about what is the ultimate chance that we're right versus we're wrong in terms of what we define regarding the effectiveness of a particular intervention or

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procedure, whatever it is. And I think we fall short there in terms of saying how uncertain we are, because we're not going to be right all the time, we're going to be wrong, researchers are going to be wrong, are going to make wrong decisions sometimes. But the issue is being explicit, and it's not that hard to say I'm willing to tolerate, you know, a 30 percent chance I'm wrong for this particular procedure versus another given the likely benefit, and, you know, we'll do this particular procedure even though we know that we need long-term follow-up out to ten years, but we're going to accept five years and the attendant uncertainty. I think where we fall short in terms of decision-making is really putting numbers out there explicitly and saying this is the basis of our decision. Because some of these decisions will be reasonable, rational and appropriate and allow us to, you know, bring things quickly out to light, but at the same time recognizing how much uncertainty we have.

DR. PEARSON: Sean was next.

DR. TUNIS: I just had one more thing in terms of this conversation about sort of general characteristics of the kind of evidence that Medicare

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might be interested in. I guess, Steve, if you weren't chairing you would have mentioned it, but you know, the economic outcomes and the financial implications of alternatives needs to be designed into these studies as well. And while I'm fully aware, Barry, that Medicare doesn't use economic considerations in coverage decisions, part of the whole quality framework that you outlined talks about transparency of costs and quality, and also payment reform that rewards efficiency.

And you know, in sort of the emerging payment world where consumers are more responsible for the economic implications of our decisions, where providers are going to be more responsible for choosing efficient options, obviously the research agenda is going to have to include gathering information about not only the comparative risks and benefits, but also the comparative costs.

To flag one serious dilemma that that raises which is encountered numerous times is, you know, the legitimacy of comparative research when the primary motivation is, you know, that there's no reason to believe there's a difference in outcome, but there may very well be a difference in costs. I think those kinds of trials, for example, a study of

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Aranesp versus Procrit is one example to look at some people's blood pressure rising. But you know, there's a study which may not have a compelling clinical argument to do it but it has a very compelling economic argument and, you know, we have a lot of thinking to do to figure out in what circumstances are such trials either ethical, practical, or worth what can be a very large investment actually, to get that information.

DR. PEARSON: Which, I'm going to pass it down in a second, but there's probably a reason why Sean and I have been separated by MedCAC, to keep us from -- but he built the soap box so I have to jump on it.

The word cost effectiveness in this list somewhere. Every developed country in the world, if you had talked to them about their evidence gaps and research priorities, quality of life and cost effectiveness, which includes both clinical outcomes as well as the cost and other impacts on patient utilities are front and center. And I think it's very important and I'm really glad Sean brought it up. For all the reasons that comparative effectiveness research is needed in general, there are critical evidence gaps having to do with the cost

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effectiveness and impact on quality of life for a lot of medical interventions. So I think that it would be very healthy for this panel to highlight that as one of the evidence gaps that, and types of research going forward, that yes, patients and doctors and systems of care will look at evermore in the future. I think the Secretary was out just yesterday and was quoted as saying that Medicare is -- do you remember the exact words he used?

DR. STRAUBE: I think he said on a disaster course.

DR. PEARSON: On a disaster course. The evidence will be necessary to help us get it back on track. Yes?

MS. FRIED: Well, if I recall -- I had a different comment, but you know, cost effectiveness always raises my blood pressure. I remember years ago when the proposed regs came out, there was a lot of language about cost effectiveness. My guess is that's why they never came out with the final because there was just such an outcry, because the lawyer in me sees that the statute says reasonable and necessary, not reasonable and necessary and cost effective. And I think using cost effectiveness is

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something we just have to be careful about when we are discussing it.
I heard duration of benefit and I actually have a question for those of you who used it. Were we talking duration of benefit in follow-up in the research, or duration of benefit of whatever the therapy or treatment is? Because I think for many beneficiaries six months of a longer life or six months of greater cognition, or six months or eight months of a better quality of life, even if that means that eventually they will die, is very important. And especially if we're looking at the 85 and older, or any people within our Medicare population, that's an important question.
DR. PEARSON: Just briefly, I think that for most people it would be the concern that, especially if you're comparing a new treatment versus what we already do, that if the new treatment has a short-term improvement but it has good reason to suspect that it may at six months, six months later it may all end up the same or even worse after six months, you just have to be very careful about the frame of the research. So it's not saying that a short duration of benefit is not important, it's making sure that that benefit is real compared to

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something else.
Does anyone else have something teed up to say? If not, let me reflect, it's about the half point, and I wanted to just let Barry say -- clearly these conversations are not prescripted, you can tell that we have ranged widely. So let me just reflect back with Barry to see how he feels we are addressing Medicare as CMS is the customer in this process, and see if he can focus our remarks.
DR. STRAUBE: Good, thanks, Steve. This has been a very interesting discussion, I want to thank everybody for their comments so far, and that's what we would expect of this august group. You all have a lot of background and knowledge and that's why you're here on this panel.
A couple of reactions. One has to do with, again, the concept of a new term I think we started to use, dynamic coverage decision-making. And I think that fits perfectly with what the intent when Sean was leading the effort here a few years ago and started coverage with evidence development and the way it's evolved since then. That was in fact one intent of coverage evidence development. I think, though, I would like to mention some of the limitations with how we've defined coverage with

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evidence development so far and maybe generate some feedback on perhaps how we can consider differences to that.

When Mark McClellan okayed that early on, it was expected that we would do CED in a very limited number of circumstances, and I think that was predicated on the original and at least what we're continuing to do perception that we will invoke the coverage with evidence development approach when the overwhelming evidence that we look at in making a coverage decision is almost there to meet what would normally get coverage but in the past would have led to a noncoverage decision. So it's very, very, very close to getting coverage, but rather than noncover it because it didn't quite make it, we do coverage with evidence development to try to get over that little little hump that's left.

The problem is I think a lot of folks, including many in the audience, would probably hope that we would kind of widen the gap so that we're not that close but maybe that close or this close, or this close, and I think that's one of our dilemmas going forward to use dynamic coverage or coverage with evidence development, or whatever we want to call it. It's how narrow should that, or closeness

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meeting definite coverage criteria should we be at. So that's one thought we might follow up on. The second one has to do with the concept of, we can either try to be in alignment, as Barbara was pointing out and others, with FDA's needs, CMS's needs, and from a research standpoint NIH's expectations. And one way is to do it all up front, and indeed, it's been a frustrating process and some folks in the audience have heard me kind of mention that it's back off the back burner every once in a while, and that is so-called parallel review. I think before I mention that, we've always encouraged at CMS for folks with new innovative technologies who are considering getting FDA approval and/or eventually CMS approval to come in and talk with us as early as possible. FDA of course encourages that too. The frustrating thing has been that, again, FDA's needs may be different than ours, they actually are. So wouldn't it be nice if we could develop a process where people could come in and talk to FDA and CMS at the same time, where we can provide feedback and help drive the design of a randomized clinical trial or whatever type of evidence we want to get at. Informally that's there now, people can

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come in. The problem is, we are not authorized to be able to talk at the same time as FDA because of statutory requirements and such right now. So we're continuing to discuss that internally, and strongly hope that we will be able to do more in terms of getting together, and NIH could be a part of this too based on I think some of the feedback I'm hearing in this conversation.

But if we don't do it up front, then it's this back end, where we've provided coverage and again, we get, how close do we have to be to the standard criteria for full coverage before we invoke some dynamic coverage process. So let's hold that, Steve, and maybe get some comment.

The second thing I wanted to mention, I guess a lot of what I'm hearing, I'm trying to put back into the context of what we're going to be doing this afternoon, and that is prioritizing evidence gaps. And what I'm hearing is some answers, although not everything addressed what I would tee up as if you look at the list that we've generated and you're going to talk about this afternoon, why are there gaps there. And I think it might be interesting to answer that question.

We've had a few suggestions, one is

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funding, there just simply hasn't been funding to look into these particular questions. Some is that if we adhere to the gold standard of a randomized clinical trial that it's too expensive or too complicated or that we can't get the patient population, et cetera, to meet that need. So that gets back to I think a very helpful discussion of, short of a randomized clinical trial, what other evidence-gathering mechanism should we be considering and should folks who need to gather the evidence be considering, so we can narrow that gap.

So why are there the gaps, and again, it might be useful to look at the list and, you know, you can pick one out, a couple out, irrespective of where they come out on the prioritization list. You know, pick genomics, I think Nancy brought that up. We've established a genomics work group here at CMS because this is an area that's going to hit all of us. And so why are there gaps? You know, if we pick on the genomics genetic risk factors. How does knowledge of genetic risk determine its improved screening and prevention programs, or certain treatments? Why haven't -- we've gotten lots of effective tests, but why the clinical utility gap? Why aren't we addressing some of those to determine

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when a genetic test in fact is useful and might lead to better outcomes? And then as the follow-up corollary, why are there these gaps to these, what are the barriers? So once we identify and prioritize them, we might address those, how can we fill the gaps. So I throw those out for discussion.

DR. PEARSON: Okay. I think that second one is very important and I think it will be a good topic. Before we do that, should we have brief comments if there are any on the question of what, does anybody have anything to say about the, in a sense, the spread of the threshold, the evidence threshold that separates CED from usual coverage and from no coverage at all? Yes?

MS. FRIED: Well, there's also local coverage policies, and I raise that again because that was not listed in your group. And I was wondering, Barry, if you, if there can be, I don't want to call it a demonstration project, but something where there would be, if the gap is much broader, if it could be, you know, local coverage by a certain carrier with evidence gathered at that point, versus on the national level.

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DR. STRAUBE: That's a good point, Leslie. I think for the whole issue, national coverage decisions versus local coverage decisions is another whole controversial, very controversial topic. And I think what you're suggesting could be one additional model that we might consider. The problem that I see, I suppose, is which local entity would do this. If it's on a treatment or a service or a test, that there's one organization that does the testing that's in the jurisdiction of a MAC, you could do it. But if it's a service that's being provided nationally, it gets a little bit problematic with doing it in one area, because you're restricting it to the population in that area, which may have unique characteristics also. So I think it's something we could put in, but it's somewhat problematic, I think.

MS. FRIED: Just to follow up, the reality is that's what's happening now because you have coverage, depending on where you live and who the carrier or MAC is, you may have coverage for a service in one region but not another. So I just, I agree that the whole LCD is a big issue but they do that.

DR. STRAUBE: Yeah, they do. But then as you know, there's other areas that don't cover in

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that area, or they cover it under different circumstances, so that automatically generates a national coverage determination, not automatically, but it often leads to that.

DR. PEARSON: Mark?

DR. HLATKY: Just a comment on the whole gap issue. I mean, I think that there's really two reasons for that. One is, the biggest one is probably just, it's in the life cycle of what we're talking about. A lot of these things are new technologies of some kind and so by definition we need to develop the evidence. And for other things there may be more mature technologies that are out there but for other reasons they haven't had evidence developed.

And I keep coming back to this idea that there are certain classes of things that we tend to have really good evidence about because there are very strong incentives for people to develop evidence, or for the private sector to develop evidence. So if you want to get a drug approved, the FDA says you have to do trials. And we have very big trials, they want to get labeling indications, there's a great incentive for the private sector to conduct the trials that are needed to provide that

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evidence, maybe less incentive after they're approved, but there's still a tremendous incentive. There is no such incentive for diagnostics, which tend to come up on the list that you mentioned. You know, the genomics, they don't have to meet the same standards, they don't have to show that there's improved patient outcome from using a diagnostic, and that's why we don't have any evidence, in my view, is in part that nobody is saying we need that evidence. So I think that's a huge gap, and there's some other ones as well besides diagnostics.

It is certainly the case for procedures, surgical procedures and so on, we often don't have the same standards. So part of it is just, we have very different levels of evidence that are required for, say drugs, which are probably the highest, and some devices that are implantable devices, we have evidence maybe less so than drugs from a regulatory perspective, and for some things there's very little. And I think one of the questions is, you know, how do we incentivize, you know, how do we get people to come forward with that evidence, and could some of this process be helpful in saying, you know, gosh, we really need to have evidence so we'll get a coverage

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decision for this new diagnostic or whatever there. Because there's clearly no, it's in nobody's interest necessarily to do those studies, and I would say a lot of groups may think that on the diagnostic side that just demonstration and information that's provided is sufficient, and many of us would argue that that's, you know, you need to go beyond the next step of just demonstrating that's useful information, that it actually helps beneficiaries or other patients.

DR. PEARSON: We may want to start getting into the wider evidence gaps, but I did have one answer for at least the CED evidence gap, and this is something that has been an open question ever since CED came into its existence. One thing that I would say is that I think that, and this is easy to say, but one thing you would want is for safety to be prioritized. If you're looking for that bottom threshold where things need to get over it in order to be even considered for CED, you would want there to be enough robust evidence about safety. You may still not know very much about whether it's more effective than what's currently done, but if you have pretty good assurance about its general safety, that to me would be one of those key things in defining

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the floor for a CED.
But I do think that it should ideally stay relatively narrow at the top, partly because we're still learning about the best ways to perform CED even if we decide to do it or not. We haven't really done very many of those loops where we actually launch a registry or clinical trial, learn from it, and feed it back into approved decision-making by patients and doctors. There are a lot of registries out there in their infancy where we're still learning on that learning curve. So I think going a little bit slow and treating CED as an experiment in and of itself is relatively important.
I do wish that it could be -- I love the term dynamic coverage. Who could be against dynamic coverage? I like dynamic coverage, and I like dynamic pricing too. Why couldn't we consider CED to be linked to a concept that if you're not going to be covered yet, we may cover with some evidentiary, again, floor to it, and we'll pay you what we currently pay for this condition or, you know, care pathway. That way we will learn, you know, the products that wouldn't have been otherwise approved but that have pretty close evidentiary principles in a responsible way. Because I think, you know, some

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people may think that that's a crazy way to, the easiest way to thwart innovation of any kind, but if there isn't the right evidence to get full approval, I do think CED could consider some linkage to pricing to facilitate the ability to broaden that gap, or that band, if you will, a little bit further. I just took us off into a completely different policy discussion.

DR. STRAUBE: If I could, Steve, dynamic coverage, I think there are other examples that we've used recently, the most -- I'll be raising the blood pressure of my colleagues from AmGen perhaps, but the erythropoietin stimulating agents is an example of that, both on the ESRD side but also on the cancer side. On the ESRD side we've had an erythropoietin monitoring policy that in fact, we gradually ramped up our monitoring and also changed our coverage restrictions trying to address the issue of overusage of ESAs in dialysis patients, putting them up to a level that clearly didn't show any benefit, and indeed as we got evidence that there may be risk to that, put them at risk, and in fact we have been monitoring the effect of that after we've implemented those payment policies and seen a decrease, not surprisingly, in the usage above hemoglobins of 13.

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And in fact we've seen an increase in the range that is desirable by guidelines from KDOQI of patients in the sweet range of 11 to 12 for that therapy. So that's one issue, and we're continuing to look at that and will reconsider changing that policy based on the results that we get having implemented it.
On the cancer side, along with what you're bringing up, where FDA had approved ESAs in cancer for specific indications, felt that they were safe and effective, but all of a sudden there's a spate of studies that come out questioning the safety in that population. So we again intervened with a national coverage decision which was quite controversial when it first came out but I think is ultimately going to be shown to be in keeping with where FDA will come down. And that was dynamic because we felt we had to protect Medicare beneficiaries, which gets back to your safety point, first and foremost.
So I think there's other examples of how we're doing dynamic coverage.
DR. PEARSON: All right. We can continue on either vein, I think we've opened up both now, the barriers to why there are the gaps that we're looking at and/or further comments on CED. Yes, Nora.
DR. JANJAN: I would just say that it

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seems to me what we have is not only dynamic coverage but dynamic gaps of evidence, because as we talked about before, certain drugs or devices are approved for certain indications and as experience is gained with that, it's expanded in its application and so what you have then is a gap of evidence, a dynamic gap of evidence as you use the agent or drug more broadly. And so I think it's extremely, the examples that you cited are important, because there is a disincentive to continue to follow patients and evaluate in the broader population because if you find something that you don't want to find, then there will be restrictions in coverage.

So you know, obviously there's an incentive to get the coverage and then have it broadly used, but there is a disincentive if you find something that you restrict that coverage, so I think we need to align our incentives for all the stakeholders. And our primary incentive is to the patient, what's safe, what works, how does it impact their life, and keep all those aligned, all those incentives aligned where somebody gets something positive out of continuing to monitor. Because, you know, we need to make sure that all the stakeholders involved get something out of maintaining that high

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level of evidence and effectiveness for the patient.
DR. PEARSON: Yes?
MS. DAVENPORT-ENNIS: A couple of observations when we talk about coverage with evidence development. I would like to begin by stating the obvious. Certainly agencies have one motivation for needing to get the coverage with evidence development right. The patient probably is the most vested stakeholder in seeing that we get it right. When we look at the fact that today, I agree completely with Leslie's remarks, that you've got local carriers who are making decisions daily around coverage with evidence development, there may be an opportunity to at least do a summary meta-analysis of their experience and what are the lessons learned to date from some of those local carrier decisions around coverage with evidence development, to see if the process that they're using at local levels could indeed seek to inform the process that may be used ultimately at the national level. So that would be one observation I would like to share.
I would like to go back, Barry, to your example around the ESO issue and the ESRD issue to simply say that I think that particular process affords such a perfect window into the fact that as

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CMS is considering evidentiary priorities to encourage research studies, that at the same time there has got to be very deliberate attention paid to making certain that as studies are being done, there's going to be some coordinated evidence or body of evidence that's going to be produced for the United States.

I think for many people in this audience and for some of you on this panel who sat at NCI for two days on December 18th and 19th and listened to researchers from around the world doing cellular studies in these areas, we walked out with the same conclusion, more questions unanswered than answered, and more processes used without conformity, and the result was insufficient information to really get anyone to where we need to be. And with shrinking resources in the country when we look at the evidentiary priorities we've got to talk about today and the study process to get to answers, we need to be looking very deliberately at what are we going to do to give us some answers that at the end of the day will serve the population well.

DR. PEARSON: Sean.

DR. TUNIS: Just one more comment, I guess on this sort of size of the gap, you know, how close

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for CED do you have to be. Of course, you know there's a serious interaction between that and, you know, how long it would take and how much money it would take to sort of close the gap. So, you know, if the decision is well, you know, you're almost there but it's going to take a five-year randomized trial to close the gap, and in the meantime the only patients who are going to have access to the procedure are those enrolled in the trial, that's really different than, well, we can close the gap with a large national registry where basically everybody is going to get the technology anyway. Basically it's a positive coverage decision with a slight additional requirement that some data is collected.

So, you know, the dilemma here, and, you know, you faced it I presume in the example of the PET scanning for oncology, is that was a pretty acceptable CED decision because we were trying to close the gap using, you know, kind of self-reported information on change in management. You know, whether or not that really is going to provide the kind of evidence about the clinical utility of PET scanning for any of those oncology indications, that's a whole different question. But if you try to

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do CED and say we're going to do CED, but we're going to require randomized studies of diagnostic utility showing impact on patient outcomes, then, you know, that's a really different dynamic in terms of how acceptable.

So in other words, you know, how close, how small that gap is really depends very much on, you know, what kind of evidence Medicare and everybody thinks you need, you know, to move the final little bit of distance. So again, it ultimately comes back to, not surprisingly since I was connected with it, the same issue, which is what's, you know, what is the sufficiently robust methodology to adequately answer the question that you're trying to answer.

DR. PEARSON: Yes.

DR. WHITE: Just to follow up on the same thought as a clinician, I think that we're talking about what level of evidence we need for various gaps to be reduced. It just seems to me that it's so costly to do a randomized controlled trial and so difficult especially to design one that has to do with the Medicare population. Wouldn't it be nice if we could make it very clear to people who are dedicated enough to do these trials to make those

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trials designed, at least they have a concept of what NIH might, what the FDA may want, CMS may want, at least so we wouldn't go through the expense of conducting a trial and miss a big potential application of it. And it may not necessarily be an application for a given device at that time, but it may serve as an important baseline for the body of evidence for a trial that's going to happen and they may be very well aware of one to two years down the road.

So I think if we can clarify what we are demanding of this, not just say you have to have an RCT or you have to have a registry or you have to have this, but wouldn't it be nice if we could -- and heaven forbid we all wonder what the FDA's requiring -- I think we could really define this, that would be a great goal of this committee, I would think.

DR. GRANT: I wanted to go back to the issue about the gaps in maybe genetic testing, but first draw an analogy which is not genetic but cardiac computed tomographic angiography, and there's an example that's really no different. The test came on the market, came out, we could demonstrate that it's similar to coronary angiography but outcomes

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weren't examined.
And I think that Mark is right on target in terms of why there are gaps in the genetic testing role, and I think they are gaps that really need to be addressed and made explicit as to the kinds of evidence that we need, that being we need to have a demonstrable improvement in clinical benefit. And these tests are really attractive, the biomarker tests, all these things, you know, they seem like they're going to work, you know, they're the panacea, genetics is the new world.
And it may very well be, but at the same time I think there's, adopting them as technologies we need to say that, we need to require that the evidence really does show clinical benefit, or if it doesn't definitively show it, then we're going to look at it, an archetype would be, you know, an example of that. But I think the incentives are there, or I think the incentives will be there as soon as people are marketing them. I think that's coming.
DR. STRAUBE: If I could just interject, the CT angiography in cardiac disease is an interesting case study, I think, to me, in several ways. One, it's an example of a technology that the

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horse got out of the barn and it was subjected to local coverage decision determinations and whatnot, and there was some inconsistencies, and it was widely in use when we decided to open it up to a national coverage decision.

When the medical community has embarked and is already using technology without necessarily having looked at the strength of evidence or the settings in which it should be used, or the indications for which it should be used, there is this community practice precedent that gets set, and it's very difficult then to withdraw coverage. So that was one thing we learned out of CT angiography. And I suppose to some extent this puts an onus back also I think on all of us who have been or are practitioners before we start using technology, regardless of whether it's paid for or FDA-approved or on-label or off-label, or whatever. Are we just using it without really understanding the evidence behind why we're using it or whether we should be using it or not.

I think it does bring up very definitely the issue of comparative effectiveness and certainly it raises the cost effectiveness, is it, for the cost involved, adding anything. And then we also learned

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that there were some subcategories here, this gets back to, you can look at an overall population, but clearly it was our feeling that in high risk patients, these are the type of patients that most clinicians would have go straight to the regular angiography, not do CT angiography in a high risk patient, but use that as a defining point as to whether one would do traditional angiography in probably the medium and low risk patients. And again, we felt that the evidence is still somewhat clouded in those two categories. We put it out for public comment, we had lots of comment and that ultimately made us decide to continue as we're doing now, but keep open the possibility of revisiting this in the near to intermediate future. So we proposed CED but there were folks who were convinced that it's proven already so why would we want to withdraw it and go back to CED.

So that was an excellent case study in how difficult all of these topics we're talking about are in terms of addressing them.

DR. TUNIS: So, can I just comment on that? Because Barry, if you were going to do CT angiography for intermediate risk patients over again, it seems to me the only thing that would work

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is because the horse was already out of the barn after all of the local folks had adopted the ACC/ACR policy, you would have had to start, you know, much earlier, open a national coverage decision potentially right around the time you did the original MedCAC meeting instead of waiting a year and a half, or even possibly before that. You know, open a national coverage decision before all the contractors had already sort of performed a fait accompli.

And I'm again just thinking how would you do it differently. Well, if you opened that coverage decision proposed CED, you would have to be prepared then to say, well, CED is going to be attached to a requirement for a large simple randomized trial showing impact on outcomes unless you're willing to do a registry, and I didn't get any sense that the coverage staff was that interested in a registry. Then you would actually have to have some infrastructure and funding to allow you to do a $20 million prospective study.

And maybe that's not the way to get it done but the point is, it's a great case study to say, well, if we want to prevent that from happening in the future, first we have to make the decision

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what kind of a study is adequate to demonstrate diagnostic utility in that particular case. So does it need to be a randomized trial, does it need major adverse cardiac events, what's the proper trial? Our friends from NHLBI could probably help us with that, I'm sure they have opinions on that. So you would have to decide that, and then you would have to jump on it early on and actually find out where there's infrastructure to enroll 15,000 patients fairly efficiently and follow them for two years if that's the design.

But those are the kinds of problems we're actually going to have to solve. Otherwise we're just going to keep chasing our tails for years and lament the fact that we never have evidence on technology.

DR. STRAUBE: And that gets us back, I think, to why do we have the gaps, and the second question I raised, how do we fill the gaps. I think we have to do that. You know, it's probably no surprise to a lot of people, but we're covering a lot of services, treatments, technologies, et cetera, which if we were starting from the beginning again, they may not well get covered today if they were brand new, we don't have strength of evidence there.

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So going forward, we should try to do that better.
DR. BILD: Could I make a comment on that?
DR. PEARSON: Sure, go ahead.
DR. BILD: That is a very interesting case and one that NHLBI was involved with, and indeed, the horse is out of the barn. However, that seems to be also a very common development actually, especially in cardiovascular imaging, that a new technique is put out there and then gets widely adopted without good evidence. So it, I just want to point out that I don't think that that's the exception, it seems to be actually a fairly common situation and one that we haven't figured out exactly how to grapple with.
DR. PEARSON: I think we could populate the Kentucky Derby with the horses that have gotten out of the barn.
(Laughter.)
DR. PEARSON: The CMS staff works about 13-hour days and they never take breaks and so there's not one on our agenda. I'm going to make a command decision, especially since Blackberries are not receiving in here and I'm sure many of you need to get outside. Let's take a ten-minute break, because at 10:30 we do want to start with the public comments, we don't want to give short shrift to that

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phase of the day. So literally ten minutes from now at 10:30, please be back in and we'll start with public comments.
(Recess.)
DR. PEARSON: Thank you for coming back. We are glad to be able to welcome a list of prearranged public speakers, scheduled public speakers, and then there's been a list generated of open public speakers after that, each of them will have three minutes. The scheduled public speakers are given five minutes and I'm going to let Maria help us triage this process, but first up is Diane Smith. Please just introduce yourself briefly and then five minutes, there's a red blinking light up there that will tell you when to please wrap it up.
MS. SMITH: Yes, thank you so much. I really appreciate the opportunity to speak to this very important panel. I am not coming to represent any device or drug or anything like that, I am a geriatric nurse practitioner with 25 years experience in dealing with elderly patients, especially elderly patients with incontinence in nursing homes. I've been a nationally recognized expert in continence and actually served as a continence expert for Medicare on a previous MCAC committee.

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I just wanted to let you know that I submitted a very brief paper to you which is some description of clinical outcomes of my practice in Pennsylvania with one specific nursing home. We could not fund any large-scale study, but I wanted to let you know that at the last meeting in December at the NIH when they were looking at the prevention of urinary and fecal incontinence, there was really a dearth of evidence that showed that you could do anything for these older frail patients in nursing homes, and I wanted to show you that there is a lot you can do with very simple things like visiting the patient, examining the patient and coming to a diagnosis, and working with the doctor and with the nurses and the nursing assistants to come up with a team plan of care that actually helps reduce incontinence.

Now this is actually federally mandated by F-Tag 315 and it is really important, that is a great F-Tag, that is so important because it really highlights this exact type of thing. Now there is a new emerging role of the geriatric nurse practitioner, adult nurse practitioner subspecializing in incontinence because we have heard you, that you are spending $119 billion a year on the

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treatment of UTIs in the Medicare population and unfortunately because no one was helping the staff, nothing was happening in nursing homes, there was no change in the percentage of incontinence, which on average ranged 50 percent, but in many states is 98 percent reported on the QI reporting.

Now the QI is a very methodical review of the problems of the patients in nursing homes that is federally mandated and is reported monthly, and I'm sure you get reports about that. I wanted to tell you that what happened was that we are consulted by the primary care provider, we go in and do exactly the evaluation that is required by the F-Tag, we look at the vagina, we look at the prostate, we look at constipation, we look at the drugs, we look at everything. We spend about an hour assessing the patient. We do very simple diagnostic studies like post-void residuals, or a simple cystometrogram that is really necessary in that patient. And then we do a lot of education, we teach doctors and nurses --

DR. PEARSON: Diane, I'm sorry, I know you only have a limited amount of time and I appreciate what you're saying is important.

MS. SMITH: Yes.

DR. PEARSON: Is there a way you can help

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frame it in terms of evidentiary priorities?
MS. SMITH: Yes. I wanted to tell you that the outcome of this ten-month review showed a significant reduction of incontinence of 24 percent, a percentage from, went down from 71.9 percent to 47.8 percent, and as we speak, that percentage has gone down to 45 percent in that home. And also, we had a 90 percent reduction in UTIs in that home in that ten-month period. We also had a 29.5 percent reduction in the numbers of patients who did not have a plan of care.
So I just wanted to let you know that this role is emerging, it's something that we'd like to bring you more evidence about because we are actually through our societies going to try to have more discrete data for you, outcomes reporting on our clinical practice, and we'd like to partner with CMS to basically let you know that we do believe there are things that average clinicians can do to reduce some of these risk factors. Thank you so much.
DR. PEARSON: Thank you. Next is Cynthia Rice.
MS. RICE: Thank you. My name is Cynthia Rice and I'm with the Juvenile Diabetes Research Foundation. As you may know, JDRF is the world's

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largest charitable funder of type one diabetes research. This year we will fund about $170 million in research around the world. We're an organization that was founded and is led and is funded by patients.

One of the areas of research that we focus on is metabolic control, how do you improve metabolic control in patients with type one diabetes. And one of our areas of interest is continuous glucose monitoring, and ultimately an artifical pancreas which connects insulin delivery to continuous glucose monitoring.

I'm here today, we submitted formal comments that I'm sure you all have in your packets so I'm just going to briefly summarize them, but we're here today to say that we applaud you including continuous glucose monitoring as a question as part of your list of evidentiary priorities. We're not here to argue that, you know, it should be an eight versus a two versus a five, but just simply that we think it should be on the list, and let me take a few minutes about why that is.

There are very promising data on the use of CGM in children and working age adults who are undergoing intensive insulin therapy, lower A1c's,

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less hypo and hyperglycemia, but really there are no studies with significant enrollment of Medicare beneficiaries and this could have a significant impact on that population potentially as well. So I want you to know that we are committed at JDRF using the research funds that our families raised from their friends and neighbors to conduct independent randomized clinical trials for CGM. You know, we have one underway, we may conduct others, but I'm just here today to say, you know, we appreciate CMS putting us on the list, we think it belongs on the list, it's one of obviously many very important issues that you have on the list.

And then just in closing, let me just say that my travel today was paid for by JDRF and as indicated in our written comments as well, JDRF is an independent organization. We do have some funds that come from various manufacturers that support our research, but not the work that I'm here talking about today. So thanks very much.

DR. PEARSON: Thanks very much, and you helped me remember that I should have asked all the speakers to let us know if you're being paid, how you're being paid to attend the meeting, and if you have any financial involvement with manufacturers.

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Next is Teresa Lee.
MS. LEE: Good morning. My name is Teresa Lee and I'm here on behalf of AdvaMed, the Advanced Medical Technology Association. AdvaMed's member companies produce medical devices, diagnostic products, and health information systems that are transforming health care through earlier disease detection and less invasive procedures and more effective treatments. Our members range from the largest to the smallest of medical technology innovators.
Thank you for holding this second MedCAC meeting and for soliciting public comment on priority areas for generating evidence that would have an impact on Medicare's beneficiaries. AdvaMed believes that generating evidence to inform physician-patient decision-making is an important matter. While CMS considers evidence generation priorities that may be significant to improve health care for Medicare beneficiaries, the process employed needs to be conducted in an open and transparent manner.
In this regard we have three areas of concern. First, the purpose of the initiative. Second, the process and framework for the initiative. And third, the content of the research questions.

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First, AdvaMed is concerned that the purpose of this initiative involving Medicare evidence priorities have not been made clear. As a starting point you stated that this list will be used to develop evidence for decision-makers, but the question is, how will CMS use this list and the potential research it may yield. As a representative of a broad range of medical device and diagnostic technology companies we understand the wide range and levels of evidence that are available regarding our products.

The discussion on CED, however, suggests that this list that you're developing today may be used for coverage, and we hope that by the end of the day there will be a crystal clear understanding of the purpose of the exercise. This not only would help the general public and stakeholders comment on the research areas and the questions identified, but also will help the members of the MedCAC in focusing your efforts to rank the questions and determine whether any questions or areas should be added or dropped.

For example, if these questions are to inform Medicare coverage decisions, it is unclear why the issue of cost effectiveness should be analyzed in

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any of the research questions. Appropriately, CMS does not consider cost or cost effectiveness in rendering coverage decisions. Therefore, if the purpose is to inform coverage decisions, cost effectiveness analysis should be irrelevant. Making the purpose of this initiative and the intended use of the priorities list perfectly clear will help to make CMS's ultimate end product more useful and we believe would also help to shape specific criteria for the MedCAC panel members in considering and developing the sequence in scoring those questions.

Second, AdvaMed members have numerous questions about the process and overall framework used to develop the priorities. Will this subject be discussed again publicly or privately in another forum? When and how does the prioritization come to closure? What criteria or approach was employed during the prioritization process at the federal workshop held in February? What criteria are you suggesting that MedCAC members use to develop priorities today? What are the next steps following today's MedCAC meeting?

We recommend treating the MedCAC's advice from this meeting in the same manner that CMS treats MedCAC advice on topics related to the national

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coverage determination process. We hope to see posted on CMS's web site a proposed list of evidence priorities and a full description of the intended use of those priorities with a public comment period. Given the large number of clinically important and substantive research questions at issue today, an extended comment period, for example 60 to 90 days, would be appropriate. Once finalized, what will be the process for updating the list, given that evidence generation is ongoing with various studies and clinical trials that may be conducted in the months and years to come? We urge CMS to clarify these process and framework questions.

Third, the content of the research areas in question is critical, and as the MedCAC and CMS develops these evidence priorities we urge an emphasis not just on specific technologies or services, but rather on patient-focused innovations and healthcare system delivery and management that will improve health for the largest number of beneficiaries. Such innovations hold the greatest opportunity for both improving quality of patient care and reducing costs, and thus should be the highest priority for evidence generation.

There are studies that have been performed

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on healthcare system delivery and management enhancements that would address some of these issues and they point to clear opportunities in this area. For example, a study by Johns Hopkins University on improved daily ICU team communication involved setting daily patient-specific goals and regular communication among ICU staff using a form to clarify the care plan. This healthcare delivery innovation yielded increased understanding of the care goals for each patient and reduced the mean likely stay for ICU patients by 50 percent.

We applaud AHRQ's work to fund patient safety and quality improvement projects that get at these kinds of healthcare delivery improvements but we believe we have only scratched the surface in this area.

In a similar vein, AdvaMed is pleased to see that there are a number of research questions under the category healthcare policies that would evaluate topics that involve health systems and healthcare delivery. Disease management and topics that involve health benefit design are two such research areas that are of particular importance to the Medicare program and its beneficiaries.

Notwithstanding, we have a few concerns about the

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content of the research questions provided to date.
DR. PEARSON: Teresa, I'm sorry to interrupt, but could you please wrap up?
MS. LEE: Sure. Some of the research questions appear to assume that patients currently have access to services that should be limited in some way. We believe a balanced approach with an objective toward appropriate utilization would be appropriate. In addition, we urge the MedCAC to consult with physician specialty societies and patient advocacy groups to enhance the role of their credibility in the priority areas.
In addition, we note that there seem to be several undefined terms in the priority list, including the terms comparative effectiveness and cost effectiveness, and it's not clear whether those terms actually refer only to clinical or to both clinical and cost effectiveness.
DR. PEARSON: Thank you. Just to be fair to other speakers, we're going to ask you to be finished. Thank you.
MS. LEE: Thank you.
DR. PEARSON: Joseph Burkholder.
MR. BURKHOLDER: Actually it's Randy Burkholder, and I am pleased to be here on behalf of

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the Pharmaceutical Research and Manufacturers of America, and I appreciate, we appreciate the opportunity to address the MedCAC committee on the topic of evidence priorities for Medicare beneficiaries. We also submitted formal comments to the MedCAC and I wanted to focus on just a couple of key points that we made within those comments. Those relate to the three basic points, the importance of defining a clear purpose and intention for the priority list, the importance of a comprehensive perspective as MedCAC addresses this issue, and the steps that could be taken to ensure full openness and transparency of this process. Before I turn to each one of those, I want to turn back briefly to Dr. Straube's opening comments and just recognize the important goal he articulated at the beginning, of ensuring that every patient receives the right treatment every time at the right time. That is the goal that we strongly support, and I assume everyone in this room strongly supports. We strongly support the kinds of collaborative partnerships that Dr. Straube identified as an important part of achieving that goal.

At the same time, I think for all of us to

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come together to work for common goals, those goals need to be clear. We had some concerns coming into the meeting today that while CMS had stated goals, those goals, there may still be room for confusion around those goals, I think particularly around the ways that MedCAC, the description of the meeting on the MedCAC coverage page had changed over time. And I guess I'm concerned today that probably there is less clarity and not more clarity around the exact goals and purpose as a result of the discussion and the CMS statements thus far today. And I want to underscore what some of the earlier speakers said about the critical importance of ensuring that we all know what the goal is that you're working towards so that we can provide meaningful input and can be a meaningful participant in that process.

And just a couple of examples, trying not to take up too much of my time, but to underscore why this is important, if our goal is hypothetically getting at waste in Medicare by addressing small area geographic variation, that would probably lead to one set of research priorities and, you know, one set of potential priorities and one set of priority evidence gaps. If our goal was to find better ways of closing the gaps that are there for Medicare beneficiaries,

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between high quality care and the care they actually receive, that would probably lead to a potentially slightly different list of research questions and priority evidence gaps. If our goal is to manage Medicare costs by managing the dissemination and access to medical technology or innovations or procedures, that will of course lead to another set of potential questions and research priorities, so we need to understand what the ultimate goal is and what CMS's intent is and how it hopes to use these priorities so that we can provide meaningful input. We believe it is very important to ensure that the central goal remains better healthcare quality and improved Medicare beneficiary outcomes, and we encourage CMS to make clear that goal. And based on that goal we believe that a comprehensive perspective is important, and considering the potential range of research questions and evidence, priorities within them. That range of potential research needs extends beyond the types of questions and the types of evidence that would typically be addressed in the Medicare coverage process and would extend to a number of other types of interventions that other speakers have identified around processes of care and care management and delivery, we believe

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all those are important and should be considered. We also think by bringing a wide range of perspectives together the MedCAC is well positioned to provide insight on that wide range of evidence needs that affect beneficiary health outcomes. And again, we think this broader scope is to some extent reflected in the priority list that was developed through the CMS and federal health agency workshop earlier in the year. These include questions on appropriate use, underuse, nonadherence to prudent therapies, care management approaches for patients with comorbidities critically important to the Medicare population, adoption of clinical practice guidelines and disease management programs, just to list a few. We think that broader scope of questions merits careful consideration and we support their inclusion in the list to be considered by MedCAC. Finally, briefly on openness and transparency, clearly it's essential to the process. I will briefly note just a couple of points, thank you. And you know, we appreciate the steps that CMS has taken, including holding these meetings to provide openness and transparency in this process. Regarding the list before MedCAC today, we appreciate clearly the time and considerable effort

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that went into developing that list. The process unfortunately was not an open and transparent one that went into that, so we would recommend that CMS provide background minutes, transcript, what have you, on how this list was developed, so that stakeholders know what went into the questions that were decided on and what those scores actually mean in the current list.

DR. PEARSON: Randy, can I ask you to wrap up your comments?

MR. BURKHOLDER: Okay, the last point quickly. The other critical point on transparency, I think, relates to understanding the rationale for the priorities that are set and we strongly encourage CMS and MedCAC as they set priorities to make clear the rationale for their decisions. We think that's essential to good process and is consistent with the recommendations made by the Institute of Medicine in 1992 where they recommended about priority setting in health care that the rationale be made explicit so that people can trace backwards for results to inputs and so satisfy themselves that the process was fair.

DR. PEARSON: Thanks. We're going to have to ask you --

MR. BURKHOLDER: I suspect my time is up?

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DR. PEARSON: Yeah, it is, thank you.
MR. BURKHOLDER: I will conclude by saying I conclude, and thank you.
DR. PEARSON: And next is Joshua Beckman, also known as Randy.
(Laughter.)
I'm kidding.
DR. BECKMAN: My name is Josh Beckman and I'm coming to you today as a representative of the PAD Coalition, and I want to thank you for the opportunity to present our views on the evidentiary priorities. The PAD Coalition under the auspices of the Vascular Disease Foundation represents 71 different health organizations, health professional societies and governmental organizations, including the NHLBI as the founders of the PAD Coalition, the Office of Public Health and Science, the Centers for Disease Control, and the Indian Health Service. In fact today, I'm here to speak to you on behalf of more than a million healthcare providers.
We were gratified to see that among the evidentiary priorities there were two that recognized the importance of peripheral arterial disease, the first question being asked, does routine screening for PAD improve functional status and/or quality of

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life, and then the second one was, does screening for atherosclerosis improve outcomes and is it cost effective?

We would like to urge the committee to refocus those guidelines because we think they're a bit misplaced. As a little bit of background, everybody should recognize that there are eight to ten million Americans who have peripheral arterial disease, and the best estimates suggest that one out of five men and one out of six women in the Medicare population has this disease. This is not a rare disease, this is a morbid disease, it's a common problem and it is everywhere. If there are 16 million Americans who have coronary heart disease and five million Americans who've had stroke, there are about ten million Americans who have PAD, and this number is only going to increase as the population ages, and the frequency of comorbidities like diabetes increases as well.

Now we would suggest that the screening for functional outcomes is probably a bit misplaced, because screening implies that a patient is asymptomatic; otherwise it wouldn't be screening. We find it difficult to understand how you can screen for an asymptomatic disease with the goal of making

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someone feel better. In fact, what we're worried about in truth is that the patients who have symptoms for arterial disease get lots of treatment now appropriately. Their critical limb ischemia has been treated for many, many years by vascular surgeons and with the new availability of interventions, many of the specialties who wrote guidelines participate in the care of patients with symptoms.

What we worry about is the incredible burden of morbidity and mortality. In fact, patients who have peripheral arterial disease have an approximate 15 to 30 percent mortality rate by five years. The biggest problem that we see is that half the patients with PAD have no symptoms at all, yet they have the same death rate. They have no idea that they're walking around with a time bomb. The guidelines for the management of these patients are well set, they have been written by all the major stakeholders and then endorsed by the rest.

There is no question as to what we should do for these patients nor how we should find these patients. We should find these patients with an ankle-brachial index. The question is not whether or not this technology works, the question is whether this technology is applied to the appropriate

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populations, and in our estimation it is not. I would suggest that our goal be not the screening of asymptomatic patients to try to make them feel better, but the use of a noninvasive test like the ankle-brachial index as a diagnostic procedure to find these patients. I can tell you on the basis of consecutive patient studies in thousands of patients who is going to have this disease and in what proportion. I can tell you with randomized control trial data that if we apply the correct medical therapies that we can save lives, reduce heart attack and stroke. I can tell you that when we find these patients we can make them better. And the link that is missing, and when we talk about small gaps, here is the smallest of the gaps. The one piece of evidence that's missing is the stem to stern, finding the patient and then treating them through the end. But I can tell you that there is no doubt about any of the middle steps. We can find these patients easily, we know where they are, we know who they are. We know that when we find them, they have incredibly high rates of heart attack, stroke and death. And we know that when we treat them with medical therapies that are well proved in large randomized control trials, that we

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can reduce the rates of these events. The only thing we don't have is the stem to stern.

And so I would ask that we refocus our evidentiary priorities so that we ask the question, does the use of routine screening, ABI, save lives? Does it reduce major cardiovascular events? This is the one group of patients with atherosclerosis that get short shrift and it's the one group in whom we can make a tremendous difference with well proved therapies already available.

I want to thank you very much for the opportunity to present our views, and good luck with the rest of the day.

DR. PEARSON: Thank you. The last of the scheduled speakers is William Weintraub.

DR. WEINTRAUB: Good morning. I thank you for the opportunity to present the views of the American Heart Association and the American Stroke Association. I'm William Weintraub, I am chair of cardiology at Christiana Care in Delaware and director of the Christiana Care Center for Outcomes Research. I'm also a member of the steering committee of the American Heart Association's quality of care and outcomes research interdisciplinary working group. Neither the association nor I

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received funding to participate in today's meeting and I have no relevant conflicts of interest. The American Heart Association appreciates the work the committee is doing here today. Decisions regarding medical treatment and services should be based on strong scientific evidence. That is why CMS's recent efforts to identify research gaps is so very important. Encouraging research on these priorities is the key to better treatment decisions as well as determining what services Medicare should cover.

Last October I spoke before this committee and urged you to focus on cardiovascular disease and stroke, because they represent the biggest burden to Medicare beneficiaries, the biggest burdens in health care in our society. We are pleased that so many of the topics generated at the recent federal evidentiary priorities workshop addressed issues specific to cardiovascular disease and stroke. Additional research on virtually any of these topics would be beneficial since they address public health, prevention of disease, and care for the elderly, all areas of great concern to the American Heart Association. However, there are a few research questions that stand out. I would like to briefly

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highlight a few we believe should be a high priority. One, how cost effective is CT angiography? The burden of coronary artery disease is immense, it caused 20 percent of deaths in 2004. Accurate diagnosis is essential to effective treatment and increasingly to prevention. CT including CT angiography has undergone an accelerated progression in imaging capabilities over the past decade. As a result of this rapid development, the diagnostic capabilities of the technique have exceeded the critical evaluation of clinical application. As per the discussion earlier this morning, there are insufficient data to provide optimal guidance about the application of this promising but expensive technology, particularly for patients who are at low and intermediate risk for obstructive coronary artery disease. Further study that links proof of concept of CTA to improved clinical outcomes is necessary. Two, is there overuse of coronary artery angioplasty, PCI and stenting, as opposed to medical therapy? In 2005 an estimated 1.2 million inpatient percutaneous coronary interventions were performed in the United States alone. These procedures, however, carried fine risks and their long-term benefits are incompletely defined. Similar advances in medical

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therapy for coronary artery disease have occurred. Drugs can be used to prevent, treat and perhaps reverse coronary atherosclerosis. However, important questions remain pertaining to clinical and cost effectiveness that remain to be answered.

Three, comparative effect of the studies of treatment of carotid artery disease. In recent years stenting has become an increasingly common treatment for carotid artery stenosis, particularly in patients at high risk for carotid endarterectomy surgery. However, sufficient clinical evidence that compares stenting, endarterectomy and medical therapy is lacking. The lack of data is evident in the disagreement among providers over the role of carotid artery stenting in certain patient populations. In order to compare carotid artery stenting, endarterectomy and medical therapy, well designed controlled randomized trials are needed.

Fourth, comparative effectiveness of different treatments for acute stroke. Stroke affects 780,000 Americans annually, it is the third leading cause of death, it is one of the leading causes of disability. Intravenous CPA is currently the only FDA-approved reperfusion treatment for selected patients with acute ischemic stroke. The

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FDA has also approved endovascular devices for removal of clots from brain arteries in patients with ischemic stroke. However, because of a lack of comparative data, these devices are approved as tools to accomplish the stated purpose but not as a treatment strategy. The lack of direct comparative efficacy data for these different approaches has left providers without critical information they need when considering treatment strategies. High quality data would allow for the rational choice of an appropriate intervention for individual patients and the avoidance of interventions that may be of little value.

And finally, five, the screening for atherosclerosis, or atherosclerotic disease improve outcomes, is it cost effective, per the previous speaker. The committee should revise this question to address a key research need for atherosclerotic disease, the use of the ankle-brachial index screening to identify patients with peripheral arterial disease. As a physician I can tell you that we typically screen patients for high blood pressure, cholesterol and diabetes, but screening for PAD has not received as much attention. We would like to increase the focus on lower extremity PAD because it

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is a common syndrome that affects a large population and patients with PAD are at increased risk for heart attack and stroke.

Because PAD can be treated, early identification of patients is key, as per the previous speaker's comments. Upon diagnosis, therapeutic interventions known to diminish increased risk of heart attack and stroke may be offered before costly cardiovascular events. The committee should give high priority to an evaluation of the impact of ABI screening on morbidity and mortality.

Thus in conclusion, in closing I would like to thank you again for the opportunity to present the views of the American Heart Association at this meeting and to reiterate our support of your efforts to identify research priorities for Medicare. I will be available to the panel for questions during the question and answer period. Thank you very much.

DR. PEARSON: Thank you. All right, thanks to all the scheduled public commenters. We now have a list of four open public speakers who had signed up and we would like to, again, try to keep it to three minutes, please. We're going to start with James Min. Again, please introduce yourself, your funding for travel to this meeting, and any

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relationship with manufacturers. Thank you.
DR. MIN: Thank you for having me. My name is James Min, I'm a cardiologist, a clinical cardiologist and academic researcher at Cornell Medical College, New York Presbyterian Hospital. I also come today as a, I sit on the board of directors for the Society of Cardiovascular CT, and the SCCT paid for my way here.
I listened with interest to the comments this morning of the panel and I applaud the MedCAC committee because I think that you guys have a very, very difficult job. And I also agree with you that when the national coverage announcement for coronary CT angiography was released, the horse was out of the barn, and I will also agree with the fact that it is an interesting case in point.
But the one thing that I want to point out is that the time that the MedCAC original analysis was performed to the time of its release represented a big transition period of CT angiography, namely the transition between 16 to 64 slices. So, it wasn't until 64-slice CT came out that we see the really rapid adoption of the technology by clinical practitioners. As we all know, the recent national coverage analysis and national coverage determination

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by Medicare was released, and in that document when they released it they said that they still believe that the evidence remains insufficient for CT angiography.

I would just like to pose a question to the panel which I think from listening to it this morning was not well answered, which is, what is the level of evidence that is sufficient to prove out the clinical and cost utility of coronary CT angiography? Because I would argue to you that it's not the same for each and every item, and for a diagnostic test versus a therapeutic intervention it's very different. So to me the most important aspect of the diagnostic test is that it should be diagnostically accurate. And I think that we can make no bones about it, there is no better noninvasive diagnostic test for the detection and exclusion of obstructive coronary diseases.

The second thing I think that a noninvasive test should do is risk-stratify. It should predict those patients who are at risk for adverse clinical cardiovascular events.

And then the third thing that I think it should do, it should successfully impact medical decision-making or treatment stratifying. On this

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vein I think we have a lot of good tests in cardiology, stress echo, nuclear stress testing and CT, and I think in this budget-neutral environment we need to look at it not only in terms of clinical efficacy but also cost efficacy. On that vein we have at least five published studies, or at least five published studies or in-press studies, and at least 30 abstracts that were all peer-reviewed, that demonstrate that CT angiography can be cost efficient in at least two scenarios.

First, in those patients who are being referred for invasive angiography, CT angiography can act as an efficient and cost efficient gatekeeper to prevent people from having to undergo an invasive procedure. Secondly, CT angiography can act as a successful substitute to the alternative standard of care, which is nuclear stress testing, and it can do so in a clinically efficient as well as cost efficient manner.

Obviously we need to do more studies at this point in time. We are currently working on a decision analytic model with very good data and we're currently trying to design a randomized control trial to answer the questions that the MedCAC committee members posed.

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DR. PEARSON: Thank you, James.
DR. MIN: I would just like to invite, SCCT would like to invite the MedCAC as well as CMS to participate with us in terms of designing future studies that can help answer these questions. Thank you.
DR. PEARSON: Thank you. David Smith, if you're here? He's out having that mint julep, I think.
It's either Jean Gagnon, or more likely Jean Gagnon. Also not here.
DR. GAGNON: No, I'm here, but my comments were covered.
DR. PEARSON: Oh, okay. Leticia DeWilde.
MS. DEWILDE: No comments.
DR. PEARSON: No comment, all right.
Since we have some free time and there's going to be a chance for the panel to ask questions of the presenters, if there's anybody else in the public who would like to have a comment now, there is some time to do so. Speak now or forever hold your peace. Please introduce yourself.
MS. STINCHCOMB: My name is Stephanie Stinchcomb, I represent the American Urological Association, and you have a couple of our near and

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dear topics on your priority list of BPH and incontinence. The AUA works very diligently to make sure that we have practice guidelines and they are being revised at this time, so I would ask that you would definitely take advantage of having the specialty societies help you with your determinations. That's my comment.

DR. PEARSON: Thank you. Yes. If anybody else is interested please come have a seat up here. Yes.

MS. DEVOTO: This is Emily DeVoto, I'm representing the National Breast Cancer Coalition. I agree with some of the previous presenters that we would very much like to see the process clarified, the goals clarified, it would be very helpful to us in providing meaningful comments on this very important process.

And yes, one other point. I was wondering if the panel is going to be required to formally answer the comments that have been presented today.

DR. PEARSON: No, there is no process for us to answer the comments. We certainly are welcome to, but we don't have any kind of formal feedback on them. Yes.

MS. STRICKLAND-SMITH: Hi. I'm Adrienne

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Strickland-Smith and I represent Diversified Clinical Services. We have a hyperbaric medicine wound healing company that is actually nationally represented across approximately 300 centers. We have huge databases out there in the population that can be looked at for wound healing and just, the comment is that there is funding needs to look at the variety of questions that need to be answered in the wound healing arena, and we would like to partner with CMS in order to identify appropriate funding sources to answer the questions utilizing the database, and underscore the fact that utilizing huge databases with observational data may answer many of the questions that RCTs just won't answer, just to emphasize some of the comments that the panel made. Thank you.

DR. PEARSON: All right. We have a time period now in which we can ask questions of the presenters or make comments, both. Mark.

DR. HLATKY: I guess I mostly have a comment that was spurred by some things that we've heard from the audience, from the public presenters, and it's the issue about cost effectiveness. And this is something I have done myself in some cost effectiveness studies and I also know that this is

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not something that's used for coverage decisions. And one of the questions is is this relevant at all to our discussions today, and I just wanted to say a word in favor of it to say that cost effectiveness to my mind, is actually mostly about effectiveness, and the way I look at it is it's really saying is the effectiveness that you see, that you can measure, is that meaningful in some way. It's really saying is the degree of change in effectiveness that you're observing a meaningful thing that would be something that people are interested in getting. And that to me is the value of it and it's not so much about dollars. So I think there's been some concerns said about cost effectiveness and yes, in a formal way it's not to be considered, but I think it's very useful information for people to have available and certainly should be discussed, because I do believe it's mostly about the effectiveness and much less about the cost.

DR. PEARSON: Richard.

DR. WHITE: Yes. I have a question I would like to address to Dr. Weintraub, and in fairness allow Dr. Beckman to respond also. Clearly the issue of ABI is an important one, but I think the point that I think Josh made strongly is that its

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perhaps real advantage is to identify people who may be at risk for cardiovascular morbidity, mortality and stroke. If one was trying to identify those patients, what would be, and your only purpose was trying to identify patients who are at risk for cardiovascular events and/or stroke, not peripheral artery disease, what would be the, if you had one test, what would be the best diagnostic test? Would it be ABI or would it be some other test to specifically look at cardiovascular disease and/or stroke, as opposed to peripheral artery disease?

DR. WEINTRAUB: Well, I think to some extent the question is unfair because --

DR. WHITE: Well, it was meant to be unfair.

DR. WEINTRAUB: All right. But I was going to preface that and then I'm going to answer your question. If you ask me the one thing, if I only have one thing, it would be blood pressure, but I do think it's a little bit unfair.

DR. WHITE: And I do understand there's some controversy about it.

DR. BECKMAN: So, of course I have to disagree with that comment. It's quite obvious to me that inherent within your question is a mild

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misunderstanding of what the ABI does. The ABI is not a test for a risk factor for atherosclerosis, it is a test for the diagnosis of atherosclerosis, and so it is the same as, the diagnosis of peripheral arterial disease is the same in risk as the diagnosis of a heart attack, as the diagnosis of a stroke, and you don't convert someone from walking well, no risk factors, to walking well with risk factors. You convert someone from previously unknown to have disease to frankly having disease.

We are now easily telling them that this is not a risk factor for a problem, you have the problem. And so I would disagree because although hypertension is ripe and common in the population, it is not a state of events where 25 percent of the people will be dead in five years. If you leave the hospital because of a PAD admission, you have a higher rate of heart attack and death in the next year than if you leave the hospital with a heart attack diagnosis. These people are incredibly ill and they have the disease, so although we call it screening because we are finding it, the truth is we are actually diagnosing it. And you don't have to do anything else beyond that point to know that that patient needs a statin, an ACE inhibitor and an

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antiplatelet agent to save their lives.
So my answer is, one test, the ABI.
Easily done, done commonly for late stage symptoms which represent a minority of the patients, but not for the cardiovascular morbidity and mortality which are found in all the patients.
DR. WHITE: Thank you. I expected two separate answers.
MS. FRIED: So is your recommendation since it's a diagnostic test, it's not a screening test, that everybody have it, and where is the glitch? Is the glitch in the research or is the glitch in coverage?
DR. BECKMAN: There are both in my opinion. The glitch in the research is that we don't have a, we don't have the ability to say that if we screen for PAD like we do for hypertension and then treat it, that there are event reductions. What we have are studies that show if we screen it we can find it, and find it pretty easily. And then we have studies that show if you enroll patients in large randomized clinical trials that if you treat them, you reduce events. But there is no look for it, treat it, reduction in events, that's the evidentiary gap.

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Who would I like to look for it in? Well, I can tell you that in a large prospective accumulation of patients, consecutive accumulation of patients, 6,800 of them, 20 percent of men over 65 and 16 percent of women over 65 had this disease. In a study done in the United States of 7,000 consecutive patients where they looked at everybody over 70, and men and women between the ages of 50 and 69 with a history of diabetes or smoking, 29 percent of those had PAD. As we look at other screening tests that we use commonly, colonoscopy, fecal occult blood testing, mammography, all of which have well demonstrated evidence bases, the frequency of a positive finding in those screening tests is about one percent, one-and-a-half percent at the highest. I can tell you in advance that if you screen patients in the United States that we can find this disease in one out of three.

MS. FRIED: Just to follow up, and I'm not trying to be flip at all, so really would it be going to Congress and saying this needs, because that's who decides whether there are certain preventative services?

DR. BECKMAN: Yes, I agree with you, that is another way in which we're trying to tackle this

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problem. But I think the biggest problem with this disease is that a lot of the information I've discussed today is a surprise, that people had no idea that there are ten million Americans, most of whom are in the Medicare population, who are at incredibly high risk for heart attack and stroke and death, and that despite this, despite the fact that more than half of them have no symptoms at all and they have no idea they have any disease or disability, we basically ignore them because we don't look for it, because we wait for the very late stages of symptomatic presentation to actually screen them and that's what's covered. One to two percent will get critical limb ischemia. A hundred percent are at risk of death.

DR. BUSH: I would like to make a comment on this as well because I support what you're saying and what Dr. Weintraub is saying. But just a little bit of education, and I think when you're talking about PAD and looking at ankle-brachial indices, it boils down to education and people realizing that diagnosing lower extremity disease, not only just diagnoses lower extremity disease, but it's a marker for systemic atherosclerosis, and that's what we're saying, is that vascular disease not only occurs in

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one vascular bed. But if you've got the presence of it in one vascular bed and it's easy to diagnose rather than getting a CT angio on everybody to look for coronary disease, then we can extrapolate and say that they have coronary disease if they have peripheral arterial disease.

I also want to make the point that it's not a huge expensive test, this is something that we teach the nurses to do in our office. They take the blood pressure in the arm, they take the pulse, and they take the blood pressure in the leg. So this is not something that I think a huge outlay of resources or huge coverage determination needs to be made, but I think a huge push for inexpensive, cheap, if anything it doesn't even add to the bottom line, ten seconds to do an additional test screening. So I appreciate your comments.

DR. PEARSON: I'm going to let Mark, but I have one question myself. Again, stepping back and considering the idea of an evidence gap, it involves many different moving pieces. One is the importance, and that can be defined in different ways, you know, disease burden, disability, cost, all these different ways. Then if it's important, why isn't there the right amount or type of research being done so that

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there's actually not a gap?
So if we were the NHLBI where there's actually a formal institution that's supposed to be triaging research in this clinical domain, why aren't they listening to you? What are the barriers to the evidence being generated through the existing channels? We can talk about barriers for other types of clinical domains or issues, and there may be others who have a viewpoint on this, but from your perspective, why aren't you being heard by your clinical and academic colleagues?
DR. BECKMAN: So, I would actually make the point that the NHLBI has been listening quite closely and putting its money where its mouth is. They have funded a series of RFAs for research into the treatment of these patients, they have funded training programs to make sure that there are enough internal medicine-based specialists who understand this disease process and who will be trained as clinician investigators to be able to carry out these studies, and they have actually funded many studies looking at peripheral vascular disease. What you're really asking me is why haven't they funded the single study of from discovery to end, and my guess would be that it's incredibly expensive, and if you

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have to make a priority list, it may not have made it among peer review.

Now I also think that it's been poorly recognized over a time, the severity of peripheral arterial disease, its frequency and its outcomes. And so I know that in medical training, for example, vascular disease that is not in the heart is relatively ignored. And if you are an internal medicine trainee you hear very little about carotid disease, you hear very little about renal disease, renal arterial disease, and you hear very little about lower extremity atherosclerosis. In part that's a failing, but also in part it's a recognition that we are now only, that it is a recent concept that atherosclerosis is systemic. We all take it for granted now, but ten years ago we didn't and we were arguing about it.

So now that we understand that atherosclerosis is systemic, we can look back at data from 1992 from Mike Crickey in San Diego and see that in asymptomatic patients over five years there's a 25 percent mortality, and then we have to wonder why it took another 15 years to get a similar outcomes study to show that over six-and-a-half years there's a 28 percent mortality in the same asymptomatic group. I

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would say we've moved very little, despite the fact that we're now beginning to all be on the same page. And I think the NHLBI has done a really good job at pushing this. Do I think they could do more? Absolutely, please do more. (Laughter.) But I don't think they should be blamed at all, they have actually been pushing this field quite nicely.

DR. PEARSON: And I certainly didn't mean to blame anybody, it's more for us the challenge of hearing the voices that are actually in the room and even our, you know, even our own prejudices and biases that we bring often mean that there are voices that aren't heard, people who don't have societies to back their area of interest or for which there's not, for a variety of reasons, enough research and funds to go into it. So again, I'm just helping open up the question of the gap, not just the importance, but the gap. Go ahead, Mark.

DR. HLATKY: I actually have a very specific question about this whole question about ABI and I want to make sure that I understand what you and Bill Weintraub are talking about when you talk about screening for this. Is this as was just

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described, you know, having someone in the office take a blood pressure cuff off the wall and measure ABI as part of the visit, or are you talking about referring people to a vascular lab for a separate charged procedure and having measurements made in a vascular lab, which seems to me to be a different thing. So when you are talking about ABI screening, which of these things are you talking about?

DR. BECKMAN: I personally am talking about -- it's not actually where the test is done, but the mechanism of the test so that it meets the requirements that are currently paid for for patients who have symptoms, which is the test with a Doppler wave printout. I don't care if it's done in a vascular lab or it's done in an office that does it routinely, I'm not making that comment. Nor am I discussing specifically the method, but any method that conforms to currently reimbursed tests. I'm also, by the way, not saying that I think it should be done every visit every year. I think it should be done once in a lifetime, because it changes very slowly. And just like for AAA, which now receives coverage, I think that we can make a huge impact in the welcome to Medicare physical, for example.

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DR. HLATKY: Okay. You're talking about, then, specifically something that is charged separately for as a diagnostic procedure, not something that I can take my blood pressure cuff off the wall and measure it, you're talking about a diagnostic code.

DR. BECKMAN: So if I lived in a perfect world, you're absolutely right, you could just take it off the wall. And I published a study using automated blood pressure cuffs and compared them to the Doppler ultrasound to show that they were equally as good. And when I go around and talk about PAD I ask people, if you don't have time to use a Doppler ultrasound, and one of the reasons that people don't do this test is because of time and money, I say fine. When the patient is lying down in the office getting their EKG, put on a blood pressure cuff on each limb and generate an ABI.

But we all know what happens. What's done in the office is what's reimbursed because that's where you are setting the priorities. You tell people what you want by paying for it. And so unless you pay for this test, it won't be done, as proved by the lack of continuous evaluations by investigators of primary care offices who participated in the large

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prospective evaluation studies. They don't do it because it takes time and they don't get paid for it. So if you want it done, you have to put your money where your mouth is, like we do for everything else.

DR. GRANT: This is more of a comment but you can feel free to respond. It sounds like, and I profess, I am not very knowledgeable in the area, but it sounds like the circumstances you're describing are those in which there is relatively strong evidence for all the different pieces of the puzzle in the chain for the model that one would put together. So the question I raise, is there really necessarily a large gap here or is it, and maybe it already has been done, that the model -- in this case the chain of evidence hasn't been linked and examined with reasonable assumptions. And from what you're saying, and you're doing it reasonably compellingly, I'm not sure that the investment in a large study would necessarily, the value one would obtain in a very large expensive trial, and you can correct me if I'm wrong, I just think on the surface that's what I see.

DR. BECKMAN: I think you're right. I think all pieces, I think to get from A to B, we've done every middle piece, we haven't done A to B. And

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in fact recent studies have shown that with the application of -- first, there are randomized trials which show that with each condition and each medication work. Secondly, there are studies looking back to 10 to 15 years with variable levels of medication use showing that as you add the number of appropriate medications, there are ever increasing reductions in adverse events.

My answer to you is we have been asked to prove that it goes from A to B because otherwise people will say how can you prove it works. Well, you know, my comeback is commonly a bit flip and I say I know that when you jump out of a plane you're going to die, and I know that parachutes save lives, but nobody's proved that point either. But that's what comes back to us as you can't support doing this without proof from start to end, which is why I think the evidentiary gap is tiny, although it's not going to be cheap.

DR. PEARSON: Bill, did you have --

DR. WEINTRAUB: Can I respond --

DR. PEARSON: Yes, please.

DR. WEINTRAUB: -- which I hope really gets at your question, because I think you are right that we don't need randomized trials about whether we

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should do this or not. But there are other kinds of studies that need to be done because why are we doing this, why is it being done routinely? Everybody knows that this is valuable, everybody knows that. So other kinds of studies are needed and there is an evidence gap about, just about how we go about this along the lines that Dr. Hlatky suggested, just what's the right kind of setting? We don't know, we just want to get it done.

So I think there are implementation studies that need to be done and we need to figure out the right way to pay for this, and we need to figure out as a society and especially for Medicare beneficiaries how we can get this done so that people will be screened properly and so we can save lives.

DR. PEARSON: Sean, you had a comment?

DR. TUNIS: Sort of a comment and it's not on PADs.

DR. BECKMAN: Can I sit?

DR. TUNIS: A comment I'm interested in, from Teresa Lee and Randy or Joseph Burkholder. So I'm going to take a quick crack at what I understand to be CMS's goal in trying to set these research priorities, and Barry, you're free to disavow that this is in fact your goal, but I'm going to preface

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it if, sort of if I were still here, this would be my goal. Which is, you know, basically every time CMS tries to do a national coverage decision they find the same thing, which is that the kind of evidence that they would like in an ideal world doesn't exist. And you know, whether it's looking at PET scans for oncology, whether it's looking for platelet-derived growth factors for wound healing, whether it's CT scans for intermediate risk, you know, patients at intermediate risk of coronary disease, it doesn't matter, it's always, you know, the conclusion is, boy, we wish there were better studies. So the point of this exercise in my view is, isn't there some systematic way that we could be proactive and, you know, and collaborating and identifying, you know, in advance, what can we do so that five years from now we're not still whining about the fact that we never have the evidence that we want to make these decisions. And presumably you want to do that in a systematic organized, you know, transparent repeatable way. So that would seem to me to be the goal of an exercise like this, which is, you know, there's no road map for how to do this so CMS has done the honorable thing of, you know, trying something and getting people to poke fun at them,

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which is always great entertainment and I love it myself.

So I guess my question to Teresa and Randy would be, assuming that is the goal of this exercise, how would you recommend CMS go about accomplishing that?

MS. LEE: Hello again. I think that's a legitimate goal. I think that what we would like to see is a little more specific in terms of the down to basics, you know, what are the particular criteria you've been looking at. Because you've got such a long list of evidence priorities now in front of you and certainly it makes sense to try to identify those issues that are important to the Medicare program. But again, you know, if we could drill down to what does that mean.

I mean, are you interested specifically in, you know, CED, is that the purpose, trying to identify areas where you think that CED may be something that you might be interested in. And I think Dr. Straube pointed out that there is supposed to be some kind of agenda for coverage, but you know, to me it's still sort of not clear exactly what it is if it's not that. So just a little bit more definition, and I think that maybe that might help

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make the process for putting numbers by each of these research areas a little bit more clear.

DR. STRAUBE: Let me jump in. Sean. I think you articulated it well, I thought I articulated that also at the beginning, and I thought we articulated it at the last meeting. This is a little like dealing with patients, some people need a little more hand holding to be reassured about whatever you're telling them which can be scary and frightening in terms of disease. But I think, not to be flip, truly this started off as I stated, a realization that we're frequently getting national coverage decisions that either we open up or more likely that others open up, ask us to open up and the gaps, as Sean articulated, are immense. And so this was an exercise to try to identify using broad stakeholder input, I would say arguably this is still the most transparent process I've seen in this country in terms of getting public input into decision-making, unlike where I came from in the private sector, which was much more secretive. So we've gone through a process, there's a list of things that the federal work panel and this MedCAC has come forward with as suggesting where some major gaps are. I think that the comments about can

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we make it more transparent, can we allay some of the fears that industry in particular seems to have about what our intent is, yes, we can. But we're here today to try to prioritize where those gaps may be, and Sean, I think Teresa, was trying to -- I'll even respond more to those in a separate comment, but is there something that AdvaMed or PhRMA can comment like the other commenters did in terms of are these the right gap areas, are there some that they missed, did they articulate the content in an indirect way. That would be the most helpful thing, and I think, Sean, that was what you were trying to get at perhaps too.

DR. TUNIS: Yes. I mean, that, and more generally I think, you know, assuming that the goal you just described is in fact the goal or the goal I described, you know, it's sort of come up with some more ideas and suggestions about how to achieve that goal, whether it's specific research questions or suggesting a different process by which those questions might be identified and prioritized. Because clearly this is an experimental effort and it can clearly be done better, and I think Randy, you and Teresa and the folks you work with might have a lot of good ideas about what's the best, most

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efficient way to do this. But I think what, you know, Barry and his colleagues are trying to do is pretty clear.
It's, you know, what studies can we start today, hopefully collaborating with NIH or the product industry that will make sure that, you know, the emerging technology of today is not the technology that five years from now we'll think is just another one that got out of the barn without the kind of evidence we would like.
MR. BURKHOLDER: I'll attempt to add something. And Barry, as one who needs lots of hand-holding, I do sincerely appreciate the openness and transparency you have provided in the process.
You know, I guess, and not to be flip, Sean, but if that's the goal, it's a pretty straightforward one, why hasn't that been clearly articulated in writing by CMS? That's one thing that we look for in understanding where CMS is coming from, so looking at what are they saying on paper.
And, you know, I appreciate the importance of what you're saying from the podium, Dr. Straube, although from the podium this morning we heard from CMS speakers information to support patient and physician decision-making on one end, all the way down to CED

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and coverage criteria on the other end. So even from the podium there's not that clarity there yet and it's not there on the MedCAC, CMS coverage page. You know, I think what you articulated as a goal maybe was a little closer to the early draft of that web page and a little further from the current draft. So I would say that would be step number one, if that's the goal, let's spell it out clearly. I mean, you know, I guess there are different approaches that one could take beyond that and say how do we start to get our hands around, how do we get the evidence that we would like at the right time. The answer to that question with respect to all the stakeholders you've brought around here today is going to be critically important, picking the right evidence at the right time for the right purpose. Now, the patient community and the provider community, and the researchers and the manufacturers, and the payers, all might have slightly different perspectives on that, but that would be the starting point. You know, I guess you could look back to Section 731 and see that there's a framework there for development of CMS guidance around these kinds of ideas, that might be one starting point.

MS. LEE: I want to thank you too for

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holding these MedCAC meetings and I agree with you, it's by far much more transparent than a lot of processes that private payers may undergo in terms of, I don't know if it's priority setting or just decision-making. We do think that this is a great forum. You know, I'm still not a hundred percent clear on what's going to happen after this MedCAC meeting and as I mentioned in my remarks, it would be helpful to have something similar to what you have in the NCD process, which I think is extremely well done, to have, you know, the proposal that comes out of this process in terms of the rankings, post it on the CMS web site, allow one last shot for comments, maybe 60 to 90 days, you know.

And the other question of course that I had was what happens after this, because I know that there was some discussion early on about updating the list, but I guess the question is how often does this get updated, how does it get updated, are you planning on having these MedCAC meetings periodically to update that list?

DR. PEARSON: Yes, Nora.

DR. JANJAN: What's striking me from these comments is the disconnect between the physician's office and the research, and guidelines that are

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developed from research. Taking the PAD example, taking the example of pain control during cancer treatment, I just reviewed a paper that demonstrated again that pain is poorly managed during cancer therapy, after 25 years of evidence, guidelines, everything else.

You know, you talked about reimbursement for physician care. Well what about standards of care? That's our obligation as a physician, to evaluate that. For PAD, what's the big deal about taking blood pressures in the lower extremity? And from a pharmaceutical point of view, you want us to do that because then we prescribe something that gets to the patient that actually helps them. So I don't understand what the disconnect is between taking a few extra minutes caring for the patient, finding out what's happening to them, and fulfilling your obligation to discover a problem in order to relieve a symptom, and not doing it and having the patient walk out of your office with an unresolved problem or potential problem that's going to come to hurt them in a little bit.

I think the medical community, there's plenty of paper out there telling us what to do and I don't understand why that's not getting done. None

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of us are perfect but on the other hand, you know, we've got the structure to guide clinical care. So as far as amount of evidence that's required, I mean, I think a lot of it is there but we're not doing it.

DR. PEARSON: Yes.

MS. DAVENPORT-ENNIS: I would also like to make a comment to the gentleman who spoke to the issue of PAD. Certainly thank you for enlightening us on the panel, thank you for enlightening the patient population to the issue, and I would like to share an observation. It was suggested that perhaps what needs to happen is there has to be a statutory revision if this is going to be reviewed as a diagnostic rather than therapeutic intervention, and I would like to defer to remarks that Secretary Leavitt says frequently when we are addressing issues around health information technology, and that is that so much of the reform in health care will be led by the patient.

If we could put you on every national stage and every national nonprofit patient meeting in the United States of America for the next 12 months, I feel very assured that the number of patients in America who would be walking into their physicians and requesting this particular diagnostic process as

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part of just their standard examination would accelerate probably even beyond the expectations of your organization. And I think that in looking for solutions, certainly coming before this body and addressing this body is one solution, certainly going to Congress and seeking statutory reform is one solution. But I would also invite you to join hands and hearts with the patient community of America and see if we cannot indeed be a favorable force in moving your issue to become standard practice within the cardiac community.

DR. BECKMAN: Absolutely. So, I would have to say first that the Vascular Disease Foundation, which is the overriding organization that puts up the PAD Coalition does include such patient-based organizations specifically. However, I would be happy to go speak in every state in every place that someone would invite me to come speak about this issue. I think I can find experts in every state and in every at least large medical area that could speak about this issue with the same level of passion and interest. Again, the organization which I have the privilege of speaking for today represents more than a million people who are interested in this disease. I myself know at least a

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hundred people across the country who would speak with similar passion and interest. So I will take every step that you think will help us move from where we are today to where we need to be tomorrow, and there's no limit to what we are willing to do. We're all committed to making sure these patients do what we want, live longer and feel better.

MS. DAVENPORT-ENNIS: And I think I would add to that, in a very timely manner. I think we need to facilitate an introduction for you with the National Health Council and again, to get some of those nonprofit patient leaders to know who you are, and I will certainly be happy to meet with you after this meeting.

DR. BECKMAN: That would be wonderful.

DR. PEARSON: Yes, Barbara.

DR. ALVING: Sorry I missed the talk, but I am very enthusiastic in support of this ABI and work very heavily with the organization at NHLBI. The problem is, you know, we read earlier this week that the life expectancy of women is going down, it's all about behavior. And one could look at ABI as one way to kind of take people by, you know, the collar and shake them and wake them up. They've been told to quit smoking for 20 years now, but then you say,

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you know, we've got evidence here that your vessels are getting all clogged up and you're not going to be able to, you know, even walk to the store, or that's why you can't walk to the store anymore. It's the same way that we're looking at spirometry for patients, to really -- I mean, I saw one woman I'll never forget several years ago, who was a chain smoker and in the hospital because she couldn't breathe, and she said, you know, they told me I have COPD, what is that. So somehow we have to wrap this into the overall health message and I would say that there are, you know, some people are already on their statins, et cetera, et cetera, because they've gotten their classical measurements, or somebody for example died of an MI, but some people are clueless, and the ABI would be another way into waking them up. But somehow it has to be wrapped into the overall picture. We've already talked about people on Medicare focusing on their own four to five diseases, and we need to fold it into that context.

DR. PEARSON: Mark has one more comment.

DR. HLATKY: You know, I think this has generated a lot of discussion, but it raises two issues to me. One is this idea of, I think Mark mentioned about something about a chain of evidence

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and you know, can we connect the dots enough. And I would actually say that's actually very important, that we may need to look at this in a way to say we do need to connect the dots.
I was just reading on the plane coming out here a study where they are looking at new interventions, a new drug to treat HDL. And it was very clear that HDL was bad, low HDL was bad, raise it, you know, numerous studies have shown this, we had a drug that did this, you know, et cetera, et cetera, and what happened in the end? Patients were harmed because the drug had unintended effects. And so the reason is just to say I'm a little suspicious about saying well, you know, we have all the pieces and so we don't need to connect them, the pieces of evidence, you know. I think there's a need sometimes to make sure that it is seamless, that there's not a gap, because there are other things that could come back to us about that.
And with respect to this ABI measurement, I think it's one of a class of measurements that is basically a diagnostic or a risk marker measurement, of which there are many. There are many new biomarkers, there are many other imaging tests, there are many other things with respect to coronary

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disease and the question comes, okay, we have information but how actionable is that information, what evidence do we have that it really helps people, and most importantly just like in this other thing is, what kind of unintended effects are there from potentially using this, which needs to be done. Maybe it's less obvious for PAD, but I can say the coronary calcium scan is a similar thing in the same vein, the same arguments are out there, and there's some issues about well, okay, what about some of the negative effects of getting those tests. So I'm just saying, I support the idea of doing more research on ABI because I think that's important, but the reason is because I'm suspicious about being too glib about connecting all those dots without having it really firm that the chain of evidence is connected, and realizing that there are sometimes unintended spin-offs from these things, so we need to prove that we really are improving outcomes for patients, not that just we're generating information about risks.

DR. PEARSON: I would like to let Dr. Weintraub have a chance to respond, and then I'm going to let Barry give sort of a summary of his response to some of the comments before we break for

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lunch.
DR. WEINTRAUB: I think what Dr. Alving brought up is really sort of the key point, and Mark's comments in response were very helpful as well.
This is what the American Heart Association is really all about, because vascular disease is largely preventable. In young people, diets, exercise and smoking cessation, and as people move into middle age and beyond, blood pressure control, again, the control of lifestyle, lipids, screening for diabetes and at least one screening with ABI. And with all of this vascular disease is largely preventable and very treatable, so why is this our number one killer? And I think our number one killer is the society, both in terms of behavior and in terms of good healthcare delivery, we're not doing a good job.
In addition, I think there are lots and lots of uncertainties along the lines that Dr. Hlatky brought up. We can't just assume that because you treat a surrogate that raises HDL that it's going to benefit patients. As he mentioned, a drug that raised HDL actually resulted in more harm than good.
And there are lots of screening tests available now,

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all of which are being pushed rather passionately, some of which are really quite expensive, and their impact on outcome.

And Dr. Hlatky also brings up a perfect one with coronary calcium screening. Much more expensive and exposure to radiation. Much less certain that it's going to be of benefit. As a new one not being applied I really like ABI, because it's inexpensive and no one is going to be harmed by doing it.

But I think what we really need is to figure out as a society how to deliver medical care well. We're going to do more to help people save lives if we do what we know how to do already and do it well.

DR. PEARSON: All right. Knowing there are other comments that people would like to be made and people would like to make them, but since it's getting nigh on noon, let's let Barry sum up and then we can come back and pick up the conversation after lunch.

DR. STRAUBE: I would like to try to respond as was suggested to the comments, just at least briefly. This is an off the top of my head, unofficial kind of response.

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First of all, the MedCAC of course is an advisory committee to CMS, so what's happening today as a refinement of what we thought was the original goal is advisory to us. As I said at the outset, this is somewhat of an iterative process, so we're going to take what comes out of this and the prior committees, and that includes the public comment which is very important as part of these proceedings, and decide what specifically to do.

Our original goal, again, had been specifically to look for evidence gaps that primarily would inform coverage decision-making in general, not to set a coverage agenda in terms of what we would be covering the next year or two, or not covering. But to identify these gaps so we could start to then peel back the onion and try to say how do we get that evidence to be provided to our benefit, and that would require additional meetings and discussions in a, you know, fully transparent manner.

I think, though, as we've gone through these meetings, and to be fair to Randy and Teresa especially, and by the way, in addition to hand-holding, I always go into what I call my doctor mode when I'm doing management when we're dealing with challenging issues. And one of the things I

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think that doctors have to do to be good doctors is to listen, and it doesn't matter what people are saying. And especially you have to resist the urge to tune out people who may be saying something that's different than what you want to hear or what the topic of discussion is, because it may be a very important point. So I think those comments that you made were very good and let me come back to that in a second.

In terms of the speakers, official speakers we had, I think Diane Smith, I would take her comments to get back to this afternoon's efforts to be relevant, vis-a-vis there was at least one topic that had to do with incontinence, and there were related, a few other related ones too. So what I took from you, Diane, was that those were good topics to identify as priorities, there is some evidence that you and your colleagues have developed, but there is a need for us to develop additional comments, so I think that was very helpful.

MS. SMITH: There's now an official scope of practice for nurse practitioners interested in providing services to people in long-term care for continence and urology needs, and it's being endorsed by two different nursing organizations.

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DR. STRAUBE: So that's helpful and I think the committee should be cognizant of that as you go through your scoring this afternoon in terms of the relevance of some of the topics that the federal panel came up with.

Cynthia Rice from JDRF made some very helpful comments too and I think, again, specifically I was going back to the list and it was relevant to monitoring of diabetes results and what you do with them during the process. So that was very helpful and I remind folks to be cognizant of that comment.

I'll skip Teresa and Randy just for a second. Dr. Beckman, again, obviously made some comments suggesting refinement in fact of some of the way things are stated, but was clearly advocating for the importance of peripheral vascular disease or peripheral arterial disease. And Dr. Weintraub, who has been present at both of these, made some very helpful comments about specific items on there, so again, I remind you to look at those.

I think, back to Randy and Teresa's points; again, our original intent, as I said, was to try to identify gaps that would inform us of coverage. But as I have been going through this and with your comments today and others on the committee,

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I think that in addition to that focused intent originally, we have to remind ourselves we did change the name of the MCAC to MedCAC, and we have a brief description of why we did that and what the role of the MedCAC is currently. But the addition, the relevant addition was Medicare Evidence Development and Coverage Advisory Committee, and I think we're using evidence in a whole slew of ways within CMS. So part of the anxiety that I think some folks have, justifiably so, is what is the rest of that evidence development, and that's something we haven't fully defined and may need to do in the future of MedCAC, in terms of what is the scope of this committee going to be beyond just a coverage focus. For now it's not beyond that specifically, but there have been many suggestions made that I think we could take to heart right now, bring back, discuss it at a staff level, and then when we come back with announcing what came out of this, also consider the broader picture of evidence development and what this exercise has to do with that broader exercise.

Some of the areas, again, that we use evidence development beyond just coverage, has to do in quality measurement development, it has to do with

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public reporting and transparency, we want to put only evidence-based information on there if we can. It has to do with quality improvement and how we inform providers, the people who provide the care, and beneficiaries as to what the best kind of care that they should choose themselves, and/or advocate for themselves or their patients. We're using evidence-based medicine and evidence-based decision-making in our value-based purchasing and incentive programs to try to promote quality and value in health care.

There are policy decisions that we make, and that's one of the concerns that people have, you know, are we going to make policy out of this. And then there are, we obviously talk with the Hill and three are legislative issues that we discuss with Congress and with the administration in terms of going from there.

So Randy and Teresa's points are well taken, I think in that larger context. So I think what I would like to conclude with and everybody can go to lunch then, is that in addition to the main focus this afternoon, we'd like Dr. Pearson to focus the committee on looking at the work that's been done, the scoring, so we can come up with a priority

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list here. I've heard some advice from the committee and from the public that there may be some other things we should consider and we will, and that has to do with announcing publicly what we're going to do with this, why we come to whatever conclusions we do, and I think in a broader context it probably is starting to address this bigger issue of evidence, how we're using not only this, but other forums to gather comments about evidence-based decision-making. And the topics, by the way, that were raised here and are raised at every meeting that I go to, I think, comparative effectiveness and cost effectiveness. That's a given, that's going to keep coming up, and we're going to have to decide how best to engage with that at some point, but that's not the purpose of today in terms of comparative evidence.

DR. PEARSON: Thank you, Barry, and thanks again to the public speakers, both those prepared and those who came up. We're going to try to come back again -- the cafeteria gets crowded so I encourage you to go there now to buy your lunch, I speak from experience, it will take you that long to get through the lines, and we're going to meet back here at one o'clock.

(Recess.)

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DR. PEARSON: Thank you again for coming back, and we will begin. There are lots of ways that we could start off this next session because ultimately again, and just to kind of frame what we're going to do, we're going to have an open discussion of the panel, in our agenda it's labeled initial and then final, but it's all going to come together, and the point is to inform our own thinking and to make it more transparent as we move to a point in the meeting at which all members of the MedCAC panel will write down a score, a new revised score on the priority of scale of one to ten and that will be handed in to the CMS staff, but will not be collated or averaged or anything today, but it will be made available and I'm sure that they will let us know exactly how.

And we also, we did want to spend some time as a group reflecting on the process and ways that we might advise Medicare going forward, thoughts about issues that have come up for us as we tried to do this, and perhaps some suggestions moving forward.

So one way that I think might be helpful to start off is to have people try to, I think the picture I used was to take their brain out and put it on the table in front of them, and let's try to

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express how we are looking at this list and have tried to make prioritization, what factors have we looked at, how have we tried to weigh different issues. Because none us will have had all of the information that one might want in order to make a perfect prioritization, even if we know what our criteria are.

So I would like for people to think about what criteria they have been using in their own thinking and also to perhaps give a specific example of one of these topics that they gave a very high ranking to and maybe one that they gave a very low ranking to, to kind of make, again, more explicit how our processes have been done. And through that conversation, again, we may find that we have an emerging consensus around the ways that we want to take some of these criteria into consideration.

So with that in mind I'm going to actually pick on someone who heard this a little bit over lunch. Mark, I'm going to start with you.

DR. GRANT: You promised me you wouldn't.

DR. PEARSON: I know I did, but since you did hear it, and you've done this twice, you told me. So what we're going to do, it doesn't have to be everybody, but I would like to get a good sample of

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folks, and if you have a particular way that you feel that like you have been prioritizing that's important for others to hear, let's make sure to hear the way that you approached it.

DR. GRANT: All right. Well, as a general principle, which was difficult to apply lacking some of the information that I wanted, the first thing that I obviously did was to examine the question or the topic and see how specific it was and how it might change decision-making, you know, and based on some of the other reading materials that we got before, I guess as criteria my general view was a measure of some health-adjusted life years, the idea being in the ideal situation, if I knew the answer to this specific question that was posed or the topical area perfectly or with reasonable certainty, how would that ultimately affect a measure such as some health-adjusted life year measure, some quality of life or meaningful outcome measure related to the disease at hand.

And where uncertainty was high and I thought the information would be critical to inform, I ranked them very high. But also where the impact would be high, I tended to rank those items or topical areas higher, whereas those that were less so

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based on the knowledge that I have obviously, there's lots of areas I don't have knowledge. Does that fill it out enough?
DR. PEARSON: Can you give us a specific example perhaps?
DR. GRANT: Well, I guess my favorite one is CT angiography, it's on here. I ranked it high because I think that the uncertainty is significant in terms of defining its role in terms of what are the potential benefits and what are the potential harms specifically. We know some of it, but I think some of the critical pieces of evidence are missing on it and its potential impact both in terms of benefits, but also in terms of the downstream consequences are great.
Some of these I probably ranked low also because -- well, I ranked low, and people -- well, let's see. I think it was neuro-imaging modalities for headache, and that is based on what I know in my experience.
DR. PEARSON: Okay, thank you. Anybody else want to express? Karl.
DR. MATUSZEWSKI: In having the test of, task of evidence gap priorities, earlier today we heard about what were some practice gaps which are

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different from evidence gaps. I think I heard some discussion about educational gaps, both educational for the clinician and the patient. But when I went through the list of the different topics, I realized that the priority I was putting down, and I think the rest of my panel members would be completely different and say if this was a panel of ethicists, of healthcare ethicists, or if it was a panel of healthcare actuaries, we were supplied with a whole lot of data and I could not feed that into my computer because this is not a multiple regression. The priorities would be different if it was just NIH researchers, it would be different if it was practicing clinicians, it would probably be quite predictable if it was advocates of specialist societies and special populations. I think that there is a good chance here of saying this is what I know real well and this is what I put all my chips into.

In terms of -- I don't think anyone in this room, or perhaps no one in this world could say that they're aware of, in any great detail of the evidence that exists for all the topics that were presented in the list. I think some people who are generalists might have a sense, if you read a

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reasonable array of clinical journals every month, I think you get some sense of where evidence is evolving and developing.

But I have to admit, in my final prioritization I tended to put higher priorities on topics like electronic medical records, like health policy decisions that could indeed affect and advance forward knowledge in a whole lot of clinical areas across a lot of different populations. And what I tended to rank lower were when it was very specific in terms of the question in this age group, in this particular disease in this circumstance, because I think if you answer the broader health policy questions you will be able to get down to that level, or at least you will have much greater information.

DR. PEARSON: Yes, Linda.

DR. BERGTHOLD: How were these questions selected? I took them to be examples of types of research questions, not definitive research questions, because some of them were yes and no answers, so I was just wondering whether they were meant to be the question to be answered or just an example of a question that could be answered.

DR. PEARSON: There is probably some specific reasons, I mean answer as to how they were

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gathered. I know the answer is from obviously different parts of the process and they ended up framed differently, as you said. I think one thing that we should decide as a panel, this came up in conversation at lunch, was if we think that the question itself is poorly worded or too narrow but still represents an area that we think if the research question were more properly framed would be of high priority, I think it's reasonable to give that the benefit of the doubt, that the research question would be refined and it would represent a good bite of the apple.

Now that's tough because to a certain extent, like for instance around the ABI, he said that the question really was off target in significant ways, the wrong outcome and wrong framing, so we may not be able to fix all of these in that way. But to a certain extent I think it is probably reasonable and if anybody feels otherwise, let's talk about it, to try to give the benefit of the doubt to the question as recommending something. Does anybody disagree with that?

DR. BERGTHOLD: So I'll give you my criteria then. I have this interesting role as consumer representative which, don't pin me down too

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hard on what that means, but here's how I have thought of it over a period of years, and that is that it's different from being a patient advocate, because I'm not advocating for a disease or for someone who is ill, but as a Medicare beneficiary myself, thinking about the population of the Medicare beneficiaries as a whole, both their health and their illness. And so when I look at these research questions, what I tend to do is look at sort of a couple of things. Number of people affected would probably get a higher score. Whether the research question could prevent further disease, so catch it early would be important I think for beneficiaries. Research questions that would, if answered adequately would improve quality of life, and have an impact on treatment.

So I would have put the effect of total body cooling and sudden death as low because it affects relatively few people and not -- it's sort of preventing death, but it's not exactly the prevention idea, and something like how effective is aggressive blood pressure in the elderly in preventing or delaying CHF as higher. So that's sort of how I would be looking at these questions.

DR. PEARSON: Yes.

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MS. FRIED: I wanted to go after her because I actually used very similar criteria which I'm not going to repeat, but I also added, I really looked at quality of life issues in sort of my own, that was a very high factor for me, and especially in dealing with issues concerning functions and so, along with some of the other comments made. So I ranked actually very high, as an example, the impact of some of the rehab therapies on -- well, I have to find it, but some of the rehab therapy, the physical therapy and occupational therapy for certain people. I can't find it, but you get my point. I ranked high things like that, that would really have an impact on function for some of the Medicare beneficiaries.

DR. PEARSON: We'll keep going down this way and then come back. Yes.

DR. BILD: I used some of the factors that other people have mentioned regarding the burden of disease, morbidity, quality of life, the number of patients affected. I also in some cases picked up on whether I thought there was a real lack of research. So for example in the genetic risk factors, does the knowledge of genetic risk determine its improved screening and prevention program, I rated that fairly high because there's a lot of interest in that area

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and it's actually something that's being put out there and being used without any, or with little evidence in some cases. So there was a lack of evidence and I put it higher.

I will also say sort of along the same lines of what Linda said, sometimes the wording of the question influenced the way I ranked it and I might have done it differently if I had a different mindset. In some cases there was a lot of redundancy so if there were, say, four or five related to vascular imaging, I, you know, I might have rated a few of them high and said okay, I've rated three of them high already, so I won't do it again.

The other just comment along those lines is I see that, now that I've looked at them, I didn't use the full range of scores. I was an easy grader. So I was enthusiastic and that may not be the way other people think.

DR. PEARSON: Yes.

MS. DAVENPORT-ENNIS: And I would like to share that some of the criteria that have already been cited I also used. I thought it was important to look at the different, if you look at the Medicare population, what are the diseases that are very prominent and what are some of the therapies or

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testing that is going to have to be used broadly across that community, and if so, try to give that some high priorities.

I also looked at some of the, with members from the scientific community and with other nonprofit organizations to be able to get a collaborative sense of what is important to the community, and in doing that identified what are some of these topics, such as MRSA, that could indeed pose a public health risk, and if we felt it posed a public health risk, we certainly scored that very high.

When we look at cancer and things like the need for biomarker studies, we see that that is a way to avoid losing patients through a failed first, or a step therapy, maybe two to three steps and failing, before they can get to drugs. So if we can accelerate the use of biomarkers in these tests to get the patient to what they need to, we scored that highly because we felt it would give great advantage ultimately.

We also recommended, which I know could not be published, but we did supply to the Agency an additional form where we suggested that some of the topics be combined into one study that would cover

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multiple areas and that in some instances the question that was asked we felt would only have relevance if we could know what the therapeutic intervention was going to be so if you were going to do the test or study it, then what is the subsequent therapeutic?

And then such as the neurodegenerative disease questions, we felt an important question always to be answered is will those therapies improve functionality and independent living, which was important to us in many of the categories.

DR. PEARSON: Richard.

DR. WHITE: I think I looked at things a little bit different. I started out by assuming that whatever information is generated from our endeavors will be looked at very closely, and to credibly truly evaluate the current status of the research strength of each of these issues, no one could suggest that we understand very much at all beyond our own special interests. And to make comments based on the research strength, for me to make comments on the research strength of research support for a diabetic issue is totally inappropriate.

And I think we should realize that and I think a good example from the morning session,

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unfortunately they aren't here, but the two cardiologists, one of the cardiology reports listed the six or seven hot topics, and wouldn't it be nice if you really had experts in each of the areas to tell you what the current status of the research is. But the point is that since I know with the exception of a few specialties I can't do that, I can certainly comment on things I know about and I looked at them in terms of the impact.

In orthopedics we're very, very concerned with quality of life issues and functional improvement and so I looked at things that were the most frequent, the most costly, the most high in terms of producing either morbidity or mortality, look at that as a baseline information. I didn't try to factor in if I had any concept at all realistically other than a nonscientific opinion whether we could comment on the research part, and that's how I sort of rated things in that way.

DR. PEARSON: Thank you. Sean, let me ask you, you may have your own thoughts, but I also wanted to pick on you because I know you've had some experience working with the James Lind Alliance, which is an international group that tries to put the patient at the very center of the process of

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prioritizing research; as opposed to being at the table, it's meant to really put them in the driver's seat. You may have some comments on how that perspective has or hasn't been reflected either in the list of questions here or in what you think the prioritization should be, as to whether that had any role in your own thinking.

DR. TUNIS: Yeah. I wouldn't say that I was -- the James Lind Alliance is actually, the focus is to try to get the questions of clinicians and patients identified to then drive a research agenda, and they've created something called the DUET, which is the database of uncertainty and effectiveness of treatment, which is sort of -- Ian Chalmers, who created the Cochrane collaboration, is now with the James Lind Alliance, and he's good at coming up with pleasant names. So the notion is that the kinds of, you know, unanswered questions that patients and clinicians have in decision-making differ systematically from what perhaps policy-makers and payers want to know.

That experiment has been, you know, modestly successful. It turns out that clinicians have very different questions from patients and they've tried to get them both together. But what's

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clear is that, you know, and Nancy probably has a lot of this view too from her work, is that patients do care a lot more about, you know, what is the impact of this treatment going to be on my function, on my quality of life. They are less interested in, for example, do patients across a broader range of compliance or heterogeneity, how do they do. Because, you know, patients who assume they're going to be compliant with the therapy, they want to know how effective it's going to be if they follow directions, not on average how effective is it in people who, some of whom comply and other ones don't. So it does lead to different research questions and different research design.

The only thing I was going to add in terms of my approach to prioritizing was, you know, besides burden of illness and a little bit of economic impact and prevalence, which a lot of people I think were considering, was did the question look like something that the existing clinical research infrastructure wouldn't prioritize highly. So you know, it looked more like an effectiveness question or a pragmatic question or, you know, something that kind of addressed a real world type of question.

And then the other thing that influenced

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me quite a lot, whether it should have or not, was the question framed in sort of a research hypothesis kind of way, you know, specifically a defined patient population, a defined intervention, a defined comparison group and a defined outcome. So if it was framed in a way that it was clear what the question was, I tended to give it a higher score, whereas something like vascular disease imaging, does it drive practice, I gave a zero just because I couldn't, you know, maybe I didn't have enough time to figure out what the question was.

DR. PEARSON: Yes. Nora.

DR. JANJAN: Consistent with some of our earlier remarks today it seems to me that we've got really also two different types of questions here. One, like the bone densitometry study, it's a mature technology that's been out there forever that millions of women are undergoing every day, every year. So the point is, why don't we know this already, and why are we continuing to do this in our standard of practice if we don't really have evidence to support it, and yet it's in our guidelines. So I don't understand why we don't know this and incorporate it into standard of care.

Then you've got some immature, more

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immature experiences like Her-2/Neu, you know, that haven't been out there for 20 or 30 years, and surely we can learn more as we get into Phase Four and we're able to get more specific data out of it. So some of it is the potential, like Her-2/Neu, and some of it is standard practice, like why aren't we applying what we know already, and if we don't know this, why are we doing it.

DR. PEARSON: Yes, Barbara.

DR. ALVING: I have just a couple of thoughts. One could be, you could look at these questions and decide maybe you want to rearrange some of them, some of them you may want to drop out, so you could sort of do a little bit of editing with some of the questions.

The other one is that it would be very interesting to present this, let's say challenge, to systems engineers, because really, I can see two other ways of looking at what we're trying to get at. One is to overlay a series of grids. For example, you could have one grid -- well, you could say increasing costs of doing this study and that would be on your abscissa, and on your ordinate would be your return on your investment. Now, how do you define that return, and this would be where you have

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your overlapping grids. One would be savings to -- and when you say, well, savings to Medicare, actually that would be savings to our country and then that money gets used somewhere else.

It could be quality of life return, it could be, you know, whatever, and then you put those grids on top of one another and you're going to find certain studies that maybe really come out very well. For relatively low cost you're going to get a very high return on your investment in three or four or five domains. In a way it's sort of like then you could assess a global benefit score where you say well, we've looked at all of these five factors, maybe you sort of weighted them in terms of expense and quality of life, et cetera, and then give or assign sort of a priority to that.

DR. PEARSON: Well, Mark's smiling because we were -- have you heard of value of information analysis? We might as well introduce it, because you could have just created it from what you just said, and it's an economic modeling approach to judging the return on investment, if you will, and by that they mean return on knowledge that you gain from a study in a particular area. So if you can increase the precision around which you know the effectiveness of

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a drug, how much will that yield you in terms of improved patient outcomes, or a particular price, if you will, of the research. So there are sophisticated mechanisms out there and actually there are other countries that have been using this to a certain extent because they tried very hard to do exactly what we're doing, which is to link the decision-making process back into the research prioritization. So it's something I think we may want to look into, because there are experts who are quite fond of it as an approach.

Yes, Mark.

DR. HLATKY: Just to get back to it now, how do we, or how would I handle some of these things, and some of the things that I used to weigh many other people have mentioned a lot which is, you know, prevalence of disease, how severe it is, the impact on people. I was influenced also by the article that we got from, I think it was Von Gross in the New England Journal that talked about some areas seem to be relatively underfunded and I paid attention to that, like chronic obstructive pulmonary disease was one of the underfunded areas, and I said well, I didn't know that, so maybe we ought to put a little bit more priority on that.

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Other things that I had were sort of what I would call researchability and ripeness for research as sort of being important things that were there, and I tended to not put down things that I didn't really think were research, that I thought were maybe questions that people had but weren't research. Like one of them, a couple of them are actually under this health policy area, which seemed to me to be a mix of things that were really research and other things that were just kind of questions, like would it be cost effective to pay for glasses and what would the cost offset be.

I rated that at the absolute bottom because I just thought that was a coverage question, you know, why don't we pay for glasses. I wasn't really, I mean nobody would disagree that it's not effective to get people glasses who can't see well and it doesn't cost very much, so I mean, where is the research question in this one? It seemed to me to be a policy thing like why don't we pay for this. So I was less impressed with something like that.

On the contrary, this question about CT angiography, I've worked a little bit in this area and I think it's an extremely important question because it's a big issue, it's a new technology, it's

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going to have a huge impact, and we don't know what the outcomes are going to be. Now, I might rephrase that because I'm not sure cost effective, which was a word that was not well received by many, I think the intent of that is what is the effect of using CT angiography on clinical outcomes is really what it means to me, and rephrased that way I thought it should be very highly rated, and so in some cases also, the specific wording.

Finally, I guess I also considered at the federal scientists level that they may have provided some information on researchability, if you will, that they may think that the, you know, the scores from the other federal scientists. And in particular when it was rated highly to start with and not so much on the second round by the federal scientists, like this thing on MRSA, I guess we ranked it kind of high to start with and they didn't. And when I looked at the question I was thinking well, maybe this is not -- it's not a very good question actually.

It's like, you know, MRSA is clearly bad, but this question doesn't sound like a research question to me either, and it seemed to me that that's what the federal scientists were saying, and

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maybe a different question about MRSA would be up there. But this particular question they didn't seem to think was very researchable, I guess I took that into account, and I don't know much about that area to know what would be the researchable question. If I was a public health guy maybe I could do that, but given that that's not my area of expertise I just kind of left it open, saying well, you know, that doesn't look like a terribly ripe question.

DR. PEARSON: Let me bring back this issue that I think Sean may have raised first, or at least touched on it. And that is, some of us at least have tried to figure out what I would call are the orphan areas here, where they might not even be the most important but there's going to be a chronic lack of good evidence for a variety of reasons. It could be because the research is just hard to do because patients are all spread out or it's in primary care or what have you. It could be because there's likely to be a lack of a manufacturer interested in funding research in that area. So I think I also and I think at least many of us may have factored that into our thinking of how to prioritize, whereas others might have felt that they didn't have much of a perspective on what would be kind of a chronic and difficult area

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to gather evidence.
But I'm just seeking further feedback. If we as a group in general have tried to assess, and again, we're not set up to perfectly assess this, but I think many of us did try to guess where there would be chronic underfunding and underperformance of the evidence in general. Is that a fair statement?
DR. TUNIS: I think this is the same thing. I mean, I think there's examples of where, you know, medical intervention, some structured exercise programs to reduce falls in the elderly would strike me as perhaps falling into that category, where there's no natural sponsor for that kind of study.
Now also to highlight, it's possible that there's a large randomized trial going on right now on that exact question, so that was one of the things I was constantly aware of, which is I couldn't possibly factor in, you know, what was ongoing research, you know, because a lot of things that are important questions, other people have actually discovered that they are important questions and they may well be studied. None of us are really a good repository for that kind of knowledge.
DR. PEARSON: Yes, Lisa.

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MS. LANG: I'm not going to add anything in the area of priorities because I think what I used and stumbled toward was really a lot of what people are discussing here because of the frustration at the diversity of questions on the list, the variations in the level of specificity and the like, and I wondered what at this point the process might be for moving ahead and trying to kind of nail down, either agree that we're going to focus on two or three areas and try and bring in experts or try and marshal the expertise, the technical expertise that's sitting at the table here in those clinical areas, and then maybe put the rest out for more specialized comment. I think one of the things I didn't say in the last session that I think I would like to say is that I think the bench science question about how you set an agenda is a good development, how do you set the priorities among expenditures for basic research. But the kind of thing that I think the Medicare program needs most is research that links the academicians and the clinicians with an eye towards focusing at the end in the guidelines that actually will affect care. So that at the outset of the framing of the question, there is the notion of what the care process has to be that would be different.

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And I think when you start talking about the value of information analysis, I think if we could come up with some way of merging that decision analytic approach to the goal of trying to improve processes of care as we go through this hodgepodge list and maybe prune it or make it, you know, make the question sharper in some cases, I think we would have a better product to go back to the public at large and ask their opinions about.

DR. PEARSON: I think we should definitely have this part of the conversations. We're also going to spend the latter part after we do our final ranking I think doing a bit of a postmortem and also a view toward the future with exactly that kind of suggestion.

DR. GRANT: Having had the opportunity to go first, I will make an observation. I think it's interesting that each of us, although there's overlap in some respects, has our own calculus here for solving the equation, and then there's a question of what really is the equation, and I think one of the outcomes of this in the most formal way, if I could say the calculus in the most formal fashion would be a value-information and other approaches to this, certainly decision-analytic.

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But I think one of the outcomes of this, and I think some of the commenters have asked for it and I think appropriately so, is to make that calculus, whatever criteria, or not criteria, but really what is the formula explicit, or as explicit as possible. There may be outliers, there may be orphaned areas, there may be specific things that are of particular importance for particular reasons. And you know, from my perspective it's informing, you know, is it going to be the burden of disability adjusted life years or are we going to use quality as a global measure, which includes how many people it affects, but I think really synthesizing that calculus might be useful in the process.

DR. PEARSON: Other comments or thoughts about how the prioritization went? I feel like if we had had a flip chart or a dry-erase board to kind of write all these different ones, it would look like a very different calculus. Or even if we listed and could nod our heads at many of these different criteria, we would each assign different weights to them. So to the extent that this is transparent, it still may not be that explicit, because it's very hard to guess exactly how each of these factors would go into an ultimate single number that someone

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assigns to one of these questions. I think that there's a lot to be said on the broader scale about how this process could be used going forward or how it can be done in the future. Do we have any more things that we want to focus on before we start to turn to actually revising our ranking?

DR. BILD: One sort of process question. Somebody sent me a link, and I downloaded yesterday the summary scores from this panel, and I don't know if everybody has that or if that's something we want to work from, or if we're going back to the raw scores, individual scores from last time.

DR. PEARSON: I don't know if there is a specific view from your perspective, but all the panel has been given is only their own score so far. We have been given the round one score from the first MedCAC meeting, the score from what do you call it, the federal panel, and our own individual scores. I think that was intended so that we wouldn't be overly influenced to an early consensus, if you will, by looking at other peoples scores in our group here.

MS. LANG: (Inaudible) and what the relationship is.

DR. PEARSON: That list -- sorry. I was

just told that ranking was from the October panel, so it was a different list of questions that has been refined since then largely due to the federal panels. Barry, is there anything else you think we should comment on before we -- I really hesitate to start to go through these with a fine-toothed comb, I don't think we're going to get that much more out of it.

DR. STRAUBE: I think that, again, we have some fellow type A's, I think we're probably all type A's sitting at this table, but going to the web site to get additional information was more than you needed to do. I think how the staff had set this up was to get away from the first panel and not have that influence what was going on, although now we have another part of the calculus here that some people have been influenced by looking at that, I suspect.

But if I understand this correctly, you can shake your heads yes or no, my staff, the federal workshop ran through two votes, if you will, so what you have here is what the federal workshop voted on each of these topics. They took a vote, they had some discussion, interactions and whatnot, they took a second vote, so you see a trend there. And that

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was provided for this committee's information, just to see where the federal panel got to. Then you all did your own personal rankings which were taken by staff and put into what you each individually received, so that's how you scored things, not how the committee did. The decision was made not to provide information of a combined score taking all of the votes because we didn't want to bias anybody, wanted to provide your prior vote. You've heard what was discussed here and whatnot, and then wanted just like with the federal panel to get a second vote, and that will be taken, collated, and come up with a combined vote from the committee. Leslie.

MS. FRIED: I have a question, then, because I assumed it was two different groups, because in the round two there's dashes, so what does that mean?

DR. STRAUBE: Good question. What does that mean?

SPEAKER: In the federal panel scores it was two different groups.

DR. STRAUBE: Two different groups.

SPEAKER: And if there was a dash, there was no vote. Not every question got reviewed by two

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different groups.
MS. FRIED: Oh, so some of them only reviewed some of the questions?
SPEAKER: Yes.
MS. FRIED: Thank you.
DR. STRAUBE: Is that because we ran out of time or they didn't want to address it?
SPEAKER: It was mainly time.
MS. LEE: What was the answer?
DR. STRAUBE: It was mainly time. It wasn't we don't want to vote on this because we don't think it was worthy of being on the list.
DR. PEARSON: Sean.
DR. TUNIS: So, one thing I noticed about this list, just to get into a comment I want to make about a certain level of discomfort I have with putting another number down for any of these questions, but I noticed, for example, there's only a couple of questions on this list that are listed as related to cancer, so that probably means that there were few NCI people at the federal workshop or something. I don't know what it means but presumably in the universe of potentially important questions, cancer would come up more often than it did on this list.

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Which is not, it's only one indicator of what I imagine everybody sort of has a feeling about, which is that it's a fairly, I'm not sure if the word is opportunistic, but somewhat ad hoc collection of questions, some of which seem more important than others, but you know, to -- you know, at the end of the day I worry a little bit about the implications of coming up with sort of a first place score from one to ten for these questions when everybody, you know, here seems to use some different criteria for why they rank things high or low and, you know, some people I think gave high scores to more general questions, I gave low scores to more general questions, so I guess that means on average it's of medium importance.

So anyway, the point is, you know, I think there's a lot of learning to be done out of this exercise and again, you know, I'm extremely supportive of it. I'm just not sure personally, and maybe this is a question for Barry and Steve, you know, are we sort of obligated to kind of take the final step to giving a last number for each of these questions, or is that really more misleading than informative at this point?

DR. STRAUBE: My response to that, Sean, a

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couple of things. One, as we said at the outset, this has been an iterative process, and I think the more we get into it, the more we're learning that it's more complex than anybody dreamed it would be. And two, we certainly can refine this going forward, and I'm not sure what the going forward steps are yet. I've got a list of notes I have been taking and some suggestions at the end of this again, as to how we should proceed. But for the purposes of trying to get through this as a first iteration, I think as best people can, realizing that there are all these biases, faults, omissions, et cetera, that people do their best just to, given what they know right now, to try to score these in terms of importance. Now this is not leading to, we're not asking people to rank each of these, which would be their top one and which the bottom. This is simply what do you think from your perspective. It may be that you don't have any expertise in diabetes but you do have expertise in orthopedic surgery, or whatever our individual backgrounds are. I really like the aspect of the patient focus to some extent, that's something we can all share, but whatever our backgrounds and mix, it's just trying our best to come up with a score that we have a list at the end.

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I'm going to make some proposals to the committee and to my staff and to the public as to how we act on this afterwards.

DR. PEARSON: I would also suggest, to a certain extent to capture part of what you're talking about, I think it would be helpful if CMS, when you present the scores to the public, if you could not just show the average, but show the range. There are different ways to display it, but I think it would be valuable for people to see whether this five comes from a lot of ones and tens or whatever it might be.

DR. JANJAN: And I would encourage you to show the difference between pre and post scoring. Because for example, when I initially had this, the glasses issue, I thought of course this should be available to everybody because it's a no-brainer, you need to give glasses to people who can't see. But it's not a research question and I agree with Mark on that, so my scores will be, based on this discussion, will be very different from pre versus post.

DR. WHITE: Just one subtle instruction from you, Dr. Straube. When we rank these and say give something a ten, highest priority, is that suggesting by all the different criteria we have that we feel that it's a very important entity to have a

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high level of research support, or is that suggesting that it needs significant additional support? I think one person commented earlier, why are we doing osteoporotic screening throughout this country if we don't know whether it works or not. Well, we do know it works, okay, it's clear. So we don't need research support on that but it's a very high priority in terms of its impact. So are we looking at what in general should have a high level of support or are we trying to judge whether it does or does not? I hope that's not confusing.

DR. STRAUBE: No, that's again, a good point. My simplistic early inclination was that, again, it was do we agree that there is a gap in evidence in this particular area, whether it's for an existing treatment that we have been using but don't really think that there's a gap there, or an area that we know that there hasn't been any evidence obtained, that's what I would put at the highest priority perhaps.

DR. ALVING: I have a particular question about the CRP. It says routine addition of CRP, and I think you mean or other biomarkers to standard lipid profiles reduce risk of clinical vascular disease. Now, oh dear, do you mean as we currently

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have them? Because as we currently have them, I believe nothing has really been validated, we don't have a Framingham risk score unless you -- and even then it doesn't say that it reduces vascular disease, it just says that is the best predictor, and what we do with that information is something else, so I'm not quite sure of the intent of that question.
It's also an interesting question because CRP is measured all the time in this country and again, there are numerous papers and you will even find the official guidelines there, and yet we're wishy-washy about trying to prove the issue. I believe you'll find they're also measured in Europe. So I have -- what was the intent of that, and does it mean biomarkers in the future, because that will be extraordinarily expensive.
SPEAKER: That came from the federal workshop.
DR. STRAUBE: Again, these are what came -- one of the criticisms I think is going to be the questions weren't refined sufficiently, they weren't worded appropriately all the time, et cetera, but this is what the federal work group came up with.
DR. ALVING: Oh-oh, we're Feds. Can we refine it, can Feds help Feds?

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DR. PEARSON: Let me decide it. Because there's so many questions for which we could do this and need to do this, that we won't be able to do it for all of them. And I think, again, that if we try to decide -- I think the best way to do it, if you think that question could be reworded in a way that would be best, go with that.

DR. ALVING: This is where it would be nice to have a little comment box, we could write comments, because I would probably just hack it out.

DR. STRAUBE: Excuse me, Steve, if I could, I think the addition of having a comment box is, I mean one of my take-aways after the fact is going to be that we probably need to come back and really critique what we've done here, but this might be an efficient way of starting that. That is, people can score but if they want to add a comment, a succinct comment, that probably would be efficient and helpful.

DR. PEARSON: Yes.

MS. LANG: Not that I wouldn't have to try and submit comments, I thought we were going to have a discussion about each of these as we went along, but no, we're just going to score them? All right. Because at some point, because I think where CMS

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might really want to go in thinking about this framework and trying to create a framework that makes sense for the program is somewhere along the line to think, to take record of which things were most salient for a particular score would be helpful, and so if that's what you mean by comments, that would be great.

I think that in part, if part of what we're doing is also this Rorschach of trying to, putting a score on what we think the question is, but on the other hand if you would like us to, we can also do that.

DR. STRAUBE: Well, everybody presumably has already done that once.

MS. LANG: We did, but I was hoping we would come to some consensus.

DR. STRAUBE: I would have to agree with the chair's process because there are so many things on this list, we'd be here until next year discussing those, I think.

MS. FRIED: I have a question. One of the criteria that I used in scoring was determining what evidence is needed to help CMS make decisions, what evidence are you wanting to ask for in terms of some of these categories, and so if the evidence existed,

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even though somebody said it's a priority, I ranked it really low. For example, carotid stenting. There are currently NIH-funded trials, so why don't we wait until we get the outcome of those trials, so I ranked it low even though it's an incredibly important issue.

Use of electronic medical records to improve care and advance research in patient safety. The VA has done this and is doing this, so I ranked it low even though it's incredibly important. So I think there's just going to be a broad range, but that's how I approached these, was what, is there a gap or is there someplace we can look for to fill that gap.

DR. PEARSON: And I think that's one of the biggest variations that we find. Some of us may have knowledge about where research is ongoing or completed that would mean that you feel there is no gap, whereas others might say well, that's really important, and so I think that's one of the biggest issues that we lack in terms of information about adequate reprioritizing, is where are the gaps, and we don't know. Yes.

MS. LANG: And I wanted to share with the group, one of the things that the National Library of

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Medicine is engaged in at this point is the expansion, working to expand a database called the BB Gap, which is basically a genomic database in one of the topic areas, it has to do with the feasibility of developing a voluntary database for genomic-wide association studies. This is the BB Gap database. At the moment it has genomic data, for example, for the entire Framingham study population, all three cohorts. This is an incredibly rich database and it's available for free for all researchers, you know, and it's only one of several databases of the sort that could create a meaningful starting point for a lot of meaningful research in the public domain.

And I guess the other piece that I would say is that I tried to score those things where I though we needed to establish federal priorities because I thought someone had figured out there was money in it or potentially money in it. And so if that's the case we all need to collaborate, and it's nice for us to work together and it would be good if we coordinated the way we shared data, collected data, made data available afterwards, and perhaps what we're doing with the clinical trials database might help do that in the long run, another project

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the library is involved in.
You know, it seemed, it wasn't clear to me for whom this will ultimately be an important set of priorities, is this national priorities or specifically federal not-for-profit priorities or the like.
DR. PEARSON: Yes.
MS. FRIED: Several of the questions say is this cost effective or should we do research on this certain treatment and is it cost effective, and that's outside the realm of the law, the reasonable and necessary at this point. And so the way those questions are worded, I would urge people to sort of think more like is this effective research or comparative to other modalities, versus is it cost effective, because I think that becomes a problem. At least for me it becomes a problem for the scoring.
DR. PEARSON: All right. I think we still will have some conversation definitely about the process and ways of moving forward. Why don't we go ahead and do our rankings, okay? So what we're going to do is everybody is just going to run down the list again, look at the score you gave it the first time, we'll have at least ten minutes, we'll see how long it takes everybody to do this, but think through each

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of these topics with all of the conversation today in mind and see if you want to change your score. Put down a score even if it's the same one, and then staff will come around and collect it from each of us. So we will spend a target ten minutes, and see how long it takes to do that.

Actually if the audience wants to take a break at this point, that's a great time for it. Try to reconvene at 2:15.

(Recess, during which panelists completed scoring on sheets provided, which were collected by staff.)

DR. PEARSON: For probably I'm guessing between 15 and 30 minutes, return to the topic of the process, because I know that CMS is very eager to learn from this 1.0 approach, even though this is the second MedCAC meeting. It's still something that all organized healthcare systems and disorganized healthcare systems struggle to do well. So more reflections on what would have made this a better or easier process, other suggestions either for the framing of the priorities that we received or anything else that you think would be of use to CMS moving forward, I know that they would appreciate it.

Sean.

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DR. TUNIS: I have a couple of suggestions that I think have come up in some form or other throughout the day, but I think what is going to eventually have to occur, you know, is that there's a step or two probably missing that will have to precede a group like this trying to rate the importance of studies.

And one is that there's going to be need to be some very content expert, clinical experts, research experts, et cetera, in a very focused area who really understand the state of the art in the field both clinically and scientifically, who can sort of focus in a particular area and identify, say, the eight or ten questions in that topic area. So you know, interventions for treatment of coronary artery disease, or imaging for oncology or something. And that, you know, to come up with the initial set of important unanswered questions.

And there's two sort of models that strike me as a lot of this work, the preliminary work sort of already being done that you could hitchhike off of. One is and, you know, I've sort of talked about this with other folks, but whenever AHRQ does a systematic review of all the existing evidence on a particular topic like treatment of early stage

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prostate cancer, they already have identified everything that's known, all the studies that are underway, and have some idea about what are the important gaps or important questions. So for example, our recent AHRQ review on treatment of early stage prostate cancer identified robotic-assisted surgery as important compared to, you know, surgical prostatectomy.

You know, we've talked a lot today about proton beam therapy versus IMRT versus brachytherapy for treatment of early stage prostate cancer. Those questions aren't on here, but AHRQ identified those questions through the systematic review process as important questions for additional research. So I would think as a starter is, you take the last ten systematic reviews that AHRQ has done and look at their future research needs section, and then you have a pretty good head start on a fairly systematic way of identifying at least a subset of important questions.

And the other place to go that's quite similar, perhaps even better, I don't know how many professional societies do this, but the American College of Cardiology, American Heart Association does these appropriateness guidelines where they

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score specific clinical indications on a score of one to nine as appropriate, uncertain or inappropriate. Those are done in an evidence-based way and it seems to me like that middle group of uncertain specific clinical indications would be a great place to go to find potential important research questions. And, you know, they assemble those panels with all the right experts who know the research, know the clinical stuff.

So it seems to me, I think you would actually not have to reinvent a big chunk of the wheel and actually go harvest from several different things like that to get a good head start.

DR. PEARSON: Good, thank you. Yes, Lisa.

MS. LANG: Similarly --

DR. PEARSON: Wait. I'm sorry, I had the wrong name. I thought of you, but go ahead.

MS. FRIED: I will be really quick. At the October meeting we had several representatives from the various institutes of health, and actually I was somewhat disappointed that some of them spoke about their specialty when in fact I thought they would be representing their institute priorities in a broader fashion. So what would be great is if we were to do this again, is have the various institutes

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of health come and tell us what they're seeing as their research priorities and gaps in getting coverage, representing various members of the Medicare beneficiary population.

DR. PEARSON: Now, Lisa.

MS. LANG: It's actually now two thoughts. One was an additional source to piggyback on what Sean is saying. The CDC actually recently released within the last few months a very comprehensive set of basically research agenda. And one of the concerns I had looking at the materials that we received was the extent to which any of the research deliberation, the questions got integrated into this, and I would suggest that if you move in the direction of bringing people from the institutes to a setting like this, that again, you make the discussion groups balanced between the researchers, maybe folks out in academia themselves, and the people from the clinical society at a minimum core, you know, and then interested others.

Because I think what comes, the way to identify some of the underlying value discussions that occur, you know, important to whom, risk of what, you know, assessment of how a particular topic merits ranking in the listing of other similarly

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interesting or important topics, I think the synergy that comes from having a diverse group rather than a single clinician from an institute I think would serve this process and make it a stronger product.

DR. PEARSON: Nora.

DR. JANJAN: As additional resources, I would suggest that you consider the AMA Physicians Consortium for Quality Improvement of which CMS is participating, because they're creating performance outcome measures for clinicians, and you could as part of that process say what areas are indeterminate as you develop these measures, why can't we have, you know, what questions were you unable to include within those performance measures, because the data does not exist.

Likewise there are warehouse guidelines out, there's a guideline warehouse where all of the, you know, for example on ABI or some of the questions that we were asked here, we should cross-reference to existing guidelines to see if those exist, and if they do exist, there shouldn't be a question because that should be standard of care.

So I think, you know, and the American College of Radiology also has appropriateness guidelines that I just chaired the section on bone

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metastases. But they update those every year to two for clinical scenarios, and you might see where they are unable to come to consensus.

So I would agree with Sean that there are a lot of resources out there that establish standard of care, and if you're not getting that and as we develop performance measures, pay for performance, you're going to get a lot of data from that, why aren't we adhering to standard of care guidelines.

DR. PEARSON: Yes.

DR. ALVING: It might be interesting to even just step back and do sort of a strategic plan, and I'm a little bit allergic to that term but sometimes it's useful, or let's say an implementation plan of how you will do this process, and bringing in, again, you know, economists or whomever, and you could describe to the public, this is how we will go about getting this information. And I would say in these certain, you know, identify, and you could say that you're going to identify broad areas, cardiovascular, oncologic, and then the kinds of questions that would be addressed overall but in a very generic fashion, and then ask the experts in those areas to come up with what they think are the major questions and what needs to be done. But

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again, and then providing it according to certain criteria that we discussed earlier, quality of life, et cetera, et cetera, and cost, let's say the value. But if you could -- and then you could work with this plan maybe with CDC, NIH, FDA, Economists Society, just as a generic this is how we'll go forward. Because you're going to want to be doing this for as long as CMS exists, which I understand is what, 2019?

(Laughter.)

So that's about a ten-year strategic plan.

DR. STRAUBE: 2019 unless we do cost effectiveness.

(Laughter.)

DR. STRAUBE: That was a joke.

DR. JANJAN: I would suggest strongly, though, that this be patient-centric, not NIH bench research-centric, because CMS delivers to the patient. And while the bench research is important, you know, to translate data and the translational loop of the things, that's what the NIH is for. CMS is here to serve the public, it's a direct link to the public, and I would strongly recommend, you know, you're the interface between what gets approved at FDA and what goes to the patient.

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And I would strongly also get FDA involved with this process, because I think that one approval process or that one discussion period is absolutely critical for all stakeholders. I know as a clinician, if there's something FDA-approved but it's not covered, you know, it's like why not. It gets very confusing and it's confusing to patients and then they get frustrated, and they have enough burden of disease, they don't need these other burdens on top of it.

DR. PEARSON: Linda.

DR. BERGTHOLD: Just a little point, that it really should be beneficiary-centered, because not everyone's a patient. Remember, we have a fairly healthy group of people out there.

I was also going to suggest that we look to other countries, because we're so ethnocentric here in this country. We think we have to invent everything and in fact the U.K. with their nice organization, their clinical excellence, and Switzerland and France and Germany, they've all done all kinds of prioritization processes. Some would not be suitable for us but others might. I mean, it would be worth a Google search for sure.

DR. PEARSON: I was going to have a few

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comments while people are thinking about this. I didn't want in today's process to get lost what I thought was very valuable conversations at the beginning of the day where we helped explore the types of evidence that are often missing for decision-making across the board again, and I think that that's an important process that CMS can continue to do going forward with more MedCACs associated like the one around age-related macular degeneration.

I think you're going to have one on stroke rehabilitation as well, where you're going to try to get people together to decide what are the outcomes of interest, how do we measure them best, how should studies be designed to help provide the evidence that we and others need. And to do that, I think more often in different clinical areas on a regular basis I think would be a very positive thing you could do to help close the evidence gap.

Another was the importance of getting out in front as often as you can with national coverage decisions to try to open up more opportunities, and by opening up I actually mean closing some doors, to keep the doors open to evidence generation. Because sometimes too early a decision, a yes, if you will,

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will just flood the clinical field in a way that makes it very hard to do the kinds of studies that decision-makers like CMS and others, and patients really need.

For instance, I know Sean and his Center for Medical Technology and Policy have been working with multiple stakeholders to try to get a CED program set up should CMS decide to say yes, if there's a study. And those kinds of efforts really need CMS to be ahead of the curve enough to be able to say yes, if we were to get that kind of evidence flowing.

Two other things I wanted to mention. One is, I'm not sure, but in your own NCDs, do you make research recommendations? I don't think you do. Do you sometimes? You may want to think about ways to really beef that up, because again as I think Sean said, often it's out of that deep drill down that TEC assessment groups go through and coverage decision-making groups go through, that you really do get a very firm handle on where the research in the future could be most definitive. And so making that as explicit as possible will also help I think clarify the threshold for reasonable and necessary, and CED for others kind of indirectly by reading

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where you think the research needs to be done and specifically what kinds of studies perhaps might be more useful.

And the last comment I was going to make was I found this process, echoing others, very unsettling trying to rate these things, for all of the reasons that we talked about. We don't know this, we only kind of have a small piece of the information there, we know we have personal biases here all over the place. And in a way I wanted to say that personally I think CMS should prioritize its needs.

I'm not sure that the right thing is to try to bring us together to try to bring in all the different perspectives, include in the NIH, include in patients and doctors, because those voices are out there. CMS is a public insurer, the most important one obviously we have, and I think its voice needs to be heard. I would have loved to have had the CMS Coverage and Analysis Group up here thinking out loud about what research they think they need. I think ultimately, you know, there are voices from the discovery community, from the patient community, from the clinician community.

I think we need to have a strong voice

from the CMS community, because they will help balance the views that Mark was bringing up earlier. You know, there's a lot of interest in discovery, how do we bring the clinical research that's needed into some kind of balance as we think about funding research overall. So whether that's the right political strategy or not, still, I think there is a value to having a clear, crisp CMS voice in this, and I'm not sure this is the best process to get to that.

Other comments? Barry's going to have summary comments as well, so Sean?

DR. TUNIS: I'll just make one last point.

Really building on some of the stuff you said, Steve, which I think is quite good, is that, you know, first of all, while there's been lots of bumps in the road with application of the conditional coverage CED and, you know, I still think it's potentially a powerful tool and I think should be used, but there are probably models where it could be used effectively, so I would obviously encourage CMS to continue to work to refine it.

But one other variant, if you will, of CED is actually the local coverage process because things get covered locally, there's no national decision, and as long as you don't wait until all of the

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contractors are paying for something you still have the option of reviewing things at a national level and making a national policy. And as Steve was saying, if you were reasonably clear about what kind of evidence was expected around particular types of technologies while they're being covered at the local level, there would probably be some incentive on the part of the product developers and the provider community to do the studies knowing that CMS perhaps would be, you know, its decision to pursue a national coverage decision or not would depend on sort of how good the quality of evidence was developed while the local coverage was in place to sort of support the research.

So, you know, I think there's a certain almost, well, kind of an implied threat, if you will, that as long as people are developing the evidence with the coverage available at the local level, there won't be a need to do a national policy. But you know, you'd have to be sort of clear about what kind of evidence you want to see developed to kind of have that mechanism in place. So that's kind of a poor man's CED.

DR. PEARSON: Nora.

DR. JANJAN: That's why I suggested, you

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know, I strongly supported the coordination of FDA with CMS on this process. Because as I said before, so often the qualities are never evaluated of these clinical trials, you don't get economic analyses out of these clinical trials. You know, I know the FDA process is different than CMS, but if you're involved up front, then as these new agents, drugs or technologies are being developed, those data can be developed along with the effectiveness, and that is part of the effectiveness equation. So get all that data up front so that you're not chasing it later on. I really think if you integrate those two processes up front it will be easier for the folks developing this stuff, it will be easier for coverage determinations, and it will be easier. And then you've got the safety issue and the ongoing safety evaluation when it gets out to a broader market, a broader group of patients who get these new agents and technologies, that then you have a better sense of what should be covered and in what patient group.

DR. PEARSON: All right. Thank you very, very much, everybody. Let's let Barry have some concluding words.

DR. STRAUBE: Thanks, Steve, and thanks to the entire panel here today and to the audience and

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to other folks who made public comments via mail for this process.
One, I've captured all the comments in a summary plus a lot that were made earlier, and you captured it on tape and we will have a transcript here.
I think the next steps in my mind that we've talked about beforehand but we've done on the fly here, is first obviously we're going to collate the scores that you just came up with again. We will report back the results of those scores to the panel, and I think that what we ought to do when that gets reported back, it may be helpful to impose upon you, if you will, just to briefly respond maybe in terms of reactions and maybe codifying some of the comments here, or any other ones you can think of in terms of process improvement going forward.
We'll take back the results and everything that has been discussed here today, and at a staff level in CAG we will analyze what's been said and try to delineate some next steps. We certainly don't want to set in stone what we will absolutely do today, but some of the things we have been thinking about is I think we do need to describe the process that went into this whole exercise better than we

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have in more detail, flaws or not. We'll just outline how we got to where we got to at the end of the day today.

I think we have to then describe the findings. If we have comments from you all, we can incorporate those comments into the findings. And then we have to get into -- by the way, all of this description has to do an up-front thing of what we intend to use this for, some general set of principles on why we think this process is important and how we might use it.

Then we can share in some way with the public, there are several different venues we could do that. The simplest would be posting it on our web site. I raised with Tamara and the rest the dreaded phrase, Federal Register notice, but that entails approval by the Office of Management and Budget and all sorts of other complicated things. So they've convinced me that the posting on the web site probably as a first step, and I think by posting we also need to include some ability then to seek public comment and get, in addition to the panel, the wide public comment that we always hear would like to be involved in the process more.

I think that the suggestion about looking

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to other countries and looking to other arenas that have tried to grapple with this is very good. So we may be able in our posting to ask for comment about that. We certainly can do our own research prior to that, we may want to have somewhat of a preamble, if you will, that will tee that up.

I think the other thing in that public posting that we might want to seek comment on is what Steve brought up, the types of evidence discussion that we had before, trying to get a better idea. We have not gone so far as perhaps Blue Cross Blue Shield Association does in terms of some of its very deliberative criteria. I think the Agency has done that intentionally, not wanting to get too boxed in to strict criteria that would result in a lot of noncoverage decisions. So we have to weight that but I think further defining what our criteria are for making coverage decisions will be helpful.

Getting in front of the curve, I like that idea too. We've already chatted about parallel review, those discussions are ongoing, that's trying to get out in front of the curve in terms of talking to the FDA, and then the suggestion of including NIH was there too.

And then after we get public comment and

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go through all those exercises, I think then we need to go back, take the results of collating all of that and then have next steps, and the next steps could range anything from nice try but this needs a much broader process and we have to kind of do it over again, or it could be we've gotten something out of this, here's what we think we've gotten and this is how we want to use it in the short term, or some combination thereof.

So Steve, I think that's what we would propose we do based on this MedCAC meeting, and look forward to coming up with some ideas.

DR. PEARSON: Great. Thanks, Barry, and again, thanks to the panel and thanks to the audience. I hope you've had a very nice stay, and a safe trip home.

(Whereupon, the meeting adjourned at 2:47 p.m.)

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