The Board met telephonically at 1:00 p.m. Eastern Standard Time, Steven Markowitz, Chair, presiding.

MEMBERS

SCIENTIFIC COMMUNITY

AARON BOWMAN
MARK CATLIN
KENNETH Z. SILVER
MIKE VAN DYKE

MEDICAL COMMUNITY

GEORGE FRIEDMAN-JIMENEZ
ROSE GOLDMAN
STEVEN MARKOWITZ
MAREK MIKULSKI

CLAIMANT COMMUNITY

JIM KEY
DURONDA M. POPE
CALIN TEBAY
DIANNE WHITTEN
DESIGNATED FEDERAL OFFICER

MICHAEL CHANCE
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MR. CHANCE: Okay. Good afternoon, everyone. My name is Michael Chance, and I'd like to welcome you today's teleconference meeting of the Department of Labor's Advisory Board on Toxic Substances and Worker Health. I'm the Board Designated Federal Officer or DFO.

Today's date is April 23, 2021. This is day two of a two-day conference. Yesterday we had a very productive session, and I'm hopeful that today will prove the same. As always, we appreciate the work of our Board members in preparing for this meeting and for their forthcoming deliberations. We are scheduled to meet today from 1:00 p.m. to 5:00 p.m. Eastern Time. This meeting is a virtual conference.

On the line, I have Carrie Rhoads from Department of Labor and Kevin Bird from SIDEM, our logistics coordinator. Please be patient with any technical issues or extra time that might be required to take WebEx documents up and
down. We are trying to run the meeting as efficiently as possible while keeping everyone safe and socially distant. I think the meeting yesterday went rather smoothly.

Regarding meeting operations, as you all know, timing, we have a break today as indicated on the agenda. Please do not disconnect from the call during the break. For Board members, please just put your phone on mute for the break and unmute when we resume. This will make it easier on Kevin, making sure everyone can participate in the discussion and keep things moving along.

Copies of all meeting materials and any written public comment are or will be available on the Board's website under the heading meetings, and the listing there for this meeting and yesterday under April 22 and 23, 2021. Documents will also be up on the WebEx screen so everyone can follow along with the discussion.

The Board's website can be found at
If you haven't already visited the Board's website, I encourage you to do so. After clicking on today's meeting date, you'll see a page dedicated entirely to today's meeting. The web page contains publicly available materials submitted to us in advance. We will publish any materials that are provided to the subcommittee. There you will also find the agenda for the day meeting and instructions for participating remotely.

If you are participating remotely, as we all are, and you are having a problem, please email us at energyadvisoryboard@dol.gov

If you're joining the WebEx, as we all are, please note that the session is for viewing only and will not be interactive. Please also note that the phones will be muted for non-advisory board members. Call-in information has been posted on the advisory Board's website. So the public may listen in, but not participate in
the Board's discussion during the meeting. Unlike yesterday, there is no public comment period today.

A word about meeting transcripts and minutes. The transcript and minutes will be prepared from today's proceedings. During Board discussions today, as we were on a teleconference line, please speak clearly enough to the transcriber to understand you.

When you begin speaking, especially at the start of the meeting, please state your name so we can get an accurate record of the discussions. Also, I'd like to ask our transcriber to please let us know if you are having any issues with hearing anyone or understanding anyone during the recording.

As DFO, I see that the minutes are prepared and ensure they're certified by the Chair. The minutes of today's meeting will be available on the Board's website no later than 90 calendar days from today, per FACA regulations. If sooner, they will be published before that.
Also we'll be publishing verbatim transcripts, which are obviously more detailed in nature. Those transcripts should be available on the Board's website within 30 days. As yesterday, I would like to remind advisory Board members that there are some materials that you have been provided with in your capacity as a special government employee and members of the Board, but you're not --- and those materials are not for public disclosure and cannot be shared and discussed publicly, including in this meeting.

Please be aware of this as we continue with the meeting today. These materials can be discussed in a general way which does not include using any personal identifiable information such as names, addresses, specific facilities if a case is being discussed, or a doctor's name.

Thank you for bearing with me as I had to read all of that into the record. At this time, I would convene this meeting of the
Advisory Board on Toxic Substances and Worker Health. I will now turn it over to Dr. Markowitz for introductions, and then you -- we'll reconvene with the discussion regarding COVID that began yesterday afternoon. And we thank the Board members for expediting that research and review because it was something that was important to the program to investigate. So Steven, please take it away.

CHAIR MARKOWITZ: Thank you. Welcome to all. Welcome to -- welcome back to the Board members, the DOL staff and leadership, SIDEM and the public. We had a good meeting yesterday, and I expect we'll have a good meeting today. Let's do the introductions and then we'll move on from there. Let me just call out your names to facilitate this. So Dianne Whitten?

MEMBER WHITTEN: I'm here.

CHAIR MARKOWITZ: And could you just very briefly introduce yourself?

MEMBER WHITTEN: Dianne Whitten, I'm with the Hanford Atomic Metal Trades Council.
I'm the recording secretary, also a member of the IBEW 984, radcon tech at Hanford for 33 years.

CHAIR MARKOWITZ: Thank you. Mr. Tebay? If you're here.

PARTICIPANT: I don't think he signed on yet.

CHAIR MARKOWITZ: Okay. Ms. Pope?

MEMBER POPE: Good afternoon. Duronda Pope. I am the director of United Steelworkers Emergency Response Team, but also a former worker of Rocky Flats. Worked there for 25 years.

CHAIR MARKOWITZ: Thank you. Mr. Key?

MEMBER KEY: Yes. Good afternoon, Board members, DOL staff, and public listeners. My name is Jim Key, K-E-Y. I am the president of the United Steelworkers Atomic Energy Workers Council in Washington, D.C., and also acting president of USW Local 550. I have 47 years at the Paducah Gaseous Diffusion Plant. I'm very intimate with the EEOICPA program in itself. One of my 37 Freedom of Information Act requests that I filed with the Department of Energy resulted in
the smoking gun that the DOE doctor had consulted the contractor and said at least 300 workers should be tracked because of their exposure.

The contractor refused to inform the workers, for fear that the union would demand hazardous duty pay. I provided Congressional testimony on September 23rd of 1999 to the House Oversight and Investigation Committee on the investigation at Paducah. I then spent nine of the next 12 weeks in Washington lobbying each member of Congress. That resulted in the successful passage of EEOICPA in 2000.

I'm honored to have been appointed to this Board and look forward to improvements to the program that the Board can make which directly affects those workers who have been impacted. Thank you.

CHAIR MARKOWITZ: Thank you, and I thank you for that history actually. That was the 1960 memo, right? That you're referring to?

MEMBER KEY: Yes, sir. That is correct.
CHAIR MARKOWITZ: Yes. Okay. Dr. Mikulski.

MEMBER MIKULSKI: Good afternoon. Marek Mikulski. Director of the former DOE Worker Medical Screening Program in Iowa. Occupational environmental health, University of Iowa.

CHAIR MARKOWITZ: Dr. Goldman?

MEMBER GOLDMAN: Hello. I'm Dr. Rose Goldman. I'm the former founding director for the occupational environmental health program at Cambridge Health Alliance and an occupational and environmental medicine physician, medical educator and associate professor of medicine at Harvard Medical School and associate professor of environmental health at the Harvard T.H. Chan School of Public Health.

CHAIR MARKOWITZ: Dr. Friedman-Jimenez.

MEMBER FRIEDMAN-JIMENEZ: Hi. I'm Dr. George Friedman-Jimenez. I'm an occupational medicine physician and an epidemiologist. And
I'm the founding director of the Bellevue/NYU Occupational Environmental Medicine Clinic in New York City and assistant professor of population health medicine and environmental medicine at NYU School of Medicine.

CHAIR MARKOWITZ: Okay. Dr. Van Dyke.

MEMBER VAN DYKE: Hello. Mike Van Dyke. I'm an associate professor at the Colorado School of Public Health, and I'm an industrial hygienist by training.

CHAIR MARKOWITZ: Thank you, Dr. Silver?

MEMBER SILVER: Ken Silver, associate professor of environmental health at East Tennessee State University. I have worked on DOE issues for a little over 20 years, both in the realm of community service. On the ground in northern New Mexico, organizing with the workers and their families. Mr. Key's remarks reminded me that I shared that very congressional hearing from 1999 with a lot of the families so they could get up to speed on the issues.
I gave Senate HELP testimony in 2007. I've also done scholarly work on the ethics of genetic testing for beryllium and how to use historical documents at DOE sites to draw meaningful scientific inferences.

CHAIR MARKOWITZ: Thank you. Mr. Catlin.

MEMBER CATLIN: Good afternoon. It's good to be here. My name is Mark Catlin. I'm an industrial hygienist. Currently semi-retired and doing some consulting. And in the past I've done work and training at Hanford and at Los Alamos.

CHAIR MARKOWITZ: Dr. Bowman?

MEMBER BOWMAN: Yes. I'm Dr. Aaron Bowman. I am professor and head of the School of Health Sciences. We have programs relevant here in occupational and environmental health, industrial hygiene, health physics and toxicology. I am a toxicologist as well. Thank you.

CHAIR MARKOWITZ: And I'm Steven Markowitz, occupational medicine, physician,
epidemiologist, head of the Barry Commoner Center, University of New York. And I run the largest former worker medical screening program within the complex since 1997.

Okay. Just a couple of notes before we start on our first topic. One is, you know, towards the end of the day we're going to discuss what we're going to do over the next several months and when our next meeting might be there. I have a couple of initial ideas on working groups that we might form or reform over the next period of time. And I wanted to introduce those ideas very quickly, just so people had a chance to think about it before 4:30 when we discuss the details.

One would be a group that follows up on this issue of the assessment of the quality, objectivity, and consistency of the industrial hygiene and medicine input into claims. That's one of our core tests.

We made a recommendation. The department is making some changes. It's ongoing
and I thought it would be useful to have a small group that follows, tracks that, and comes to the next meeting with some information, some better ideas, about how we might provide useful advice to the department.

And the other working group I thought we might have is one that actually discusses the public comments from yesterday or from previously. And we do track the public comments. Ms. Rhoads summarizes them in an Excel spreadsheet. So we have ready access to short summaries. And of course we have transcripts of those as well, in the written form, of any comments that are submitted. And we try to inject the content of those public comments when it's pretty relevant to what we're otherwise discussing or when those comments are items that we should be discussing. But I think it'd be useful actually if we had a small group that took a look at these things and, particularly given the comments yesterday, and follows up on them.

Those are my initial ideas. I don't -
- let's postpone further discussion of that, if that's okay, until the end the afternoon so we can get down to our business. Any comments or questions so far?

Okay. So Kevin, if you could bring up my slide, PowerPoint slide 19. Okay. So we looked at this yesterday. This was the recommendation. The threat recommendation. And let me point out that it says that the Board recommends that any chronic health condition that is listed by the CDC as being associated with severe COVID-19 disease, by meta-analysis. Systematic reviews, cohort studies, case control studies, cross-sectional studies, case series, mixed evidence that'd be considered to be presumed to lead to symptomatic COVID-19 disease. That is the diagnosis of symptomatic COVID-19 disease as a consequence of those chronic health conditions when it follows or coincides with the onset of those conditions.

So I changed this. We had discussed maybe putting in the third line from the bottom,
severe, and then I think we got back to saying, symptomatic. So this is the formula that I came up with for us to look at today. And I think, you know, basically just to kick off the discussion, you know, think about it, if there are two people, one with chronic obstructive pulmonary disease and one who does not have COPD. Otherwise they're the same age, race, et cetera. That the person with COPD who acquires COVID infection is more likely to have some symptoms from the acquisition of that infection.

Then there is the person who does not have COPD, and it's regardless of how severe those symptoms are. Even a mild case, you know, cough, some shortness of breath, but doesn't require hospitalization, it's not considered serious.

Is that the more likely scenario? If someone has a background of COPD, than if they don't. And it's that kind of case, I think, that this recommendation captures. In addition to obviously more severe COVID disease. So the
MEMBER GOLDMAN: This is Rose Goldman. I think this is good, and I think for the public that was listening and the concern that arose. There's an important distinction here which I think we should put in the record which is, the source of getting the list of the conditions, derived from the CDC's definition related to severe COVID disease. However, that's just the source of what are the conditions. But the trigger for giving the worker compensation with consideration is that you don't have to have the severe disease, but that you just have one of these conditions and that you just have any kind of symptomatic. So it doesn't necessarily have to be severe. So I think this paragraph captures that. Thanks.

MEMBER MIKULSKI: I agree. This is Marek Mikulski. I agree entirely. I felt that this severity of the disease, that is too much specificity, and there's many organizations out there defining severe disease in their own ways,
including the levels of these actuations. The 
degree of infiltration is certainly symptomatic. 
There's more leeway and is much more than 
friendly towards the ---

MEMBER BOWMAN: This is Aaron Bowman. 
I just -- I think I'm mostly in agreement, but 
just a counterpoint here and it relates to the 
fact that the published scientific evidence, to 
back this up, is mostly dependent on an 
assessment of risk of severe illness, which is 
not to say that I don't disagree with the comment 
that this would be reasonable to presume to lead 
to more frequent symptomatic disease.

But given that, you know, we want to 
operate on an evidence-based approach and that 
the evidence here is utilizing that terminology. 
Look, I hope this would be considered a friendly 
amendment to this, but that -- let me count 
sentences. I guess there's only two sentences on 
it. The second half of the first sentence, to be 
considered to be presumed -- currently reads, 
considered to be presumed to lead to symptomatic
COVID-19 disease. Just given where the evidence is coming from, how about saying considered to be presumed to lead to symptomatic to severe COVID-19 disease. To capture that whole range of symptomatic to severe cases. And the remainder, I think, could stay the same.

CHAIR MARKOWITZ: So I get -- Steve Markowitz here. I get your point. The -- and I'm not opposed to adding some variant of, if you'll forgive the term, variant of that language. But what the CDC does is evaluate the literature for severe disease. They don't comparably evaluate the literature for mild disease. And so what's -- the way it reads now, it's very easy to apply. You go to the CDC website, you look for severe COVID risk factors and you find the very table that gives you your answers.

MEMBER BOWMAN: Right.

CHAIR MARKOWITZ: So what we could do is to say, by the CDC, is being associated with severe COVID disease and presumed to be
associated with the full spectrum of symptomatic COVID disease. We could add that.

MEMBER BOWMAN: Yes. I agree that also satisfies the minor concern that I was expressing. The lead to the -- I think you said that the full spectrum of COVID-19 disease --- something like that?

MEMBER FRIEDMAN-JIMENEZ: This is Dr. Friedman-Jimenez. I’ve been thinking about this since yesterday when I suggested changing severe to symptomatic. But in thinking about it, what we’re really talking about is permanent medical impairment due to something related to COVID and the underlying, already compensated condition. So I think that the two ways that this can happen if someone has severe COVID disease with ongoing damage to their lungs or heart, or if they have what is called now long COVID, which is just now being described medically and we don’t know a lot about it. It’s evolving quickly. I think the long COVID is going to turn out to be the big player here, because this includes all kinds of
cardiac, pulmonary, neurologic sequelae, that can be -- it looks like they are going to be permanent in some cases and will be the medical impairment that we'll be talking about. But we don't have enough information yet to make a presumption, a long-term presumption on this.

So I'm thinking that we should start off with a fairly restricted definition here and stay with the severe. But as soon as we find out enough about long COVID to know what the health conditions are that exacerbated or make it more likely. Adding long COVID. I don't think we can add it yet, but symptomatic COVID is typically a short-term, self-limited disease. The majority of people, they're sick for a week, two weeks, a month, possibly two months.

Often go back to work after a couple of weeks. And I don't think this is going to be very commonly -- a common scenario for the medical impairment, permanent medical impairment that would be compensable. So my thought is that we should leave it with severe and then revisit
this at our next meeting or each next meeting and see if there's yet enough evidence to make a decision on adding long COVID. Because long COVID is really what's going to be the player here. Because severe COVID can get better and the person who can return to totally normal functions within weeks and it wouldn't be compensable. It wouldn't make sense for this to be a case.

CHAIR MARKOWITZ: This is Steve Markowitz. Yes. These are difficult issues. I think short COVID -- short non-severe COVID is an issue. That it's likely that there will be claims for people who are sick for a number of weeks and if they're already retired, then they will need added healthcare and therefore there will be some medical expenses in relation to that. So I think that the beauty of your term, diagnosis of symptomatic COVID-19 disease, is that it is fairly all encompassing. It includes the short-term non-hospitalized person who's -- who's pretty ill. It includes hospitalized
person, the person who dies. It includes long COVID.

Remember what the Department has asked us for. Is they're trying to see whether there is a solution to the problem of having the personal medical position, the private provider for the individual patient, having them keep up with the literature and making that decision as to whether their underlying condition affects the symptomatic COVID disease. And that physician is not going to be in any better position than we are to make that decision. And frankly, it's quite likely to lead to a whole variety of different opinions which are going to be inconsistent.

That is to say, when the department can actually get the personal provider to weigh in on this issue. So I feel comfortable. I understand that the evidence really is mostly for severe disease, but the logic is that it should also apply to the spectrum of symptomatic disease and for the purposes of a compensation program,
right? That's what we're talking about. And so I felt comfortable with this phrase diagnosis of symptomatic COVID-19 disease.

And frankly, weighing not waiting for further studies, which I don't know whether they'll ever really happen or not, whether people are -- if you think about it to look at this further, you'd have to compare a group of asymptomatic with a mildly asymptomatic -- mildly symptomatic and look at their risk factors. And you know, we're 14 months into the pandemic, I don't think it's been done. I don't know the whole literature, but I don't think it's been done. And I'm not sure it is going to be done, frankly.

MEMBER FRIEDMAN-JIMENEZ: Well there are RFAs now for studying long COVID, and they will define the risk factors for the continuance of symptoms with COVID. Whether the person is asymptomatic, mildly symptomatic, or severely symptomatic doesn't seem to be a major predictor of long COVID ongoing symptoms. Age seems to be a
major predictor.

And you know, what I'm worried about is that I don't want to see a backlash happen. That oh well, we made a wrong decision and now we have to change it back and get rid of the whole thing. And at a conference several weeks ago, there was a talk on COPD as a predictor of long COVID, and it seems that it's the peripheral eosinophils are low or normal. It is COPD is neither a predictor of long COVID nor severe COVID only if eosinophils are high, and that's a research finding.

It hasn't been replicated yet, but I'm thinking that there are going to be findings coming like that all the time. And it has to be put together in a systematic way to revise this presumption. So I think what's important here is that there be a mechanism for updating this presumption as the evidence becomes available. Because evidence is changing by the week or month, not like asbestos or other toxin related diseases. And so this is a very active topic
that is rapidly changing.

So I think we need to be able to respond to that in a nimble enough way that we can -- we have a mechanism to update this recommendation and the presumption.

MEMBER GOLDMAN: This is Rose Goldman. I also want chime in. I agree with that. And Steven, one thing to consider is, I forget the name of the person yesterday, made mention that there's not this distinction in terms of what they need once the person is diagnosed with COVID, this regard should come into play. And they're not going to try to do gradations of severe or symptomatic.

So I think that's important to just keep it in terms of who's going to benefit from this as symptomatic. And that even people who have a short course of it could be missing work, may have extra expenses. So I think it's reasonable to compensate them if they were to apply for it. But to George's point, just like we did with the carcinogens 2A, perhaps the final
sentence on this should be that this recommendation be updated as new research comes out or that we put in a mechanism that this recommendation gets updated every, I don't know, six months or something like that.

CHAIR MARKOWITZ: This is Steve Markowitz. I think that's a good idea. The other thing I'd point out is that what we've heard is that the program is going to recognize symptomatic COVID disease among claimants with established claims around recognized chronic health conditions. And effectively, if we limit -- if our recommendation is that we limit it to severe COVID, then intentionally or not, the net effect might be, that we're going to end up restricting who gets compensated or whose medical care gets paid for, for symptomatic COVID disease. Now you know, we need to base our decisions on what we think the evidence permits and reasonable extension of that evidence. And so there can be, you know, differences of opinion about that.
But I am concerned that the net effect of a more restrictive recommendation is that frankly it ends up, you know, restricting the people whose COVID disease is recognized by the program.

MEMBER SILVER: I -- this is Ken Silver. I concur with Dr. Markowitz in setting the bar at a low, compassionate level. I remember a few years ago my email was on fire from the advocates community over a case of a gentleman pre-COVID with occupational lung disease who was not getting approved for the delivery of oxygen to treat his condition and he expired before the program approved renewal of oxygen to his home.

I think a pretty common scenario for occupational lung disease victims in the DOE complex is, on doctor's advice they move to a lower elevation because of the higher partial pressure of oxygen from Los Alamos to Carlsbad, I know in one case, or from Denver to the eastern plains of Colorado, and they were doing fine.
So if you'd put yourself in their shoes, in their living room, all of a sudden there's symptomatic COVID and they want to get the approval for oxygen turned back on, and the claims examiner might say well you've been without it for a few years, we thought you were doing well, down there at low elevation this is going to take -- they shouldn't have to go through that. They should get what they need and if it means dying in comfort at home or recovering from COVID, that's consistent with this being a claimant friendly program.

CHAIR MARKOWITZ: It's Steve Markowitz. Actually if -- Kevin or Carrie, if you could bring it up so we could change the recommendation. I'd like to add Rose's suggestion. Well think about it some more. So the last sentence will be that the Board intends to -- the Board recognizes the need to update this recommendation based on the evolving scientific and medical knowledge on this topic.

Dr. Goldman, does that capture what
you -- or do you want to amend that?

MEMBER GOLDMAN: Well I guess we're recognizing it, but perhaps you might want to say we recommend the need to review this periodically and update it according to the evolving scientific. Rather than just recognizing it.

CHAIR MARKOWITZ: Okay. So what if we say recognizes the need to periodically review and update this. Is that okay?

MEMBER GOLDMAN: That's good for me. If it's good for other people, I don't know whether --- the issue is do we have to put in a minimum time period? As George said, this is evolving very quickly. I'm not necessarily advocating for it, but to say do we want to say that this gets reviewed at minimum every six months, which is when we meet, or not? What's going to be the trigger?

MEMBER BOWMAN: If I can suggest, this is Aaron Bowman, since we can always review it if we want to in a meeting, that we put the minimum at maybe every year, just so if we recognize that
there's really not an update, it doesn't take up so much time of our board meeting.

CHAIR MARKOWITZ: At an annual -- at a minimum annually, right?

MEMBER BOWMAN: Yes.

CHAIR MARKOWITZ: Okay. Let's get back to the point that Dr. Friedman-Jimenez raises because this amendment I think helps address that point, but it doesn't necessarily solve the issue. Doctor --

MEMBER VAN DYKE: Mike. Sorry.

CHAIR MARKOWITZ: Yes. Go ahead.

MEMBER VAN DYKE: This is Mike Van Dyke. Realizing I'm an industrial hygienist weighing in on medical issues, the conversation feels like there's -- everybody's in agreement emotionally and conceptually, but it feels like that it's the concerns or around terms that are not well-defined. Symptomatic or severe, neither of which is concretely defined.

Neither of which, I don't think, has an ICD 10 code. So would it be better to say
something like COVID-19 or COVID-19 sequelae requiring medical treatment? Would that be cleaner?

MEMBER GOLDMAN: I'm not sure about that. I'll tell you that we do a lot of calls with COVID patients, and actually my husband came out of retirement is calling high risk people who have COVID, with or without symptoms, and the issue of treatment usually conveys giving a medication or something. And there are many people that basically you're not really giving them anything. They're symptomatic. They can be at home. They're not getting remdesivir or any of these medications. And you're just trying to coach them through the illness, you know, having their tea and making sure that if they do get sicker, you send them early enough to get care in the ER or the clinic.

And so I would say those people who aren't getting technical treatment with medication are still symptomatic and should -- and may be out of work and should be covered by,
you know, the compensation here because they might be out of work or they might get triggered to maybe not get treatment but to get evaluation like a chest x-ray or something. Or to go buy an O2 sat meter that they put on their finger.

So I think leaving it, in some ways, leaving it general like this, even -- you're right. There's not -- what's symptomatic or not symptomatic? Is it a headache? You do have a checklist, but from the compensation point of view, and a person who spoke yesterday, I found her name in my notes, maybe she's on, Rachel Pond, said that basically the people are going to get the test and they are going to compensate them if they are COVID positive and they have one of these conditions.

So I sort of feel like Steve Markowitz. I don't want to over restrict us so that we're restricting people getting compensated. If we just leave it as symptomatic for right now, because there's a difference between the criteria for picking which conditions
versus who you're going to compensate. And you can always choose to compensate people for other reasons because you expect that somebody who's maybe mildly symptomatic may go on to being further symptomatic or long haul. I mean I don't think we have to go over all of that here. But we could just leave it sort of the way it is, which I think is pretty broad. And that would be my response because of what treatment really conveys.

CHAIR MARKOWITZ: This is Steve Markowitz. Yeah, I think the reason why symptomatic works is because claims examiners, personal physicians can agree when somebody has symptoms, can recognize it. And so it's just a — it is perhaps a little simplistic, but it is I think a very useful term in, you know, in evaluating claims.

So Kevin, if you could make a copy of this and then paste it below. I want to change it to a different version that reflects Dr. Friedman-Jimenez's concerns. So that we can
compare them. And if I -- before flying, I would replace the word, George, you weigh in here, but I would replace the word symptomatic with severe.

MR. BIRD: Not that one, right?

CHAIR MARKOWITZ: Yes. So --

MR. BIRD: Sorry, Dr. Markowitz. The first or second example of symptomatic in line 4?

CHAIR MARKOWITZ: Both actually. The second one is more important. In fact, the previous sentence no longer really makes sense. You'd have to -- after mixed evidence, you put a period and -- no. Okay. You know what? Let's just -- I'm sorry. Let's just leave it as it is for the moment. That sentence doesn't -- we'd have to adjust that sentence, but the idea -- so Dr. Friedman, a minute, does that accurately --

MEMBER FRIEDMAN-JIMENEZ: But now the sentence doesn't really have a purpose because you're saying that the evidence shows that it's associated with severe disease, then we presume that it leads to severe disease.

CHAIR MARKOWITZ: All right. No.
We'd have to change that sentence.

MEMBER BOWMAN: If I could suggest on that first --

MEMBER GOLDMAN: I sort of like the way it was before frankly.

MEMBER BOWMAN: This is Aaron Bowman. I just -- all right. On that first -- go back to the top version or this version, the top version. That first word, symptomatic, there. The element is just to capture what it is that the CDC data is saying and the essence of recognizing that.

So what if it said to lead to increased severity of COVID-19 disease? That covers the span, right? Increased severity. And then therefore the statement, the diagnosis of systematic disease, as a consequences would make sense if there was agreement that the CDC data in fact showed that at least due to increase severity. Not just severe but increased severity.

What do other people think about that?
MEMBER FRIEDMAN-JIMENEZ: I looked yesterday for studies that reported that, and I couldn't find them. I didn't do a very thorough search, but it's a difficult thing to study. Whether an infection leads to -- whether an underlying condition leads to increased severity of a disease. Because it's essentially a countered factual situation, where you don't know in an individual whether it would have been, you know, more severe anyway. And it's a difficult study to do because you can't randomize it.

So I haven't found any studies. There may be some clever study there that does that, but I don't know that we can assume that the evidence can be extrapolated in that way.

MEMBER BOWMAN: Does that mean you prefer keeping it as is with symptomatic?

MEMBER FRIEDMAN-JIMENEZ: I would, you know, my feeling right now. I think Steven makes a very good point that we don't want to put a damper on people that really should be compensated. And the idea here is to be, you
know, and in the event of uncertainty, to err on the side of compassion. And at this point, you know, we're in a really hurtful situation. And I think leaving it as symptomatic would be good. And then the last sentence, that we periodically review it, we can update this as the evidence comes out.

So I'm willing to leave it with symptomatic rather than severe, and then -- so be more inclusive now, and then we'll see what the evidence shows. And in the next week or month or year, there may be some clear guidance on this. Because right now we're sort of in a highly uncertain position with regard to this particular knowledge gap.

CHAIR MARKOWITZ: Yes. This is Steve Markowitz. I recognize the lack of evidence, but it's a matter of -- just of judgment. Where if I were to say, does the person with COPD who acquires this, after all, respiratory viral infection, is that person more likely to develop respiratory symptoms than someone of the same
age, et cetera, who doesn't have COPD? I'd say yes. Probably.

MEMBER FRIEDMAN-JIMENEZ: There are data on that that were presented a few weeks ago in University of Arizona. And what they are finding is that if the person has high peripheral eosinophil count, then yes, if they have lower or normal eosinophil count, then no. That COPD does not lead to more severe or more likely severe disease. So that's just emerging data that hasn't been published yet and hasn't been replicated yet. So we really shouldn't base policy on it.

But I think that we're covered if we have this sentence that says that we periodically review and update the recommendation. And make it more broad now. I think your point is extremely well taken. People will be harmed if we use severe. You know, by harmed I mean unjustly denied compensation when they really would have deserved it. And we may overcompensate a few people. I don't think
that's going to be a major issue.

From what Rachel Pond was saying yesterday, there's not a huge consensus to make this as restrictive as possible. So for now let's go with a more unrestrictive and inclusive criterion and then we'll revisit it as the data come out. That's my opinion.

MEMBER GOLDMAN: Yes. And the other thing is, what about using the phrase you just said, which is considered -- on the first paragraph, considered to be more presumed to lead, you could say, presumed to be more likely to lead to symptomatic COVID disease. I mean that's really what it is, what we're talking about here. And it's more likely than not, you know, that if they have that underlying condition, that they're more likely to develop some more symptomatic disease. So if you like that phrasing, you could put that in.

CHAIR MARKOWITZ: This is Steve Markowitz. You can add that. That doesn't really change -- the hedge there doesn't change
the essential meaning, so that's fine. And as far as the language, the other change, the subsequent symptomatic to severe or increasingly severe, I think it's potentially a little confusing for people to have to apply this, if we keep the word symptomatic. And you know, throughout the paragraph, it just makes it simpler.

MEMBER BOWMAN: This is Aaron. I concur now.

CHAIR MARKOWITZ: Yes. Okay, so then -- so let's -- okay. Is there -- we get to debate this further, but we do need a -- I think we're at the point where we can entertain a proposal to accept this recommendation.

MEMBER VAN DYKE: Excuse me, Dr. Markowitz, I have one question that sort of doesn't -- quick question.

CHAIR MARKOWITZ: Sure.

MEMBER VAN DYKE: Again, as a non-physician, so I appreciate my other panelists' comments. The phrase, diagnosis of symptomatic
COVID-19 disease. Is that is that a clear definition that the average physician would know what that means and that the department would also understand what that means? So it's clear that this could be easily documented.

MEMBER GOLDMAN: This is Rose Goldman. There -- the symptoms of COVID are also evolving. But there's basically a checklist. When somebody calls in, I mean we use a checklist if they have -- because you have to decide if somebody's symptomatic or not, which may actually impact whether they're cleared to go to work or not. And I think I would say that most physicians, if you're paying any attention at all, there's a list of common symptoms you don't have to have just loss of smell, but headaches and fatigue, cough, I mean the list just sort of expanded.

And I want to see what George and the others think. But I mean I think most physicians would know what those symptoms are. It used to be scripted that you had to have fever. And now
it's pretty -- it's just a lit -- there are these list of symptoms. The essential list of symptoms may even be at the CDC, but --

CHAIR MARKOWITZ: Okay. Thank you.

MEMBER VAN DYKE: Would that also include a COVID test? A positive COVID test?

MEMBER FRIEDMAN-JIMENEZ: False negatives are quite common. That can be problematic.

MEMBER GOLDMAN: Well that's a good question, but I understood from Rachel who spoke yesterday, that was starts this going is a positive COVID test. Now we can't get into when you should do the COVID test. If you do a once and then you repeat it in five days. And is it a PCR test or an antigen test? I don't know that, that was our charge to get into this. What I understand and Dr. Markowitz can correct me, is that this -- the starting point here, is that the person has a positive COVID test.

CHAIR MARKOWITZ: Well this is Markowitz. Let me just say that, you know, I
don't -- interesting questions. I'm sure the program is going to encounter significant variation in these claims and they're going to have to sort things out if they want to come back to us with specific questions, as they did with beryllium, then we'll be happy to address them. But at this level, I don't think we should give in to that kind of detail. This advice and then be open to providing other advice in the future.

MS. POND: Dr. Markowitz, this is Rachel. I agree. I think that if you vote on anything that just gets us there to the point of you've accepted a positive COVID test. This person has the disease, whether it's severe, whether it's not severe, that's going to kick off whatever treatment they need. So I agree that you probably don't need to get into that level of detail.

MEMBER FRIEDMAN-JIMENEZ: Can we say a physician's diagnosis of COVID-19 disease rather than a positive test?

MS. POND: Yes.
MEMBER FRIEDMAN-JIMENEZ: Because we keep seeing cases in our clinic of people with repeatedly negative RT-PCR tests and even negative antibody tests that we are convinced had COVID-19 because of their presentation. And so physician's diagnosis, I think, can be made even in the setting of a negative COVID test.

MS. POND: Yes. I would actually leave that up to you guys, who are the experts on whether it's COVID or not COVID. But if a doctor says it's COVID, then we'll rely on that. That's really just the bottom line. We're not going to try to -- yes. I think you're right. Don't just say positive. If a doctor is saying it's COVID and believes it's COVID, then it's COVID.

MEMBER GOLDMAN: Well we don't have that in our paragraph, so we're just presuming that's right. So we don't have to go into that in this paragraph because that's not what you asked us.

MS. POND: Correct.

MEMBER CATLIN: This is Mark Catlin
again. So I appreciate the discussion, and I would support keeping this broader rather than more specific. As our focus has been on the larger discussion, so --

CHAIR MARKOWITZ: Okay. So is there a proposal to accept this recommendation?

MEMBER GOLDMAN: I move to accept it. That's from Rose Goldman.

CHAIR MARKOWITZ: Okay. And is there a second?

MEMBER POPE: Second.

CHAIR MARKOWITZ: Okay. Let's open. The floor is open for discussion. That's further discussion.

MEMBER POPE: It's Duronda Pope. I like the paragraph with the conference and the way it's read. I think that keeping it broad, that way captures the burden of proof is always on the claimant. And it's hard enough keeping it --- it works for me.

CHAIR MARKOWITZ: Thank you. Other comments? Okay. Then we should -- we need to
vote on this. Ms. Rhoads, you want to do a roll call?

MS. RHOADS: Sure. Okay. And this on the recommendation that's on the screen as amended about the COVID-19 issue. Dr. Bowman?

MEMBER BOWMAN: Yes.

MS. RHOADS: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MS. RHOADS: Dr. Goldman?

MEMBER GOLDMAN: Yes.

MS. RHOADS: Mr. Key?

MEMBER KEY: Yes.

MS. RHOADS: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MS. RHOADS: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MS. RHOADS: Ms. Pope?

MEMBER POPE: Yes.

MS. RHOADS: Dr. Silver?

MEMBER SILVER: Yes.

MS. RHOADS: I don't think Mr. Tebay is on, but if you are please let us know. Dr.
Van Dyke?

MEMBER VAN DYKE: Yes.

MS. RHOADS: And Ms. Whitten?

MEMBER WHITTEN: Yes.

MS. RHOADS: Okay. Of the 11 Board members here, all said yes.

CHAIR MARKOWITZ: Okay. Steve Markowitz. So let me thank the Board members for on short notice, entertaining this query from DOL and, you know, we represent, as always, a spectrum of opinions, but we managed to coming up with some consensus language which I think helps the department. And we're open to helping them on this issue further in the future.

Let's move onto asbestos. Kevin, if you go to slide 25. Okay. So there's a working group on asbestos. Let me recognize Mike Van Dyke, Dianne Whitten, Mark Catlin. I'm going to speak on behalf of the group initially, they can add comments as we move along. The issue of asbestos, the Board has been dealing with for a number of years and the department has accepted a
lot of our recommendations on asbestos. And for the sake of time, I'm certainly not going to review the evolution of all that. But I do need to set the context. Could you go to the next slide?

So one of the things -- or actually can I move the slides now? I don't have that.

MR. BIRD: I'm happy to give you the control, if you'd like it.

CHAIR MARKOWITZ: Sure. Sure. That's fine. I don't see them on the left side of my screen, but maybe they'll -- maybe it'll appear. Okay. Okay. Okay. Fine. So okay. See we drafted some language and actually -- so we sent this to Board members back in January. So if it looks a little unfamiliar, in fact, you have had the opportunity to take a look at it. I wanted to show the punchline here, where we're heading. And then we'll talk about how we got here.

So this is an additional recommendation concerning asbestos. And we recommend that the contractor for DOL Paragon
Technical Services, reevaluate the job titles with chemical engineers, industrial health and safety engineers, mechanical engineers, and that these titles be added to the list of occupations presumptively exposed to asbestos under the program.

We request access to the generic profiles including the asbestos generic profile as cited in the PTS report. And then finally, we recommend that the DOL clarify. Now DOE jobs corresponds to the job title, maintenance and repair general helper, are classified within the same, and whether they are linked to asbestos.

So I'll show you this again for us to take a look at, but let me just present the next slide. Oh, I see. I'm sorry. I got this.

So what we did, I think I see this may have been the last Board term, I can't quite remember, but DOL has an established list of job titles that they recognize as being presumptively exposed to asbestos. And most of those are skilled trades, either maintenance or
construction trades, and plumbers, pipe fitters, electricians, sheet metal workers and the like. And the question we were addressing was should this list be extended? Are there other job titles that for which there should be a presumption of asbestos exposure?

And so John Dement kind of took the lead on this in the last board. What we did was look at national -- U.S. national data from what's called the National Occupational Mortality Survey. And we looked at the most specific asbestos related disease, malignant mesothelioma is a cancer of lining of the lung or the abdomen. And we looked at that one because most people that have mesothelioma have had significant prior asbestos exposure. So it serves as a marker for a job title as like -- very likely having asbestos exposure in the past. And so these are the results of using this surveillance data over a 15 year period. 1999 to 2014.

And you can see on the left, various job titles. And then what's key is the fourth
column, the PMR column. And what that is, is that's the measure of risk we're looking at it. It's the -- what PMR stands for proportionate mortality risk and essentially what it is, is if you take, say, insulators and you look at what percentage of -- you have a list of the causes of death. How many insulators died from what causes in a certain time period. And you look at the percentage that died from mesothelioma, and you take the percentage among the insulators who died from mesothelioma and compare that to the percentage of everybody else who dies from mesothelioma. And you just take a ratio of those.

And if you find out that 5 percent of insulators died from mesothelioma but in general in everybody else, only 1 percent die from mesothelioma, then we say that the insulators have a 5 to 1, fivefold increased risk of dying from mesothelioma. In the PMR, however, we multiply that by 100. So that's why you see very high numbers in the PMR. So in fact, the
insulators, they have a 35.39 fold increased risk of mesothelioma. And we multiply that by 100 and come up with a PMR of 3539. Very, very high risk of mesothelioma.

So anything, any PMR above 100 is elevated. Now whether it's statistically significant is a different issue. And we addressed that in the two columns on the right of this chart. This isn't the moment to discuss confidence intervals so I won't do that, but what this shows and this isn't every job title. These are just the job titles in descending order of PMR for mesothelioma. They go down to a PMR of 250. On the bottom, the welders and cutters, their PMR for mesothelioma is 250, which means that 2.5 total increased risk of mesothelioma, and that is statistically significant.

In fact, all of these elevations were looked -- all these PMRs are statistically significant. Because that's the way we're presenting the data. This table is actually much, much longer. But -- and there were many
occupations which do not have an increased risk of mesothelioma because they don't have asbestos exposure. But I'm just telling you the top ones with the demonstrated risk.

Okay. Next slide. So we sent that to DOL. We said, you know, take this into consideration -- I'm sorry, I can't operate the slides. You can take this into consideration when we look at the list of presumptively exposed to asbestos. Their contractor Paragon, wrote a very nice report discussing these issues and this was provided to us late last year I think. I don't quite remember the date.

And so what they did was accept some of our recommendations. If you can see here towards the bottom, they accepted to add or at least they advised DOL to add certain occupations. Stationary engineers, precision instrument and equipment repairers, heating, ventilation, air, HVAC mechanics, and firefighters to the list of presumptively exposed to asbestos. These are important trades.
They're probably quite numerous actually across the complex. So this was a good thing.

Well they, however, argued against some other, a lot of the other occupations, actually. For a number of reasons and the recommend -- our draft recommendation is to add back some of the occupations they rejected. So I just want to spend a minute until we understand their logic. And this is paraphrased directly from the PTS reports.

They said that they argued against presuming asbestos exposure for certain occupations when one of -- one or more of these four positions obtained. One is that asbestos doesn't appear in the occupation of the SEM. The two job titles in the NOMS. That's the table I just showed you. They encompass work in diverse industries that may have limited, uncertain relevance to work at the DOE sites.

Or job titles that may not have widespread exposure to asbestos across many job settings. Or the occupations are infrequent at
Department of Energy. Personally I think a lot of that, a lot of what they say makes sense.

Obviously if job titles don't exist at DOE, there's no need to add to the presumptively exposed list. And likewise, if there are certain job titles that don't -- that may have an increased risk of mesothelioma, but probably don't have widespread risk across those job titles across industries, maybe they shouldn't be added either.

So -- but I think that those arguments don't work for certain occupations. So if the PMR is very high, above 250, that means that the risk is quite significant in that occupation. And in that occupation, if there are a substantial number of mesothelioma cases, which we defined as 30 or more, that's -- it could be a different number, but that's a lot of cases, and if the occupations are found within the DOE complex, under those conditions, then I think that the arguments that PTS makes are not all that persuasive.
So let me get concrete just to make this real here. So I've taken the same chart that I showed before, right, and it's various occupations. And you see the PMR column, the insulators appear at the top, very high PMR and they're in descending order. And so the ones that are highlighted blue are some of the ones that were rejected by PTS, and we completely agree. I don't think that there are too many marine engineers in the complex and architects, there may be some, but they have a variety of different -- I don't think we can assume they have asbestos exposure in the complex. And likewise, ship captains and mates, they do not seem relevant.

So those are examples. And by the way, I don't think that we ever really said who should be included in the list. We said use these data in your considered revisions of the list.

So those blue ones are -- may have elevated mesothelioma rates, but they're probably
not highly relevant to the complex. Now the ones in green, highlighted in green, those are the ones that PTS agrees with should be added to the presumptively exposed list by Department of Labor. And so it was the HVAC, we see precision instrument and we see stationary engineers.

Now the ones in yellow, those are of interest because PTS didn't agree that they should be added, but we think they probably should be added. And you notice, first of all, they had a quite significant elevated PMRs for chemical engineers. It's 449 meaning they have a 4.5 fold increased risk. And there was 30 mesothelioma deaths in that group, so it wasn't, you know, a small number.

And likewise, if you'd go down towards the bottom, you see industrial health and safety engineers and mechanical engineers. Again, the PMR is above 250, and the number of deaths is 30 or more. And I think it's a reasonable interpretation to say that, mind you, when we look at these job titles, chemical engineers,
industrial engineers, mechanical engineers in the NOMS data, that is across all industries.

So that is not -- and the DOE's complex is very heterogeneous in the work processes, but obviously they don't reflect the full spectrum of industry and the country. But the fact that those three job titles have a fair number of mesothelioma cases, and a significantly elevated PMR suggests that it's not an isolated niche, an isolated industry, within those job titles that is producing a risk. It's not a small -- for instance, in thinking about chemical engineers, it's not a specialty use of chemical engineers that is likely leading to that level of risk and those number of cases, across that job title.

And the same comment would be true for the industrial health and safety engineers, the mechanical engineers. Chances are there's fairly broad exposure to asbestos, not necessarily everyone, but fairly broad exposure to asbestos in those job titles in many different industries
in the U.S.

And so that's summarized here in this slide here. And the three job titles, we think that given these criteria, should still be added to the programs list. And so that addresses that concern. But there's one other or actually two other concerns on the PTS document. Which is -- and this is an excerpt from their report. They describe generic profiles for 22 individual work processes. And then they list these processes.

And this is speaking about the asbestos exposure profile. I looked at this list and many familiar processes are there but some -- and I've seen at the bottom, janitor, laundry, and presentation seemed to be on this generic profile for asbestos but they're not included in the presumptively exposed list.

So the request from the Board would be simply can see those profiles. I don't think they're available on the SEM, but in any event, can we take a look at them. And then finally,
the last part of the recommendation is that there's a job classification called maintenance repair general helper. In the NOMS data it shows increased mesothelioma risk. And it just isn't -- that's a broad job title and it's just not clear how the title is treated within the complex. I'm sure it varies from one site to the next. And so we just are asking for clarification about that and whether -- however that job title is effectively defined, whether they are linked to asbestos exposure in this area.

So that's pretty much all I have to say. Anybody have a comment, questions? Any member of the working group have some things that I forgot to say or got wrong?

MEMBER VAN DYKE: Dr. Markowitz, this is Mike Van Dyke. I think you did an excellent job of very succinct description of what we talked about.

CHAIR MARKOWITZ: Thank you.

MEMBER WHITTEN: This is Dianne and I
agree. Very nice job. Thank you.

CHAIR MARKOWITZ: So for people who aren't in the working group, do you find this evidence and this point of view, persuasive? Are there any aspects of logic here that aren't -- that don't make sense or aren't clear, or you don't agree with?

MEMBER GOLDMAN: This is Rose Goldman. I have a question though about -- since I wasn't part of that original conversation. Are you using this as a way to identify people who have had asbestos, so that for any asbestos related disease that might come up like lung cancer, or other cancer other, you know, laryngeal, other asbestos related cancers, you could go back and say because they had this, we will assume that they had asbestos exposure versus saying anybody who has mesothelioma and had any of these, we will assume that it's asbestos related.

And the reason I ask that is I think that if you're addressing any employees who have mesothelioma, that's so strongly asbestos related
as you noted. And there's also issues of bystander asbestos, which is very well documented among custodians and isn't related to cigarette smoking. So then you really get into this low dose bystander exposure. So that I think for those who have mesothelioma, there's a very strong, compelling motion here to relate it to asbestos exposure even if it was low dose and bystander versus for other more general illnesses like lung cancer for example. Then going back and saying, well, how much are we going to say they had asbestos exposure, which might be low dose and how much that's contributing to them getting that condition. So that's -- I'm sorry for being wordy. Just sort of asking how you're using this, but I thought it was very good way to go back to that table 3.

CHAIR MARKOWITZ: Yeah. So -- It's Steve Markowitz. Thanks for asking that question, actually. It's the first of your choices. The idea is that what are the job titles that should be added to the list that, you
know, DOL has had for a long time. About job titles that we recognize, we can presume had significant exposure to asbestos for the purposes of mesothelioma, lung cancer, asbestosis, pleural plaques, in other words, it's not defined -- the entry point isn't defined by disease.

Now the bystander comment is interesting. I show this because chemical engineers, you know, they may not put down in their Occupational Health Questionnaire that they were exposed to asbestos. Likewise, mechanical engineers. Because, you know, the chemical engineering may be nearby when the mechanic is scraping the gaskets, or the pumps that broke or the valves, removing the packing. They may be nearby. They may have bystander exposure. In fact, this table suggests that it's probably pretty common that they have such exposure and that it's significant, meaningful from the risk of disease.

And I think that the SEM, you know, probably doesn't -- we think the SEM probably
doesn't say a whole lot about bystander exposure. And so it's important if we're -- like asbestos for bystander exposure is recognized such a well-documented root of exposure for significant risk of disease, that titles like this be added to the list. I think that answers your question.

MEMBER GOLDMAN: Well the reason, also, that I ask that just an addendum, is that a small amount of bystander exposure might not lead to asbestosis because you need much more, but somewhat bystander exposure or washing out clothing as we know, or take-home clothing, the bystander lower dose exposure that does not lead to pleural plaques or asbestosis has certainly been related to an increase in mesothelioma.

CHAIR MARKOWITZ: Well, you know, it's -- there's still the issue of duration latency. Those are in the procedure manual is minimum requirements. And so, you know, there are those other issues about, sort of the significance of the exposure beyond just presumption, still need to be worked at and in the claims evaluation. So
yeah. Other comments? Questions?

So then let's move on to consideration of this recommendation, and let me read it. We recommend that Paragon Technical Services reevaluate the job titles of chemical engineers, industrial health and safety engineers, and mechanical engineers, and that these titles be added to the list of occupations presumptively exposed to the asbestos under EEOICP --- and the -- should be removed, but we'll take care of that.

We request access to the generic profiles, including the asbestos genetic profiles cited in the PTS report. And finally, we recommend the DOL clarify how DOE jobs correspond to the job title maintenance and repair general helper, by classifying within the SEM whether they linked to asbestos exposure.

So does someone want to propose that we accept this recommendation?

MEMBER FRIEDMAN-JIMENEZ: This is Dr. Friedman-Jimenez. I move that we accept this
recommendation.

CHAIR MARKOWITZ: Thank you. Is there a second?

MEMBER CATLIN: Yes. This is Mark Catlin. I second.

CHAIR MARKOWITZ: Thanks. Okay. So the floor is open for further comments, questions, suggested amendments.

MEMBER SILVER: Hi. This is Ken Silver. I haven't really reviewed the existing list of occupations on the presumptive list the DOL has. Where I see engineer, I think of a slight class distinction.

At some DOE sites, the engineer is the guy with a degree and the technician maybe has a community college degree. So they're not the engineer or chemical engineer, they're the chemical technician. And the history is that the technicians did the dirty work.

And have you seen any awareness on the part of DOL, that if someone says in the OHQ and all their employment records say they were health
and safety technician that, that might be interpreted to include them as that health and safety engineer?

CHAIR MARKOWITZ: This is Steve Markowitz. I can't, you know, can't answer that question. I'm trying to look up the --- trying to get a copy of the existing list to see where the technician -- I know we look at the technician within the NOMS, and its relevance to asbestos, because we're aware of the concerns you're mentioning. I just don't recall exactly what's on the current list, but I'm trying to look it up.

MEMBER SILVER: It may be an issue for another day, but I just wanted to, you know, put it out there.

CHAIR MARKOWITZ: Yeah. I think we should clarify that on another day. Yes. Other comments, questions? Okay. So let's take a vote. Ms. Rhoads, if you want to lead the --

MS. RHOADS: Okay. Then this is on, I guess it's slide 35, the recommendation that's in
there.

MEMBER BOWMAN: Dr. Bowman?

MS. RHOADS: Yes.

MS. RHOADS: Dr. Catlin?

MEMBER CATLIN: Yes.

MS. RHOADS: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MS. RHOADS: Dr. Goldman?

MEMBER GOLDMAN: Yes.

MS. RHOADS: Mr. Key?

MEMBER KEY: Yes.

MS. RHOADS: Dr. Markowitz?

CHAIR MARKOWITZ: Yes. Yes.

MS. RHOADS: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MS. RHOADS: Ms. Pope?

MEMBER POPE: Yes.

MEMBER SILVER: Dr. Silver?

MEMBER SILVER: Yes.

MS. RHOADS: Mr. Tebay I still don't think is on, but if you are, please let us know.

Dr. Van Dyke?
MEMBER VAN DYKE: Yes.

MS. RHOADS: And Ms. Whitten?

MEMBER WHITTEN: Yes.

MS. RHOADS: Okay. Again, 11 yeses and one is not here.

CHAIR MARKOWITZ: Okay. Thank you. We're going to take our break a couple of minutes early. Then we're going to run back so we can get to the six-minute walk test. In 10 minutes, so twenty of three.

(Whereupon, the above-entitled matter went off the record at 2:27 p.m. and resumed at 2:43 p.m.)

CHAIR MARKOWITZ: Okay. It's Steve Markowitz. We're up to our discussion about the six-minute walk test. This actually is a response to some queries from Department of Labor to assist them in certain aspect of impairment evaluation and this will be led by Dr. Friedman-Jimenez.

MEMBER FRIEDMAN-JIMENEZ: Okay. Thank you. Can you -- okay, there it is. Okay. The
next slide, please. Good. All right. The background here is that people with lung diseases that are attributable to occupational causes and compensated by the EEOICPA program have varying degrees of medical impairment. And the question is raised how to use the AMA medical guides to medical impairment to assign levels of impairment to each individual claimant and, generally, what we do in occupational medicine, we'll use these guides from the AMA to assign level of impairment to people for their particular ailment. We use the 5th edition of the guides, which in many people's opinion, is less problematic than the 6th edition.

So after a pretty thorough review of the literature, in our opinion, what we're recommending for permissible testing methodologies is using the VO2 max or VO2 peak as an estimate of VO2 max. In a pulmonary function lab on a test it does pulmonary function exercise testing. However, the six-minute walk test is raised because the cardiopulmonary exercise tests
are not readily accessible to many patients.

Next slide, please. This is the table in the AMA guides that shows the different classes of impairment. Class 1 being normal or no impairment, Class 4 being 51 to 100 percent impairment of the whole person. And on the left-hand side, you can see the pulmonary function test. FVC is forced vital capacity, FEV1 is forced expiratory volume in one second. Then the ratio on those two, DCO, is diffusing capacity of carbon monoxide, and VO2 max is this exercise test that we're talking about. So these are the five different tests that are used, the so-called objective criteria, for determining the impairment classification.

Class 3, for example, is 26 to 50 percent impairment and requires that any of the four elements FEV1, FVC, FVC -- FEV1 over FVC, DCO, or the VO2 max be within the ranges that are given in that column. So that determines the classification unless any one of those five would classify the person at a higher level of
impairment. So the table, the logic of the table, is that the impairment is the highest level determined by any of those five pulmonary function tests.

So the question becomes, how do you measure VO2 max. The cardiopulmonary exercise test is recommended by the American Thoracic Society and European Respiratory Society and others as the gold standard for estimating the VO2 max. Resting PFPs and cardiopulmonary exercise tests often yield discrepant results when evaluating impairment due to occupational lung diseases. And there are, I think, reasonably good data to show that for determination of respiratory impairment, the cardiopulmonary exercise test has advantages over the pulmonary function test.

And the study that was done actually in the late '80s in asbestos-exposed shipyard workers, the pulmonary function test had high rates of both false positives and false negatives in the impairment ratings and similarly high
false positive and false negative rate and especially high rates of indeterminate impairment ratings. In other words, they couldn't come to a rating just based on the PFTs. When you compared it with the full evaluation that included pulmonary function test, cardiopulmonary exercise test, other clinical information, physical exam history, and chest x-ray, electric cardiogram.

So the exercise test is pretty clearly superior to the pulmonary function test if you're just going to choose one test. The problem is that exercise testing requires a qualified pulmonary function lab that is highly experienced, has recently done, in the last year, at least 25 or 50 tests, depending on who you read. And these labs may not be accessible to claimants around the U.S.

The CPT, the exercise test, can estimate a VO2 max in most athletes, in some people of normal physical fitness, and in only a minority of people with respiratory impairment. So in most people, the exercise test yields a VO2
peak and not VO2 max. However, studies have shown that the VO2 peak is acceptably close to the VO2 max in people that can do both. And we can extrapolate that to people with pulmonary impairment. So we're willing to accept the VO2 peak.

So the question raised by the DEEOIC is that what is the best way to estimate this VO2 max or, in this case, VO2 peak. And we reviewed the literature quite extensively.

And next slide, please. We looked very carefully at the studies of the six-minute walk test, 6 MWT which had been reviewed extensively by the European Respiratory Society and American Thoracic Society Committee. They published a Technical Standard in 2014, Holland et al., that provided instructions how to do the test in a standardized way and assure the quality of the test.

Next slide, please. So the six-minute walk test has been quite well studied for a variety of patients mostly with cardiac
disorders, heart failure, and such, but a fair number of studies with lung disorders, COPD and asbestos-related lung disease. And it is more repeatable, actually, than the cardiopulmonary exercise test. It has very good repeatability and reproducibility. It's safe and precise to predict the mean VO2 max or group. I will get to that in a minute.

And the systematic review concluded that it's valid, it's reliable, and it's robust to measure functional exercise capacity in adults with chronic respiratory disease. The systematic review also concluded that the relationship between the six-minute walk distance, and either the VO2 peak or peak work, was moderate to strong and consistent across patient groups with COPD and interstitial lung disease.

Next slide, please. The six-minute walk test measures peak VO2, VO2 peak, which is an acceptable estimate of the VO2 max, which is either not achievable or sometimes not clinically advisable because it's a maximal exercise test.
You have to really push yourself to your maximal cardiopulmonary limit, and it's not advisable in some patients.

Next slide, please. So a group published in 2010 an equation, Ross et al. published this equation, mean VO2 equals 4.948 plus 0.023 times the mean six-minute walk distance in meters. So this equation was derived from the pooled data from 11 different studies including over 1,000 patients with a variety of cardiac and pulmonary disorders.

Another equation which had been given to us, to the program, from the American College of Sports Medicine. We looked into the derivation of that equation and it seems to be based on a very, very small number of athletic people that were studied in a lab in the '60s and '70s and really did not have the evidence base that this equation has. This equation has the largest patient group of any of the equations that had been proposed.

So the authors of the Ross study did
say that this equation is better used for groups. In other words, that's why it says mean six-minute walk distance. If you have a group of 100 people doing the test you can get the mean VO2 max, or VO2 peak, from the mean six-minute walk distance. But they caution that the mean gives somewhat imprecise results. I'm sorry. The equation gives somewhat imprecise results if you use individual six-minute walk distance rather than a mean.

However, we looked at the data and it doesn't seem that it gives biased results. In other words, it may overestimate the VO2 max in some cases, and it may underestimate in just as many cases, but it doesn't overestimate more than it underestimates or vice versa. So we think that it's acceptable accuracy for clinical use. We recognize it's not perfect and it will lead to erroneous estimates of VO2 max in a small percentage of cases. However, it won't overestimate more than it underestimates from what we can tell based on the data.
So next slide, please. So what we're recommending is that this equation be used in -- actually there's still an error on this equation. It should not say mean peak VO2, it should just say peak VO2. So what we're recommending is using this equation: peak VO2 equals 4.948 plus 0.023 times six-minute walk distance. In other words, if the person walks 300 meters in six minutes, you use 300 meters for that equation.

So that'll give an estimate of VO2 max that can be used in table 4 -- 512 to classify impairment. So of all of the options that we looked at, and we looked at them all, this is the best that we see. So what we recommend then is either doing a cardiopulmonary exercise test, if that's accessible, but we suspect that in many, if not most, claimants it will not be accessible because the labs are not -- not many around the country that are qualified to do this. Or the six-minute walk test, which is quite well studied and well standardized and can be done by most physicians in their medical facility without
specialized laboratory equipment. So that's our recommendation. And so I'll end there and open the floor to discussion.

MEMBER MIKULSKI: I think -- this is Marek Mikulski, before we go into a discussion on this, I wanted to thank Dr. Friedman-Jimenez for taking a lead on this topic. It seems his research and an overall guidance will help us see through this recommendation to the end. This is not an easy topic. There's very little known and very few resources available that will guide this recommendation either way, and I do feel very strong about this recommendation based on the scientific evidence that we had reviewed in preparation for that.

MEMBER FRIEDMAN-JIMENEZ: Thank you. Dr. Mikulski. So does anyone have any thoughts, questions, comments, critiques, or recommendation?

CHAIR MARKOWITZ: This is Steve Markowitz. Just, I support what Dr. Mikulski just said about Dr. Friedman-Jimenez's work and
his work on this. Just a side note, the group looked at the American College of Sports Medicine's equation, which is the one that I think DOL gave us, in the, something like, 9th edition of the textbook. And the report was delayed by the group in part because we were waiting for the 11th edition to come out and hoping that it might provide some clarity on this equation and it kept being delayed and delayed.

It finally came out. They used the unchanged equation from the 9th edition. And then we looked back several -- I think back to the 6th edition and found the equation that was still unchanged. So it took a while to unearth exactly where this had come from, but the group succeeded. So are you saying that --

MEMBER FRIEDMAN-JIMENEZ: The equation was based largely on multiple trials of three marathon runners, one of whom was the author of the paper at Harvard. And so it was really based on a very -- and then a small number of other subjects, 9 or 11 other subjects. It was a tiny
sample. And that was the equation that was in the American College of Sports Medicine, which we really did not feel comfortable recommending.

So this equation is far better supported by evidence and, actually, I have to say Dr. Mikulski really helped sort out the history of this and finding the old references and our realizing how little basis there was for that equation from the American College of Sports Medicine was quite surprising and --

CHAIR MARKOWITZ: This is Steve Markowitz. This recommendation we're looking at, did I hear you say in the equation we should remove the word peak?

MEMBER FRIEDMAN-JIMENEZ: No, mean.

CHAIR MARKOWITZ: Mean, I'm sorry, mean.

MEMBER FRIEDMAN-JIMENEZ: Yes.

CHAIR MARKOWITZ: Yeah. Okay. So --

MEMBER FRIEDMAN-JIMENEZ: We removed the word mean from the right side of the equation, but it needs to be removed from the
left side. I missed that.

CHAIR MARKOWITZ: Yeah. Okay. So I didn't know whether that's you, Ms. Rhoads or Mr. Bird, but if you could do that so we're actually looking at what we're going to vote on.

MR. BIRD: Yes, I will. I'm going to pull it up now.

MEMBER GOLDMAN: That mean, by the way, it's in the document that you sent to review the written paper, had the mean peak also in the equation in that paper. So if you're taking it out there, you may want to review that written document as well.

MEMBER FRIEDMAN-JIMENEZ: Okay. Thanks, Rose.

MS. POND: Dr. Markowitz, this is Rachel. I just want to say I appreciate the efforts put into this particular question. I know it's not exactly your mandate, so I'm going to try to avoid asking you impairment questions, but this particular one has caused some -- a little bit of controversy in the program. And so
I wanted to make sure that we're clear on how it's used, when it's used, and how we can apply it to our impairment evaluations. So thank you for that.

CHAIR MARKOWITZ: Sure. So are there other comments or questions on this because we -- the recommendation and we need to take a vote. Okay. Is there a motion to accept this recommendation?

MEMBER MIKULSKI: I move to accept it.

CHAIR MARKOWITZ: And is there a second?

MEMBER WHITTEN: I second.

CHAIR MARKOWITZ: Okay. So any additional discussion, questions, comments? Okay. So then I think, Ms. Rhoads, you can do a roll call vote, please.

MS. RHOADS: Okay. This is on the six-minute walk test, the recommendation as amended that's on the screen right now.

Dr. Bowman?

MEMBER BOWMAN: Yes.
MS. RHOADS: Mr. Catlin?

MEMBER CATLIN: Yes.

MS. RHOADS: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MS. RHOADS: Dr. Goldman?

MEMBER GOLDMAN: Yes.

MS. RHOADS: Mr. Key?

MEMBER KEY: Yes.

MS. RHOADS: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MS. RHOADS: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MS. RHOADS: Ms. Pope?

MEMBER POPE: Yes.

MS. RHOADS: Dr. Silver?

MEMBER SILVER: Yes.

MS. RHOADS: Okay. Mr. Tebay, if you're on, please let us know. Dr. Van Dyke?

MEMBER VAN DYKE: Yes.

MS. RHOADS: Ms. Whitten?

MEMBER WHITTEN: Yes.

MS. RHOADS: Okay. Again, 11 for.
CHAIR MARKOWITZ: Okay. Thank you for that excellent work, and it's 3:00 so we caught up a little bit. Next we want to go to, actually, Kevin, if you can go back to my slide, slide 43, yes, it's about impairment evaluations. You can go to the next one. So this is kind of a free-ranging discussion. You know, it's unlikely we're going to come up with -- we may, but there's no pre-prepared recommendation on this topic. But we thought it was an opportune time to discuss various aspects of impairment questions that have come up. It does fall within the Board's chartered tasks of evaluating the quality, consistency, and objectivity of industrial hygiene and the medical consultants, or medical input, into the claims evaluation process.

And we've heard a little bit about impairment, well, the six-minute walk test is clearly an important scientific or technical aspect of impairment evaluation. But we also had heard from the public commenter back in November
raising questions about how impairment, or aspects of impairment, are treated within the program.

So the group that discussed this was Catlin, Tebay, Duronda, Pope, and myself over the last few months. I'm showing here a slide that I presented previously. I think I presented this at our November meeting. Let me explain what this is. So on a quarterly basis, the Medical Director of EEOICP conducts an audit of the contract medical consultants reviews that, you know, the claims examiner sends the claim to a contract medical consultant, a CMC, and asks certain questions and then uses the answers to judge the claim application. And so when the medical director does these audits, he, and it's been a he so far, reports out on them and uses the classification of some reports where, CMC reports, address the issue of causation. Did the exposure cause this person's illness?

Some of the CMC reports look at impairment. How much impairment exists for this
particular person on their claimed illness. And then there's less frequently another category where the CMC -- or it's not just the CMC, I think, they have these second opinions, they have these referee medical evaluations maybe they're all called CMCs, I'm not sure, but it's outside Medical input.

And you can see that I took from the quarterly reports 2018-2019 and aggregated, really, just what the medical director said the number that need -- or number and percent that need improvement. Now so you can see in 2018, right, that's the third column of the impairment -- 67 impairment evaluations, 25 of them were judged by the medical director that need improvement. And in 2019 that was 27 percent, right.

By contrast with causation, of the 67 causation CMC reports, only one percent, only one, was judged to need improvement, and none were judged to need improvement in 2019. So, previously, we have -- I know I've commented on
the very low numbers of causation reports that the medical director found lacking in some respect and focused on that. But if you look at the impairment CMC reports, a pretty high percentage of them actually judge to be needing improvement.

Now, you ask what does needing improvement mean? Well, sometimes it's a major or significant issue and sometimes it's a relatively minor issue. So that 37 percent, 27 percent, or overall both years it was, if you combine them, 32 percent, doesn't distinguish major versus minor. It does raise the question though of why are there so many CMC impairment evaluations that need improvement? And we have a -- the department has a contractor who deals with this issue, the CMCs.

And I know that what happens after the medical director does their audit that the policy branch actually looks it over and then makes the determination about asking the contractor to look into the issue of cases that need improvement.
But there is -- the question is why there are so many of the impairment evaluations that need improvement.

Now I couldn't find any medical director quarterly reports for 2020 posted online. And it's possible that I wasn't looking in the right place, didn't use the right search terms. But I don't know, Ms. Pond, whether you know offhand whether there's been a delay, or whether those -- it's been done, those should be there, or whether that's more of a question for Mr. Vance.

MS. POND: So both John and I on -- I will say that our medical director has been pulled in a lot of directions due to the COVID issues, more with FECA, Federal Employees Compensation, that is part of the reason we're looking to reassess and reevaluate how we do these audits. Whether -- exactly who's going to be auditing them. 2020 has not been done, I believe it's not been done.

John, I don't think we did them in
2020 because we were trying to re-evaluate this; is that correct?

MR. VANCE: Yes, I mean, we did stop the CMC reviews simply because these are issues regarding the six-minute walk test, and there were other questions about the application of the AMA guides in a manner in which we were trying to figure out, well, who is right and who's wrong? When there's differences of opinion like this, the question of six-minute walk, is, you know, we'll have different physicians taking different positions on what qualifies as a viable test for calculating the figure that, you know, goes into these pulmonary impairments.

So when you have a particular point of view that may not necessarily square with everyone else you've got to sort of figure out well, who's right and who's wrong. And so, you know, we've been looking at that trying to figure out how to make sure that our assessments of impairment are appropriate.

And so that's where the six-minute
walk test came out where we were trying to figure out, is it a viable methodology for calculating the VO2? So that's part of what we're trying to rework into a new auditing methodology, you know, trying to get other physicians involved in some way so that there's a little bit more objectivity sort of.

MS. POND: Yeah, and a little bit more -- just more than one perspective is what we're looking for. And so we're trying to --

MR. VANCE: Right.

MS. POND: -- we're just trying to reevaluate the whole thing and that's why you're not seeing them, Dr. Markowitz.

CHAIR MARKOWITZ: No. Okay. Related to this table we're looking at here, this issue of impairment evaluations by the CMCs needing improvement, seems to date back at least a couple of years. And I realize 2020 is a difficult year in many respects, but any insight into why there seems to be such a high rate of questions on the impairment evaluations going back to 2018, 2019?
MEMBER FRIEDMAN-JIMENEZ: This is Dr. Friedman-Jimenez, I have a question. Is there any notation of which way the impairment evaluations were felt to be erroneous? Because, I mean, there's different levels of impairment. Were they generally setting the impairment level higher than it was believed it should've been set, or lower than it was believed that it should have been set? Was there any pattern there or was it just randomly wrong?

MS. POND: Dr. Jimenez, this is Rachel. This is a difficult question, only because, you know, there's $2,500 per percentage, okay. So ratings tend to go high and I'm not saying that there's any incentive at all for that. I'm just saying that we want to make absolutely sure that's they're accurate and appropriate. And -- but it's all based on the medical objectivity of the doctor and I know that these doctors are objective. We just want to have a backup from you guys on what you guys think is appropriate.
MEMBER FRIEDMAN-JIMENEZ: What I'm asking is, what is it that needed improvement about the impairment rating? Was it that it was felt to be over-classifying the impairment or under-classifying it, or just randomly being incorrect, or it was done poorly according to the methodology, things were left out? What did -- how did they characterize this need for improvement in the audit?

MR. VANCE: Yes, this is John, let me speak to that and, in fact, on our website if you go back and look at the ones that are publicly available, you'll see some of the post-audit analysis that's done in conjunction to the audit findings. And I would say it was really a variety of factors that was, you know, being identified as a potential problem, whether physicians were using proper application of the guidance in the AMA guides.

You know, the guides lay out some very specific criteria. In other areas, the guides are very, I guess the most pleasant way to say it
is, very unclear as to what kind of methodology should be applied and combining different ratings and, you know, a variety of things. And it really does depend on the viewpoint of just who's looking at it. So, you know, it really did tend to go all over with regard to technical application of the guides and it became a challenge, I think.

When we looked at most of the post-audit results, Rachel's correct, we would look at these after the rating's already been done and so oftentimes what we would find was that the rating itself could've potentially had a technical error that could've resulted in a lower rating than what had been done before. But because we had paid that rating, we weren't going to go back to try to recollect or to call that an error.

That was just something that we wanted to work with the contractor that's doing the ratings with the CMCs to be aware of that there are these concerns to try to help doctors who were approaching particular things. It had to do
with applications of defined value chart. It had to do with the application tables in the guides. I mean, it just -- there were lots of different things and it was, basically, mostly communicating back to our contractor, be aware of these things so we don't see these types of errors in the future.

CHAIR MARKOWITZ: If we could -- no, actually, I have a question, it's Steve Markowitz, that I've been meaning to ask. Is the CMC contract, is that under -- is that finished this calendar year and is it being re-set out for reconfiguring or new contractors?

MR. VANCE: No, that contract is it still with CMC and that -- I think it was renewed relatively recently, so I don't think that it's going to be completely re-bid. They'll exercise option years, which is basically extending the existing contract for a period of time until we're in a position where --

MS. POND: And this is Rachel, Dr. Markowitz. I, you know, I don't see a problem
with the doctors, any of the doctors, the treating doctors, the CMCs. We just see conflicts in opinions and that's what we're trying to resolve. And so it becomes a little bit complicated, but the bottom line, we just want to make sure that we're being as fair as possible to everyone who's claiming these benefits.

CHAIR MARKOWITZ: Okay. Thank you. I'm sure it's not easy, actually. Can we have the next slide, actually. So some of the questions that were raised by our group about the -- to try to understand sort of what's going on. How many impairment ratings were performed the last two years? And we're not expecting answers to these questions right now, but these are things we were wondering about.

How many of those impairment ratings have been flagged for review by the medical director? How many of the impairment ratings the medical director's flagged have been challenged in one way or the other? Are there specific
impairment physicians with more challenged impairment ratings than others? And then what actions has the CMC taken to improve impairment ratings?

So I don't know whether, Ms. Pope, whether you want to chime in here. No, no pressure. And if, I don't know if Mr. Tebay got on the line or not, he was going to -- he told us he'd be in and out.

But let me, then, start off by asking you know, I looked over this morning at the procedure manual to understand the medical director's role. And I looked at it before. And what I was able to find in the 5.0 version was much of what I think, Mr. Vance, you summarized yesterday, which is that he weighs in on transplants, he weighs in on some important expensive medical items, experimental treatment, I think, on sort of advanced rehabilitation therapy, and a couple of other circumstances, transplants and the like.

I couldn't see any language which
describes what we learned yesterday. I could have missed it, but that we learned yesterday where he's pulled into claims evaluation process and provides a written opinion on some aspect of that process. And this is, in part, described in the answers a couple of days ago that you gave us to questions from our November 2020 meeting.

I'm not raising this to dispute a proper role for him, I'm just trying to understand what that role is in the evaluation of specific claims. So I don't see that language in the procedure manual. So am I missing it or does it need to be re-examined or what?

MS. POND: So this is Rachel. The medical director has been a part of the audits, as you know. And so as part of that audit process of doing the CMC reports, he weighs in on the impairments because that's a large part of our CMC process. As John indicated yesterday, we're reevaluating how we're going to review the CMC reports and how we're going to do these audits.
And so while the procedure manual doesn't specifically say he's going to review impairment ratings, he is certified in reviewing them. He's an expert on impairment ratings and we are looking at the whole process at this point.

MR. VANCE: Yes, and let me add very quickly. So I'm very familiar with what's going on with these impairment ratings. You know, what I was communicating yesterday was, you know, he is a medical consultant. And claims examiners are tasked with evaluating evidence in the case file, but those claims examiners are not physicians, so they will ask questions about different things in a case file and sometimes that means that we will need to ask a medical expert their position on certain things.

So in other words, in an impairment rating situation, a claims examiner can be looking at evidence and evaluating a medical report from a physician and saying this seems suspect in some way, there's some issue the
claims examiner isn't sure about, and so they will ask a question. They're going to say, is this something that I should be concerned about with regard to the way that this impairment rating is being done?

The medical director will answer that question and just say, here's my take on the issues that might be involved. It could be that there's no issue at all with the way that the doctor did the rating. It's valid and correct. Or it could be that the medical director says this is an issue. There is a calculation that might be mistaken. There might be an issue with regards to information that supports a different finding.

And so then when that information goes back to the claims examiner, they're going to go and take that information and go back to the treating physician and say, you need to consider this and respond to the issues that are being raised. And then once you get that response, you have to sort of decide, from a claims examiner's
perspective, well, then, what's the next step. Did they get a rational response, or is it going be a need for, you know, a second opinion? So I always look at doctor -- any physician that we're going to as being a consultive source of information.

CHAIR MARKOWITZ: Steve Markowitz. So that -- that makes sense. I'm just trying to imagine myself as a claims examiner getting, perhaps, one opinion from the outside personal physician, impairment expert, maybe a second opinion from the CMC, maybe getting a variation of those opinions from the medical director and trying decide what's true or, you know, what should apply. And a claims examiner, obviously, as you say, is not a physician. So how does it actually work itself out? I can understand also why there would be delays in the process because the -- that's potentially awkward decision-making.

MR. VANCE: Yes. I can give you a very -- this is John. I can give you a very good
example. So, you know, we have physicians that will submit impairment ratings and they will use the six-minute walk test. They will use other information because the six-minute walk test corresponds with the VO2 max. And according to one of the tables in the guides, it's going to classify into a particular range.

But a physician can then say, okay, this person with this six-minute walk test and this VO2 max result falls into a class for impairment which is a range of 51 to 100 percent impaired. And so a physician is then given some leeway as to how they assign that impairment within Class 4. And that is generally done on ADL interpretations. So how dysfunctional is this person due to this condition, or the breathing disorder, or what have you?

And so if a doctor is going to say, oh, this person is 95 percent impaired within Class 4 of the respiratory disorder, and I'm going to provide information that supports that rating, a claims examiner can look at the case
file and, say, well, okay, a 95 percent impairment is severely impaired. And if I'm now looking at the case evidence and there's evidence that this person is able to perform many different activities of daily living based on factual information present throughout the case file contemporaneous to, you know, when the case file is being reviewed, the question is going to be this rating seems to be problematic.

And they're going to need to have a physician look at it and say, hey, is this, from a medical standpoint, problematic. And so you're going to ask our medical director, or you could ask a CMC, is this something that makes sense to you? And the response could come back and say, well, you know, that range for someone with had such a high impairment should suggest that that person is almost, you know, is severely disabled. They should not be able to, you know, really leave their bed. They should be bed-bound, home-bound, and in need of significant medical help and I don't see that.
And so then the claims examiner, once they get that information, they will go back and ask the physician that provided the impairment, can you please look at this and explain it more fully to me so that I understand, as the adjudicator in this case, as to whether or not that impairment is sufficient. If the response is rationalized and the doctor provides some sort of compelling argument to support that impairment, it'll be accepted. If not, he'll likely have to seek out a second opinion. So I know that's a long-winded explanation, but that's a common occurrence that we would see.

CHAIR MARKOWITZ: Steve Markowitz. Does that mean that in some cases, the second opinion option, which is open to the claims examiner, that that function is being performed by the medical director?

MR. VANCE: No, that would be -- all the medical director would be doing is providing guidance as to what, you know, he or she thinks with regard to the sufficiency of the medical
report that's being reviewed. So in other words, all that's doing is getting information to the claims examiner for the claims examiner to make a determination on what the person's development should indicate.

And it's actually up to the claims examiner to assess that information and make an independent judgment based on the weight of medical evidence. So in some cases, the medical director will come back and say, oh, that's a problem, but the claims examiner could be looking at other information and based on it say, oh, I see, there's something that I missed that compelled me to accept that opinion, or what-have you.

So all the medical director is, is a subject matter expert trying to provide information that allows the claims examiner to weigh the evidence to make a judgment as to whether to accept that impairment that's being presented or to seek out additional medical evidence.
MS. POND: Right. Then, this is Rachel. So in some cases if there's a disagreement there then the second opinion might -- a CMC might be sought out.

CHAIR MARKOWITZ: Steve Markowitz. I mean, it seems to me if there were a core group of really good impairment CMCs, then that could, you know -- the claims examiner could send those, you know, questionable -- or impairment ratings in which they have a question to these CMCs, as they do for other issues, and the CMC could be very helpful in resolving that.

The record of the contractor with the needs improvements in impairment ratings being pretty high begs the question of whether they actually have, the CMC contractor actually has a core group of trustworthy impairment rating CMCs that the claims evaluators can rely upon more heavily as opposed to going to the medical director. I'm not suggesting there's anything wrong with going to the medical director, it's just that that doesn't seem to be the pathway
that is used to address other medical issues.

MS. POND: This is Rachel. And I think that the fact that the medical director has been involved with our audits, and now we're reevaluating that, so we're going to look at all of those issues together.

CHAIR MARKOWITZ: Okay. Are there other -- other Board members have questions or comments?

MEMBER POPE: This is Duronda Pope. Dr. Markowitz, I think you captured a lot of my questions I was going to ask about the medical director. As if he was, I think it was seen just from looking from the outside in, used as a decision for opinions. And the CE was taking those opinions from the medical director and applying that to the claim opposed to, you know, seeking out telling the claimant that -- or seeking out a second opinion. But that was a confusing part for me, wondering if your attending physician's opinion, or the report, had any weight within the claim.
MS. POND: This is Rachel. I'm not sure if that was a question directed at us. Again, we are looking at this issue in terms of, you know, we do go to second opinions. If there's no disagreement with the report that's written by the treating physician there's no reason to go to a second opinion. And so, therefore, in some instances when we go to the medical director and he agrees with it, we go ahead and accept it like John said.

In other instances, it might be a prompt to go to a second opinion. A claims examiner, not being a physician, doesn't want to just automatically go to a CMC if there's no reason to. So if we get an opinion from the medical director that says, I don't see this in the evidence, then that would be our prompt to go to a second opinion.

CHAIR MARKOWITZ: This is Steve Markowitz. So the impairment evaluations that have been problematic and have taken a long time to resolve, what's the universe of outside
impairment physicians that have produced these evaluations, are we talking about one or two people out there? I know it's a -- I know from the side of the former worker program that this is a specialty niche in the DOE communities. I don't know how many are across the nation, how many impairment physicians are involved, but I don't think it's a large number. And so I'm wondering the ones that the evaluations have been proving problematic is this mostly limited to one or two physicians, or is this a broader concern?

MR. VANCE: Dr. Markowitz, this is John Vance. So I think also we just need to make a quick distinction here. You know, we're talking about two different buckets of impairment ratings. We're talking about the individual ratings that are done by CMCs at the request of the claimant versus impairment ratings that are being performed with physicians that the claimant has chosen.

If you're talking about the claimant chosen physicians, there is a very small pool of
physicians that do them. There's not a -- I mean, there are many different physicians that are involved, but we do find that there are large groups of impairment ratings that are done by a very small proportion of physicians. That's not to say that they're aren't sporadic impairment ratings done by other physicians.

As far as the CMC review process, those are, you know, we have a contract with QTC, those physicians that are doing them have to be -- you know, they had to be credentialed to do the impairment ratings. So our hope is that those ratings are being done well. But, you know, you're going to have differences of opinion because these impairment ratings, as I'm certain you know, can get very complicated as you have more conditions, more systems, more organ systems involved. So, you know, that's the part of this issue is how stringent, or technically compliant, are physicians with regard to the application of the AMA guidance. So there's a challenge with that and that's reflected in the (audio
MEMBER GOLDMAN: This is Rose Goldman. I just have a question about these outside physicians, not the CMC. There are groups of physicians who sort of specialize in what's called independent medical exams or IMEs. And they're used to doing these kind of impairment ratings and they can be found as a specialty group or through the American College of Occupational Environmental Medicine.

So when claimants go and choose somebody to do those ratings, or to see, or to get that assessment, how do they know who to pick or is it that DOE is recommending somebody from some pool? Because I don't know that a patient would just know how to find these group of people who actually are out there who do this all the time.

MR. VANCE: This is John again. You would be surprised. What we generally see is that you have particular authorized representatives that have a relationship with
particular impairment rating physicians. You know, these could be attorneys' offices, they're working with a particular group. You also have physicians just through word of mouth who are known in the claimant community as being capable of doing these impairment ratings.

The Department of Labor would not get involved with, you know, making any recommendations as far as presenting physicians to -- that claimants could choose to use. It's up to the claimant to find a physician that meets the criteria for a physician to present an impairment rating to the Department of Labor. And it's basically either the physician's credentialed in doing the impairment ratings or feels that they have the appropriate experience or capability to do it.

CHAIR MARKOWITZ: Other comments or questions? I don't know if there's -- Kevin could you just advance the slides? I don't know. I don't think there's any more -- no, there's nothing. You can go back to the previous slide,
that's fine.

Well, let me just say that the Board is happy to assist in these issues, if you choose to ask us questions or otherwise involve us. It is part of our chartered task, which I've said at least twice in the last two days, about quality, evaluating quality, consistency and objectivity of the industrial hygiene and medical input into the claims evaluation process.

So we're probably going to have to stay on this issue with you. And I don't -- you know, the way the Board works where, you know, we have to, as a group with public access, develop recommendations and advice and then -- and vote on that. It's occurring usually every six months, occasionally more frequently, it is a kind of a slow process. I know it's governed by the Administrative Procedures Act, and there are limitations to how we can interact, I guess, with the Department. But if there are ways in which we can be helpful here, as you are making -- trying to figure things out, I would say on
behalf of the Board that we're happy to do so.

MR. VANCE: And Dr. Markowitz, this is John. I just wanted to say thank you. You know, we've been struggling with that six-minute walk test. So I think that the analysis that has been done is going to be very helpful in helping alleviate some of the concerns that have been raised with regard to the testing that's being utilized to assign impairment ratings and any kind of assistance that you can help in those areas I feel like it will be very helpful. So I appreciate it.

CHAIR MARKOWITZ: Any other comments or questions on this topic, otherwise we'll move on. We don't have any new business that I'm aware of. Does anybody -- anything on Board members' mind that you want to raise?

MEMBER POPE: Dr. Markowitz, it's Duronda Pope. In terms of the questions on impairment ratings, is that just going to be tabled until our next meeting or --

CHAIR MARKOWITZ: Well, thank you for
coming back to that, actually. We have, you know, two mechanisms that were set up by the previous Board term in terms of requesting things from the Department. One is the request of claims that we can review, and the other is the data request. And these questions we're looking at here would correspond to a data request. So we could formalize these questions. And I can't quite remember, Mr. Chance, does the Board have to vote on a data request? And he may have -- I think he may have stepped out.

MR. CHANCE: Can you hear me?

CHAIR MARKOWITZ: Yes, I can hear you now.

MR. CHANCE: Sorry about that. I was trying to unmute myself and was having all kinds of trouble. I don't believe you have to vote on a data request.

CHAIR MARKOWITZ: Okay.

MR. CHANCE: That's, you know, it's mostly the recommendations. Carrie, am I wrong about that?
MS. RHOADS: No. I think you're right. Because they've done data requests before without voting.

MR. CHANCE: Yes, so I think you're good.

CHAIR MARKOWITZ: Okay. So then, I guess the question is whether we should just submit these questions to the Department or do we want to look at these questions, add, subtract, or amend them. Let's just take a look at them.

MS. POND: Dr. Markowitz, this is Rachel. You guys did vote on the six-minute walk test, I believe, right?

CHAIR MARKOWITZ: Yes.

MEMBER POPE: So, I mean, that was the question we asked. You know, you're welcome to - - we can fulfill any data request that you have in addition to that, but that was a large majority of some of our concerns was that particular test.

CHAIR MARKOWITZ: Right. I hear you. What I think we should do is I think that we
should not -- the phrasing of some of these questions, I think, probably needs some amendment given what we've learned. And so I think what we should do is bring this back to a smaller group to formulate. And we can do this relatively quickly. If we have questions we want to address then we can reformulate the questions. Because we have learned a lot at today's meeting.

For instance, question number two, it doesn't sound like medical director flags claims for review. So that might be an inappropriate question. So, Ms. Pope, if it's all right, what if we were to take these questions back to the group who's working on this and we reconsider them. And then if we want to -- since we don't need full Board to vote on it, then we submit them. How about that?

MEMBER POPE: Yes, that will work.

CHAIR MARKOWITZ: Yes.

MEMBER POPE: Thank you.

CHAIR MARKOWITZ: Okay. I would ask Mr. Tebay, but he's not here. Okay. So why
don't we do that. And, again, I think we can do that pretty soon. We don't have -- there doesn't have to be much delay there.

Okay. So thinking in the future here, this is April, we normally meet as a Board at a minimum twice a year. Who knows whether we'll be able to meet in person come the fall. Hopefully we can. If not we'll continue to meet this way.

We may, if meeting in person is permitted, we may try a hybrid so that people who don't feel comfortable traveling wouldn't have to travel to participate in the Board. It's always nice to get together. We learn a lot and we love those tours that Mr. Lewis at the DOE arranges for us.

I meant to look up where we would be due to go next but we do this by the number of claims or claimants in the surrounding area, surrounding DOE communities or state. So we've been to Hanford and Oak Ridge and Savannah River, and Los Alamos, and Paducah. And I think I'm forgetting other places. So I'm not -- I can't
remember what's next. But in any event, that's kind of the way we would decide where to go next.

MR. CHANCE: I think we were headed to the Test Site.

MR. BIRD: That's correct. We were scheduled to go to the Test Site in March of 2020.

(Simultaneous speaking.)

MR. CHANCE: Yes, I even had, like, my bags packed and everything and then all of a sudden we couldn't go anywhere.

CHAIR MARKOWITZ: This was Nevada. The Nevada Test Site?

MR. CHANCE: Yes.

CHAIR MARKOWITZ: Yes, well, I guess bad luck. Bad luck to go to Las Vegas.

MR. CHANCE: Yes, maybe we shouldn't go there.

CHAIR MARKOWITZ: Yes. Yes, absolutely. So anyway, so okay. So we'll reconsider, think about that. Also we would expect that to be, you know, sometime in October,
November. We try to schedule those -- that meeting, the fall meeting, a little bit earlier because -- for people who are involved with teaching classes or otherwise. They need a little advance notice about their schedules. So you can expect that we're going float dates sooner rather than later about that.

Now I do think there -- I mentioned at the beginning of today that there are two working groups that I can envision carrying on some of this work over the next several months. One was to deal with our assigned task around industrial hygienists and physicians and I, frankly, would include these impairment -- these questions about impairment rating in that group.

And the second group -- I think it would be useful, although this is just my own opinion, that we have a small group that looks at the public comments and sees if there are any issues that are within the Board's domain to address and then try to make some headway on some of those issues.
Was there any other issue, or set of issues, that have come up in the last couple of days or other -- or from the past that you think we should try to make some advance on in the next few months before the next Board meeting?

MEMBER SILVER: Where are we with the firefighters and other mobile job titles?

CHAIR MARKOWITZ: Well, yes, we made a recommendation. It was not accepted. If we can think of some other part of the argument that we should introduce then we can do that.

MEMBER SILVER: I think we got onto it through public comments. So perhaps it could get folded in with that working group.

CHAIR MARKOWITZ: It was a part of a public comment some time ago. So we could do that. I don't remember it coming up yesterday, but maybe it did. But you're right it has been part of the public comments. So, sure, that's a good idea.

MEMBER KEY: Dr. Markowitz. This is Jim Key. I would like to add that in that small
working group we need clear delineation. I know the intent of Congress when this Act was passed, especially for those SEC classified groups, and we need clarification of why there's still, to date, 21 years later, the unnecessary delays in claimant -- claims being processed and compensation being awarded. Dealing specifically with those classified SEC groups.

MS. POND: This is Rachel. I just want to mention that the SEC classes and how they're classified and who classifies them are all in the purview of HHS/NIOSH. So the Department of Labor has no input into how those get classified and who is classified in those, other than just we implement what NIOSH determines.

MEMBER KEY: Yes, this is Jim Key again. I understand that, Rachel, but I'm focusing on those that have already received that classification.

MS. POND: So this is Rachel again. I just want to make sure I'm clear on what you're
saying is that you feel like there are people that should have been in the class that we haven't put in the class for various reasons?

MEMBER KEY: No, ma'am. My concern is those individuals and classes of SEC that have already been awarded and least likely as not to have been used in evaluation of the claims and why the repeated delays within those claimants within those recognized SEC classes.

MS. POND: I would probably -- this is Rachel, I would probably need some examples of -- I'm not really clear on the issue. But if you want to provide examples then we're perfectly willing to look at them.

MEMBER KEY: Thank you.

CHAIR MARKOWITZ: Other comments, questions? So the -- thinking about these working groups, just to -- there are two kinds of units that we can use. One are committee -- subcommittees, and the other are working groups. And the subcommittees are open -- have open committee meetings, meaning that the public has
access, the notification of that meeting has to be published in the Federal Register usually at least six weeks before the meeting occurs.

Whereas the working groups don't need that arrangement for public access, or there's no formal notification. The first term of the Board opted for subcommittees and since that time we've been moving towards working groups. There's some functional difference.

The working groups have tended to be more sort of technical, scientific, medical, answering specific questions. And so the working group work is sorting out those issues and then all recommendations, all decisions, or whatever the -- whether it's a committee or working group, are always brought to the full Board. That's a requirement.

Whereas the committees, I think, if I remember correctly, took on a broader set of tasks and were a little bit more exploratory in their discussions. For instance, we had subcommittees originally that corresponded to
each of the four major tasks of the advisory board.

So the first term of the Board had stated their interest in making the process as open as possible and we pretty much followed that since that time. My guess is that would be the stance that the current Board would take as well.

At the same time, the working group mechanism is extremely useful in getting work done because the time frames are different. It's much more flexible.

So my own preference, I think, and it's appropriate, is for us to continue the work through functions that I described, one for public comment, and secondly, weighing in on industrial hygiene medical input in the working group format. But we need to make sure, I guess, that that corresponds to the Department's conception of the Administrative Procedures Act because we obviously need to be in alignment with whatever the Act requires.

I know that we haven't had this
discussion with the Department in a while about this distinction between working group and subcommittee. I just want to make sure we're following the rules. So, Mr. Chance, if you can weigh in now, otherwise if you could let us know soon whether we need to use one mechanism versus the other, or whether we can select which one we want to use, that would be helpful.

MR. CHANCE: Yes, Steve, this is Mike. Let me look at that distinction. I haven't looked at that in a while either. I think that you're basically right, but let me get back with you on that rather than commit to something.

CHAIR MARKOWITZ: Okay.

MR. CHANCE: Does that sound good? Yes, I'll get you an answer shortly.

CHAIR MARKOWITZ: Okay. Great.

MEMBER CATLIN: This is Mark Catlin, Dr. Markowitz. Is it a choice we have to decide one or the other or can we use both?

CHAIR MARKOWITZ: Well, interesting. Interesting. You mean, so we take on an area and
when -- and we work on it as a working group and then we get to a certain point where we need to explore it according to a committee structure with a scheduled meeting, public access, et cetera, and then maybe go back to the working group or vice versa. That's interesting. We never thought about that.

MEMBER CATLIN: It essentially would allow us to move ahead a little more quickly, it seems, in between our full Board meetings. So it's just a thought.

CHAIR MARKOWITZ: Right. Right.

MR. CHANCE: Steve, this is Mike again. I do think that the working groups do give you greater flexibility, but let me make sure that -- I'm thinking there is some sort of a distinction between subcommittee, but I want to make sure before I say anything. But I'll get you something really quick on that.

CHAIR MARKOWITZ: Okay. So --

MEMBER SILVER: This is Ken.

CHAIR MARKOWITZ: Go ahead.
MEMBER SILVER: Yes, when it comes to a working group on public comments, I just wanted to make sure that there would be nothing constraining the members from picking up the phone and calling the people who gave public comments months or a year ago to clarify and welcome updated evidence. And then, by analogy, on the working groups, presumably, you've had the freedom to call up other former worker program directors or experts, you know, in the field. And the analogy is on public comments the experts are the people who commented. So I just wanted to make sure that the work group would be able to do that.

CHAIR MARKOWITZ: Steve Markowitz. Yes, that's a question for the Department. By the way, I forgot to mention, in the committee structure when we say the meetings are open to the public, I don't think there's a public comment period. It's more a question of them being able to listen in.

MR. CHANCE: Steven? Steve, it's Mike
again. The contacting public commenters might be problematic. You know what, maybe you and I can a separate discussion on -- and hash some of that stuff out.

CHAIR MARKOWITZ: Sure.

MEMBER GOLDMAN: This is Rose Goldman.

I just have one comment and just to follow up on something you said. I think there's a difference between some of these technical questions, like the walking test or Type 2A carcinogens, that having a more open, you know, process when you're in very early stage of hashing out ideas, some that you might keep, some that you might not. It seems that the working group format is a lot more efficient.

And then when you present it in the open forum and other people then have a chance to see the work and the final products and everything you have it, you know, put out there.

And I think that's different than maybe some of these other questions where you're just -- where you're following up on comments that people made
and maybe you need that ongoing input from a community who's raised these issues. So I just put that out there because the work, frankly, of this committee is already hard enough and it's sort of like writing a manuscript. You wouldn't want your first draft and everything out there necessarily until you got to the more final points.

MEMBER SILVER: Well put. Maybe, Mark Catlin's formulation would work for the public comments work group where we function as a work group and we think we've got it right then we hold an open meeting and there may not be a public comment period but, you know, the advocates know our e-mail addresses and they could set us straight after the meeting.

CHAIR MARKOWITZ: Yes. Steve Markowitz. So I think the way that Dr. Goldman characterized it makes a lot of sense. But I do think though if public commenters, or members of the public, want to make the Board aware of something that I would encourage them to submit
public comments at any time, actually, to the Board. They needn't be restricted around the time of the meetings. And I think we have had some public comments that come in between meetings that have been sent to us.

So I'm looking now for volunteers for the working groups. And so one would take a look at the public comments and see what falls within the purview of the Board. It strikes me a lot of it is information -- is about getting additional information for clarification purposes. And the other one relates to the industrial hygiene and medicine evaluation. You know, the recommendation we made, the Department's obviously making some changes with respect to that, and then the impairment component of that to the extent that it's within our domain.

So who wants to volunteer for these? I must say it is nice to have people from the various so-called communities, scientific, medical and claimant community, on the Board. That's nice having a balance.
MEMBER WHITTEN: Dr. Markowitz, this is Dianne Whitten. Can you hear me?

CHAIR MARKOWITZ: Yes.

MEMBER WHITTEN: I'll volunteer to be on both working groups.

CHAIR MARKOWITZ: Okay, great. Thank you.

MEMBER POPE: Duronda Pope, I'll volunteer to be both groups as well.

CHAIR MARKOWITZ: Okay. Thank you.

MEMBER KEY: Jim Key, I'll volunteer to be on the public comment group.

MEMBER VAN DYKE: Mike Van Dyke, I'll volunteer to be on the quality one.

CHAIR MARKOWITZ: Okay.

MEMBER CATLIN: And this is Mark Catlin, I volunteer for the industrial hygiene quality one.

CHAIR MARKOWITZ: Okay. Great.

MEMBER SILVER: Ken Silver, both with a tilt towards the public comment one.

CHAIR MARKOWITZ: Ken did you say both?
MEMBER SILVER: Yes, but I think I'll only keep my nose in the quality one when industrial hygiene is discussed.

CHAIR MARKOWITZ: Okay. Okay. I'm going to participate -- I'll certainly participate in the IH and MD, and I'll see about the public comments.

MEMBER MIKULSKI: Steve, this is Marek, you can sign me up for public comments.

CHAIR MARKOWITZ: Okay. Okay, great. Well, you know, for other people you're welcome to weigh in here. I think what we'll do is circulate the membership of these working groups and then if people decide that they want to join in they'll be welcome. They'll be welcome to.

Finally, the Board process between meetings that we have in working groups, these semi-annual meetings, the communication flow, sending out draft reports, et cetera. I just want to -- if there's any -- people have any ideas on how to improve this, let's just discuss it briefly. I would say we have voted on four
recommendations at this meeting. This meeting's a little shorter than our usual meetings, which have extended as long as two days and when we meet in person I think a day and a half has been our shortest. So we've done a lot.

We've done a lot at this meeting which means that we did a lot of work in the last few months to get things together for this meeting. So I think that's good work. But if there are ways in which we can improve this, do people have any ideas or comments about that?

MS. POND: Dr. Markowitz, this is Rachel. Before you end the meeting, I just wanted to say I think that the work that has been done behind the scenes, the recommendations that had been made in this meeting, have been great and I really do appreciate all the work that you guys have been doing. Especially given, you know, the fact that we were going through the pandemic and a lot of the physicians and the scientists and everybody involved in this have other things to do. So I just wanted to say
thank you, again for your efforts and I think it's going to be really productive.

CHAIR MARKOWITZ: Good. You're welcome. You know, one thing I wondered on the IARC 2A group, maybe it's too early to mention this, but actually in the IOM report of 2013, there were some other sources of authoritative information that were recommended in Chapter 6, that might be integrated into the SEM. And I don't know whether you all want to take a look at that table and think about whether you have the resources and time to address some of the other sources, the California documents, the EPA documents. They're less targeted and there are fewer of them than NTP and IARC, but there are some other sources. So it's just a thought.

MS. POND: This is Rachel.

MEMBER GOLDMAN: Well -- yes, go ahead, Rachel.

MS. POND: So I was just going to say, we did look at the IARC -- that IOM report that came out. We did go through some of those.
reason we targeted the 2A is we thought it would be the easiest for you guys to tackle. Some of the other ones are a little bit -- I think that the IARC is really the most clear and specific. But, of course, we don't have a lot of resources for this particular task. We have a toxicologist who looks at these things, but we're willing to look at more. I mean, we do look at more, it's just time and resources.

CHAIR MARKOWITZ: Right, yes. So, actually, then my -- this is Steve Markowitz, the question I had was really addressed to the Board members.

MEMBER GOLDMAN: Well, I --

CHAIR MARKOWITZ: And we have the same time and resource limitations.

MEMBER GOLDMAN: Well, I would echo something that George Friedman-Jimenez educated me about, which is when you look at the depth of what it is that the IARC brings to it, it's really quite extensive and way beyond what we could do to start reading all the different
articles and cataloging them. Now the only thing I could see is, you know, we just started with these that had been recently updated. I mean, one could consider, perhaps, looking again at the NTP and just seeing which ones -- are there ones that might have been mentioned by them that are at, you know, these sites, that we didn't look at. You know, would there be other 2As.

I'm not so sure, and I'll defer to George on this, whether I would want to go to what California's listing, and this person's listing, but it just seems like that would be a bit of an overwhelming task. But we could stick to IARC and NTP and see if there are chemical substances that perhaps we didn't address because we just started out with these 22 that had been recently updated. So I don't know if George wants to weigh in on that. I don't know if George is on.

MEMBER FRIEDMAN-JIMENEZ: Yes, I'm here. I think, you know, we've made a substantial addition to what's in the SEM. I
think the way that it gets integrated into the
SEM and how well that works is something that we
can follow up on. I think IARC and others have
identified pretty well the occupational
carcinogens that have been evaluated that are of
concern.

My concern is to make the SEM a more
user-friendly tool. And so to make sure that it
gets integrated well and that it works and that
it fills its purpose, which is to make the users
of the SEM aware of the possible causal
substances for a particular cancer that a patient
has or to make people that are exposed to those
substances aware of the possible cancer outcome
from that.

And I think designing how the SEM is
going to be updated is something that we can give
some thought to also. You know, NTP puts out a
report on carcinogens every few years. It used
to be biennial, but now I think it's every three
or four years. And IARC puts them out as they
finish them.
So the mechanism by which they get reviewed and get onto the radar of the SEM and get incorporated in the SEM is something we could work with. And do we work at all with the people that do Haz-Map? Because this could be integrated into Haz-Map also. I don't know how well they've integrated the 2A carcinogens. I don't think they have.

MEMBER GOLDMAN: No, they haven't because we checked that, I think, in an earlier iteration of this. At least in the ones that we checked, the 18 that we looked at, none of them were mentioned in SEM and SEM is based on the Haz-Map.

And I guess, just to second something that George is also saying, you know, we put this work into these 11 and it would be nice to see what actually happened with those 11 now that we've put that out. What is going to be the response of DOL to this recommendation? Are they going to accept it, are they going to accept it for all of them? Are they going to come back and
want more information about some other aspects?

So I think just waiting and see what happens because there may be a response from them that we need to then respond to. And I think George is also right that we need to build in how would the follow-up happen and who would be looking at the next thing, the next report to come out about the carcinogens.

CHAIR MARKOWITZ: This is Steve Markowitz. I don't think -- we'll see what the Department, how it receives the recommendation on the 2As, but there's nothing, in any event, I think that would prohibit us from sending our recommendation and rationale to the Haz-Map people and just letting them know this Board exists and this is a recommendation. It's public, but what we came up with, you may want to think about it.

MEMBER FRIEDMAN-JIMENEZ: Yes, I think that would be good because the Haz-Map is more widely used. The SEM is really for only people in this program. The Haz-Map is used nationally
and internationally. And I think that if they can incorporate this step forward as well I think that would have a beneficial impact.

MEMBER GOLDMAN: Well, that's a great idea, but who communicates with them? I mean, is there somebody from DOL who's in contact with them? Do we just reach out to whoever the head is? I mean, what's our standing to just do that?

MS. POND: So this is Rachel. You know, it's a good question. We'll have to look into it.

MEMBER FRIEDMAN-JIMENEZ: In theory, the SEM is really about identifying exposures and Haz-Map is about identifying the links and documenting the links between the toxic substance and the health outcome. So they have somewhat different roles. So I think if Haz-Map could be updated in a way that would incorporate these new carcinogens, or the 2A carcinogens, that would take a little bit of the causation weight off of the SEM. Because the doctors that use the SEM also use the Haz-Map, I think, to get more
CHAIR MARKOWITZ: This is Steve Markowitz. I think it's probably more accurate to say that the SEM incorporates Haz-Map, it uses Haz-Map to make the exposure disease links. I mean, correct me if I'm wrong, Mr. Vance or Ms. Pond, but I think that's the way the SEM was created and updated.

MS. POND: This is Rachel. That's correct.

MEMBER FRIEDMAN-JIMENEZ: So are you saying then that by updating Haz-Map, that the SEM will automatically incorporate those updates?

MS. POND: That's true, but we also, based on your opinions, we don't go through Haz-Map. Some of these causation links that we add to SEM are based on your -- so we're not solely reliant on Haz-Map. We can go ahead and add links into SEM without a Haz-Map verification, especially when it comes from the Board because you guys have expertise and we have documents...
that can back up what we add.

MEMBER GOLDMAN: So do you think that then DOL should be, I mean, you are using SEM. I mean, I don't know -- we've produced this document. One of the things that was said in the beginning is that some things we just can't share. So I'm not even sure what we can share and what we can't share. Of course, that's now public record since it's up on the website.

But is there a way we would -- somebody could reach out to them or from -- I mean, I don't have a connection with this organization, you know, and so who am I to just like write to them and say, hey, we put this together, maybe you're interested in it. But perhaps as an organization or somebody in DOL could say we use SEM but this is what our advisory board put together. I mean, who would -- I think that's actually a great idea to share what we did and encourage them to make these linkages. But who would be the one to make that connection?
MEMBER FRIEDMAN-JIMENEZ: Well, Haz-Map is largely the work of Dr. Jay Brown in Washington State. I'm just looking at his website now. So maybe if we sent him our document, our review, we could start a dialogue with him and see if he'd be willing to consider adding the eleven 2A carcinogens to Haz-Map. I think it's just one guy, actually.

MEMBER GOLDMAN: Really?

MR. CHANCE: Hey, everybody. Everybody, this is Mike. Let me weigh in real quick on this about what I know about Jay Brown.

That's true, it's the one guy. He did the whole thing when we started SEM way back many years ago. It was the only thing that was definitive enough that we felt like -- because it was also tied into other things like the NIOSH Pocket Guide and that sort of thing. It was something that was ready off-the-shelf that we could use.

I do believe that there is a way to communicate with him, but I think that Rachel should be able to look into that and find out.
Because it's been a while since I've, you know, since I've looked at this issue, but you're right, it is Jay Brown and I think that Rachel can just, you know, do some investigating on how to get in touch with him. But she -- her point is still valid that the SEM can't expand beyond that database. Sorry to jump in, but I just know this so I thought I would add.

MEMBER GOLDMAN: Because, you know, just us reaching out like who are we? We don't even know him and I think that sounds like a better plan and, you know, if other people use it and he thinks what we've done is reasonable that's helpful to other people that are using that as a source.

MR. CHANCE: Yes, I would just leave it up to the Department to find out how that can be done.

MS. POND: Yes, this is Rachel. I agree with what Mike says. We, as I said, and the most important thing is we can still add those based on your research and what you provide
to us because we will have the backup documentation. The bottom line and the most important thing for SEM is to make sure we have the scientific backup. And you guys, it looks like, have provided us with a lot of that and we don't have to go through Dr. Brown to do that.

That being said, yes, I will look into how we can -- he does what he wants on his database based on his set of criteria. So once we evaluate what you've given us, we could reach out to him and suggest it.

CHAIR MARKOWITZ: Okay. Well, this is Steve Markowitz. The first step is for us to finish the process of submitting a recommendation. We have four recommendations. They have to be submitted with rationales. The six-minute walk test rationale is already completed. The asbestos rationale is completed. I don't think any changes are required. And the IARC 2A rationale is completed. Although I don't know if you want to sign off on that and see if there are any changes you wanted to make or not.
I'm going to write up the COVID recommendation rationale. It's going to be brief. I can send it around to people for their input. But it's going to reflect pretty much what we said and it's going to be relatively brief. And I hope to do this within the next week or so, so we can get these things in.

Are there any other issues before we close the meeting? Any other comments or questions? Okay. Mr. Chance, I believe you're the one who adjourns these meetings.

MR. CHANCE: I think I am. I think I am. I hope -- we made a little change to the format this time and went 1:00 to 5:00. I personally think, just from observing a little bit, that the meetings were more focused. And the recommendations, you know, that are coming out of this are going to look good.

And Steve, I'm going to reach out to you to discuss the issues that were raised about working groups. I just want to make sure that we've got all that nailed down before we actually
talk about it. So I'll be reaching out to you in the next week and we can have a chat.

So that's all. I want to thank everybody for, I think, two really good days of discussion and digging into some weighty important issues for the program. And I guess we will be in discussion later about the next meeting and the location. So without anything else, I want to take everybody for their hard work and we adjourn the meeting.

(Whereupon, the above-entitled matter went off the record at 4:19 p.m.)