

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

* * * * *

In the matter of:

*

*

FORUM ON SAFETY, MOBILITY AND

*

THE AGING DRIVER

*

*

* * * * *

NTSB Board Room and Conference Center
490 L'Enfant Plaza
Washington, D.C. 20024

Wednesday
November 10, 2010

The above-entitled matter came on for hearing, pursuant
to Notice, at 9:00 a.m.

BEFORE: DEBORAH A. P. HERSMAN, Chairman

APPEARANCES:

NTSB Technical Panel

DEBORAH A. P. HERSMAN, Chairman
BRUCE MAGLADRY, Director, Office of Highway Safety
STEVE BLACKISTONE, Acting Chief, Safety Advocacy
Division
ELISA R. BRAVER, Ph.D., Transportation Research Analyst,
Office of Research and Engineering
DEBORAH BRUCE, Ph.D., Project Manager, Office of Highway
Safety
IVAN CHEUNG, Ph.D., Transportation Research Analyst,
Office of Research and Engineering
DENNIS COLLINS, Senior Accident Investigator (Human
Performance), Office of Highway Safety
STEPHANIE DAVIS, Safety Advocate, Office of
Communications
MITCH GARBER, M.D., Medical Officer
ROBERT MOLLOY, Ph.D., Chief, Report Development
Division, Office of Highway Safety
KRISTIN POLAND, Ph.D., Senior Biomechanical Engineer,
Vehicle Performance Division

Witness Panel 4

LISA J. MOLNAR, MHSA, University of Michigan
Transportation Research Institute (UMTRI)
RICHARD MAROTTOLI, M.D., MPH, Yale University
of Medicine
ARTHUR KRAMER, Ph.D., Director, Beckman Institute for
Advanced Science and Technologies, University of
Illinois
ELIN SCHOLD DAVIS, OTR/L, American Occupational Therapy
Association (AOTA)

Witness Panel 5

JANE STUTTS, Ph.D., University of North Carolina (UNC)
Highway Safety Research Center
CARL SODERSTROM, M.D., Maryland Department of
Transportation (Maryland DOT)
ESSIE WAGNER, Program Analyst, National Highway Traffic
Safety Administration (NHTSA)
LOREN STAPLIN, Ph.D., TransAnalytics

APPEARANCES (Cont.)

Interested Parties

RICHARD ASHTON, International Association of Chiefs of Police (IACP)

THOMAS MANUEL, American Association of Motor Vehicle Administrators (AAMVA)

BARBARA HARSHA, Governors Highway Safety Association (GHSA)

JONATHAN KING, National Institute on Aging (NIA)

BETH ALICANDRI, Federal Highway Administration (FHWA)

JOHN MADDOX, NHTSA

SCOTT SCHMIDT, Alliance of Automobile Manufacturers

KELLY BRAITMAN, Insurance Institute for Highway Safety (IIHS)

JUREK GRABOWSKI, AAA Foundation

JACOB NELSON, AAA Foundation

RODNEY PEELE, American Optometric Association (AOA)

ELIN SCHOLD DAVIS, AOTA

JANA LYNOTT, AARP

NANCY BELL, AARP

JULIE LEE, AARP

ELINOR GINSLER, AARP

JEFF MICHAEL, NHTSA

I N D E X

<u>ITEM</u>	<u>PAGE</u>
PANEL 4: Enhancing Driver Performance	
Introduction by Dr. Bruce	242
Presentations:	
Driver Screening - Lisa Molnar, MHSA, UMTRI	243
Medical Assessment and Cognitive Testing - Richard Marottoli, M.D., MPH, Yale University	250
Driver Enhancement through Cognitive Training - Arthur Kramer, Ph.D., University of Illinois	259
Rehabilitating Drivers - Elin Schold Davis, OTR/L, AOTA	266
Questioning by Technical Panel:	
Dr. Bruce	243
Dr. Cheung	254
Dr. Bruce	266
Questioning by Parties:	
Mr. Michael	273
Ms. Lee	280
Mr. Schmidt	288
Mr. Manuel	295
Questioning by Technical Panel:	
Dr. Garber	306
Mr. Magladry	310
Chairman Hersman	313

I N D E X

<u>ITEM</u>	<u>PAGE</u>
Panel 5: State Programs and Practices	
Introduction by Ms. Davis	325
Presentations:	
Overview of State Licensing Laws and Innovative State Programs - Jane Sutts, Ph.D., UNC	329
Role of Medical Advisory Boards - Carl Soderstrom, M.D., Maryland DOT	337
NHTSA Initiatives Medical Evaluation Handbook - Essie Wagner, NHTSA	341
Fitness to Drive - Loren Staplin, Ph.D., TransAnalytics	333
Questioning by Technical Panel:	
Ms. Davis	329
Mr. Blackistone	341
Dr. Garber	344
Mr. Blackistone	347
Questioning by Parties:	
Ms. Alicandri	354
Ms. Schold Davis	361
Mr. Grabowski	371
Ms. Harsha	379
Questioning by Technical Panel:	
Dr. Garber	386
Mr. Blackistone	387

I N D E X

<u>ITEM</u>	<u>PAGE</u>
Questioning by Technical Panel:	
Chairman Hersman	390
Closing Remarks by Chairman Hersman	397
Adjourn	401

P R O C E E D I N G S

(9:00 a.m.)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CHAIRMAN HERSMAN: Good morning and welcome back.

Welcome to our second day of the Safety, Mobility and Aging Driver public forum.

Yesterday, our three panels discussed the safety risk posed by aging drivers and we established that, with the exception of the very old, there was not really a disproportionate crash risk associated with aging drivers. However, when the elderly are involved in a crash, they're more likely to be fatally injured because of their frailty and low tolerance for injuries.

We looked at what vehicle occupant protection systems could do to improve crash outcomes for the elderly and we also looked at what technology and highway designs could do to improve the performance of aging drivers and all drivers in general.

So today, we're going to turn to our last two panels and the first panel looks at enhancing driver performance. This panel will be discussing the ways that we assess driver capability, both in terms of mental and physical abilities. The initial question will be how do we assess performance? An assortment of tests and evaluation approaches will be covered in the panel today: road tests, vision tests, occupational therapy abilities for driving testing, medical assessments, medical review boards and self evaluations. A great deal of public interest has been focused on driver screening methods and the panel will open with a survey of

1 that work.

2 Once a limitation or a performance decrement is
3 identified, the focus shifts to a second important question, what
4 can be done to remediate the driver?

5 Dr. Deborah Bruce and Dr. Ivan Cheung have prepared
6 questions for this panel. Dr. Bruce, will you please introduce
7 the panelists?

8 DR. BRUCE: Good morning.

9 Lisa Molnar is a lead research associate at the
10 University of Michigan Transportation Institute's behavioral
11 sciences group. She joined UMTRI in 1986 and her primary areas of
12 interest are traffic safety and driver behavior. Ms. Molnar holds
13 a BA in sociology from Michigan State University and a master's in
14 health services administration in public health policy and
15 administration from the University of Michigan. She's co-author
16 of a recent book, *Maintaining Safe Mobility in an Aging Society*.

17 Dr. Richard Marottoli is an associate professor of
18 medicine at the Yale University School of Medicine. He's also a
19 medical director of the Alder Geriatric Assessment Center at Yale-
20 New Haven Hospital and he is a staff physician at the Veteran's
21 Administration Connecticut Health Care System. He received his
22 undergraduate and medical and public health degrees from Yale
23 University. Among many things, he's the former chair of the TRB
24 Committee on the Safe Mobility of Older Persons and a member of
25 the Connecticut Department of Motor Vehicle Medical Advisory

1 Board.

2 Dr. Art Kramer is the director of the Beckman Institute
3 for Advanced Science and Technology at the Swanland, chair and
4 professor of psychology and neuroscience at the University of
5 Illinois. Professor Kramer served as an associate editor of
6 *Perception in Psychophysics* and is currently a member of seven
7 editorial boards. He is a recent recipient of the NIH Tenure
8 Merit Award. He received his Ph.D. in cognitive experimental
9 psychology from the University of Illinois.

10 Elin Schold Davis has coordinated the American
11 Occupational Therapy Association's Older Driver Initiative since
12 2003. She is a registered, licensed occupational therapist and a
13 certified driving rehabilitation specialist. She holds a BS in
14 occupational therapy from the University of Minnesota and has been
15 an occupational therapist for 30 years.

16 Thank you all for coming.

17 I would like to start with Lisa. I often see screening
18 and assessment as sort of paired in the same sentence. Would you
19 give us a general description of driver screening and maybe
20 distinguish it from assessment?

21 MS. MOLNAR: Madam Chair. Just by way of background,
22 you know, as we heard during many of the sessions yesterday,
23 driving is a complex task that requires visual, cognitive and
24 motor abilities, and as we age, most people experience some loss
25 in these abilities due to medical conditions that become more

1 prevalent with aging and also, the medications used to treat them.
2 And we know that this process has a lot of variability from
3 individual to individual.

4 People are very unique and the older driver population
5 is very heterogeneous so making informed decisions about driving
6 really requires meaningful information about driver's functional
7 abilities. So the issue of evaluating driver fitness, which is
8 what we really want to talk about today, is really complex and
9 it's often controversial for a number of reasons. And one that
10 you just mentioned is that often there's a lack of clarity about
11 the difference between screening and assessment. And I'll be
12 talking about that.

13 So in the work that we've done at the University of
14 Michigan, and I think that among many other researchers, policy
15 makers and practitioners, this is becoming also the case, there
16 needs to be a clear distinction between what we mean when we talk
17 about screening and what we mean when we talk about assessment.
18 So screening and assessment really represent different and
19 distinct domains of driver evaluation and screening is really the
20 first step in a multi-tiered process. It's not something that, in
21 and of itself, should be used for making licensing decisions.

22 On the other hand, assessment provides a basis for
23 identifying reasons for functional deficits, determining the
24 extent of driving impairment and making recommendations about
25 licensing actions. And also, identifying options for driving

1 compensation or remediation, which I know we'll be talking about
2 later on in the panel.

3 So when we think about driver screening, we're talking,
4 again, as I said, about the first step in a multi-tiered process.
5 Screening is something that we use to identify very obvious
6 impairments in functional abilities and vision cognition,
7 psychomotor skills. It's intended to lead to more in-depth
8 evaluation if gross impairments are identified, but it should not
9 be used to make final licensing decisions. And again, driver
10 assessment provides the basis for identifying the reasons for the
11 functional deficits that might be observed and the extent of
12 driving impairment. It's used to identify options for driving
13 compensation or remediation recommendations and licensing actions.

14 And so as we conceptualize driver screening, we think
15 about it, really, as part of a more multi-faceted, multi-
16 disciplinary approach to driver evaluation. It's something that
17 can occur in a variety of settings and at various levels of
18 complexity.

19 Yesterday, we heard Dr. Dobbs talk about a process of
20 identification of drivers, assessment, and then options at the end
21 for maintaining mobility. And screening is really that part of
22 the identification process that involves a number of players from
23 the community. It's done in licensing agencies. It's done in
24 physician offices and other clinical settings, by occupational
25 therapists. It's something that can be done by law enforcement

1 who are making traffic stops of older drivers. It's something
2 that's also done in the community, by friends and family members
3 of older drivers who might be experiencing problems and it's done
4 by older drivers themselves.

5 So it is part of a comprehensive, multi-faceted, multi-
6 disciplinary approach to drivers who may be at risk. That being
7 said, I think it's important, as was said many times yesterday,
8 that when we talk about identifying drivers who may be at risk,
9 we're focusing on the safety aspects of transportation. We can't
10 lose sight of the fact that, although it's important as
11 researchers, policy makers and practitioners to find effective
12 ways to identify drivers who may be at risk, we need to also think
13 about how we can provide community support to drivers who are not
14 able to drive or who choose not to continue driving so that they
15 can maintain their independence and well-being and quality of
16 life.

17 DR. BRUCE: Thank you. So I'm hearing you say that we
18 need to do screening by medical providers, social services
19 providers, law enforcement, licensing, older drivers, caregivers?

20 MS. MOLNAR: Um-hum.

21 DR. BRUCE: Those are a lot of different players and I
22 would assume that the screening tools differ. So would you give
23 us some discussion about the types of tools, self-assessment tools
24 and the value of each of those?

25 MS. MOLNAR: Yes, I would be happy to.

1 So as I mentioned, screening can be done in a variety of
2 settings and in the licensing agency, for example, there are a
3 number of forms that screening can take. Observations can be made
4 of people as they come in to the counter to renew their license or
5 take care of licensing issues. I'll get to -- there's also review
6 of medical history that can occur in the licensing agency and
7 there are a variety of tests that can be done in the licensing
8 setting to screen for deficits in vision, cognition and
9 psychomotor skills.

10 Within the physician's office, there are also a number
11 of tools that are available for physicians. Physicians have a
12 unique opportunity to screen as part of regular medical care and
13 treatment. One of the challenges has been that many physicians
14 feel that they don't have the tools to really make fitness to
15 drive decisions. And also, there are issues of not wanting to
16 really disrupt the patient/physician relationship.

17 And so screening, I think, really, you know, offers an
18 opportunity to intervene early to identify red flags and if
19 necessary, refer patients on for more in-depth assessment. Some
20 of the work that's been done in the physician area has included
21 developing guides for physicians like the AMA Guide for Assessing
22 and Counseling Older Drivers that offers information about the
23 kinds of red flags that might alert a physician to something that
24 might be problematic with driving. The physicians' guide also
25 contains a screening battery called the ADReS, which has a series

1 of tests that can be administered.

2 And similarly, in the licensing area, there's been a lot
3 of work on developing some protocols for doing observations at the
4 counter, as well as developing batteries that look at the kinds of
5 limitations in physical functioning that we know are associated
6 with problems with driving.

7 Having said all of that -- I guess now, if you could go
8 to the state of the research?

9 UNIDENTIFIED SPEAKER: Slide 3.

10 MS. MOLNAR: So having said that, I think that, you
11 know, in general, although there's been a lot of research to
12 develop screening tools that are valid, reliable, low cost and
13 easily administered, these are particular constraints faced by
14 physicians and licensing agencies.

15 To date, there are really no tools that have been
16 developed that satisfy all of these components. We've been doing
17 the research for a long time. That research continues on ways to
18 improve the sensitivity, which is maximizing the correct decisions
19 that an individual is a high, you know, crash risk and the
20 specificity, which is minimizing the incorrect decisions that an
21 individual is a high crash risk.

22 So that research continues and hopefully I'll have an
23 opportunity to talk more about some of that, but in the meantime,
24 I think there's widespread consensus, as came out of yesterday's
25 discussion, that screening tools really need to focus on looking

1 at these functional declines in vision, cognition and psychomotor
2 as opposed to focusing on age, per se, or even looking at the
3 complex array of medical conditions that people might be
4 experiencing.

5 And then, in addition to, I think, the licensing
6 agencies and physician and clinical settings, I mentioned law
7 enforcement has an opportunity to do screening at the roadside.
8 And there have been a number of efforts over the last several
9 years to develop curriculums and training materials for law
10 enforcement so that they have a standardized way of using cues to
11 look at drivers who they may have stopped during a traffic stop
12 and make a determination of whether there seems to be some
13 impairment. A lot of these cues have to do with cognitive
14 functioning.

15 So, for example, they might include something like, you
16 know, assessing whether the person is oriented in time and space,
17 you know, where they -- if they're getting lost and they don't
18 know where they are or where they're going, those kinds of cues
19 that can then lead to referrals for more in-depth assessment.

20 DR. BRUCE: All right. Thank you.

21 I recently went to my DMV to turn in my motor scooter
22 license, so I've got some questions about how the practicality of
23 that might work. But I'm going to, in the interest of time,
24 proceed on through the panels and go through the questions by the
25 parties. And then, if there are any at the end, I'll reserve my

1 time for then.

2 So with that, I'm going to turn to Ivan Cheung and
3 Dr. Marottoli.

4 DR. CHEUNG: Good morning.

5 Dr. Richard Marottoli is an associate professor at the
6 Yale University of Medicine and we're going to talk -- we're going
7 to ask Dr. Marottoli and talk about some of the cognitive
8 assessments. And please give us your introduction.

9 DR. MAROTTOLI: Thank you, Dr. Cheung.

10 I would like to start just by talking, giving an
11 overview from the medical perspective sort of more broadly
12 and then I think we can get into some of the individual aspects.
13 I also didn't bring any slides, so -- but if there are specific
14 things that people want, let me know. I can get you slides.

15 DR. BRUCE: If you have any you want to submit, just
16 send them to me --

17 DR. MAROTTOLI: Okay.

18 DR. BRUCE: -- and I'll put them in the docket.

19 DR. MAROTTOLI: Will do.

20 So I would just like to cover, sort of, from the --
21 thinking from the clinician's end of the process, sort of what is
22 realistic to expect and why do people need to get involved. So
23 why should we evaluate, what do we evaluate, how, who does it and
24 what do we do with the information. And then, I think from there,
25 a lot of the other questions will come.

1 We heard about sort of the demographic imperative, which
2 is a large part of the why, but also there is the issue that was
3 raised earlier about the clinician's role in concern about the
4 safety and health and quality of life of their patients as well,
5 which is another reason to get involved.

6 In terms of what to assess, I would argue that actually,
7 there is a benefit to looking at diseases and conditions in
8 addition to functional abilities and impairments, in part because
9 we're looking also for interventions and we're looking for things
10 that we can improve. And in this patient population, this age
11 group, oftentimes, our ability to intervene is limited in terms of
12 the extent to which we can make a big difference.

13 So if we can have several different avenues and make
14 smaller improvements in each of those, hopefully, cumulatively,
15 there will be an additional benefit. So I think both the disease
16 process in terms of its manifestations and severity and also,
17 functional impairments that result either from the disease or from
18 the aging process alone are both avenues for both assessment and
19 intervention.

20 The third arm of possible, both things to look at and
21 intervene upon, are medications and this was touched on briefly
22 yesterday in the question of polypharmacy. But there are many
23 different categories of medications that can have both beneficial
24 and potentially negative effects on either the conditions that
25 they're being used to treat, but also on abilities relevant to the

1 driving task.

2 In terms of how we assess that, there are a variety of
3 ranges and it was covered a bit in terms of the specific aspects
4 of vision, visual acuity, visual fields, contrast sensitivity,
5 cognitive ability or a variety of different global measures that
6 can potentially be used by clinicians, as well as looking at
7 individual cognitive domains. The ones of those that come up most
8 often are things like information processing speed, attention in a
9 variety of forms, visual spatial ability and executive function.
10 And then, lastly, physically ability, particularly range of motion
11 and speed of movement are the two areas.

12 One area that tends not to get looked at a lot, but that
13 comes back and is relevant to everything, particularly, and we
14 talk about patients with cognitive impairment, is issue of
15 awareness or insight in deficits. And we're trying to think about
16 interventions and having people change or modify their behavior,
17 their awareness or insight into their deficits is critical in
18 recognizing the need for change.

19 We also, clinically, also like to have some measure of
20 driving performance. So it's nice to have all these assessments
21 of different capabilities, but in terms of convincing people the
22 need for a change, it's really helpful to relate those to how
23 people actually drive. And we have the advantage of often having
24 families in their clinic visit, so we'll recommend the families
25 ride with them and get a sense of that. That's helpful in

1 providing both information, also in affecting that change
2 ultimately. Oftentimes, particularly for cognitively impaired
3 patients, it's the family that ends up having to actually do the
4 dirty work in terms of making that transition. So it's helpful to
5 have them on board with that. And there are also formal
6 assessments that can be done and Elin, I believe, will talk a bit
7 more about those.

8 Then we get to the question of who does the actual
9 screening, assessment, et cetera, and this was touched on briefly.
10 But I mean the issue is sort of the self-assessment, the driver
11 themselves; their clinician, office staff; or lastly, a licensing
12 agency. And there are pros and cons of each of those.

13 Then the last segment of issues is what to do with that
14 information. And ultimately, the goal of gathering that
15 information is to convince, from the clinical perspective, to
16 convince the clinician of the need for change and then,
17 ultimately, to convince the patient or driver and the family that
18 indeed change is necessary and what that change should be. So
19 that's the ultimate purpose of gathering that information and then
20 transmitting it, and also, to identify interventions where
21 adaptive strategies that may help ameliorate some of these
22 problems and allow people to continue driving for a longer period
23 of time more safely. And lastly then, the issue of reporting to
24 licensing agencies and how that process goes on.

25 I think there have been -- from a Gestalt perspective,

1 there have been two major areas of development over the course of
2 the last 10 to 15 years in this and one that's been touched on by
3 a number of speakers, and that's the appreciation of a more
4 holistic approach to this, rather than just dealing specifically
5 with the issue of driving or not driving or licensing and not
6 licensing, but really looking at the broader perspective of a
7 person's mobility and how they get where they need to go and their
8 ability to fill in that void if they're not able to drive or
9 choose not to drive.

10 And then, secondly, is increasing evidence for the
11 effectiveness of a number of interventions, particularly relating
12 to those functional abilities I outlined, which, hopefully, over
13 time, will allow us to really sort of change the tenor of a lot of
14 that discussion from one that's very negative to something that's
15 slightly more positive in the process. And there are also a
16 variety of education interventions that can work more broadly
17 rather than focusing on specific individual functional abilities,
18 but take the actual driving task and look at that in more detail.

19 DR. CHEUNG: Thank you, Dr. Marottoli, and thank you for
20 giving us a very good succinct distinction between various medical
21 conditions and functional ability.

22 And I'm wondering if you can comment on some of this
23 distinctly different professional training that our medical care
24 professions need in order to deal with those very different
25 aspects of driving performances?

1 DR. MAROTTOLI: So that's a difficult question because
2 there's many different levels at which one could answer that.
3 First is getting people, clinicians to recognize that it's
4 something they should do in the first place. And I think that
5 that's an initial barrier that needs to be overcome. And partly
6 that's because there's a negative perception to the issue and the
7 negative effects it has on the clinician/patient relationship.
8 And secondly is the broader issue of not knowing what to actually
9 do and the third is what happens to that information after the
10 clinician gathers it. And so, potentially, each of those are
11 areas to look into.

12 I think, from the first perspective is convincing them
13 of the need from a clinical perspective that it's really the
14 safety and the mobility of their patient that is of interest. And
15 this is part of that, as well as their obligation to society in
16 terms of public health and public safety and working on that
17 aspect. And most people will recognize that and weigh that
18 against potential negative effects on their patient.

19 The second is the issue of what specifically to address
20 and that, again, depends on, I think, what we realistically want
21 people to do, as well as what they will do or can do. And I think
22 focusing on sort of the medical aspects, both the conditions and
23 functional impairments potentially related to that, is realistic.
24 I think a lot of people have difficulty then making the next step
25 of linking that to driving safety implications.

1 And so I think, to the extent that one can focus the
2 physician's task or the clinician's task to something more
3 limited, specifically on the nature and presence, severity of a
4 condition or a functional impairment, I think there's a greater
5 likelihood of getting people to do it.

6 And then there are also the issues of specific tools or
7 things that they can do fairly readily in the clinician's office.
8 And there are a lot of different tools out there, a lot of
9 different things that have been looked at, many of which are
10 impractical in that setting. And it's becoming increasingly
11 difficult because time is of the essence. There is a limited
12 number of things that people can do in that setting and I think
13 everything that we look at has to be considered in terms of its
14 potential burden in displacing something else from that
15 interaction. And so those are tradeoffs that we need to think
16 about.

17 And lastly is the issue of what happens to that
18 information afterwards. And partly it's sort of dealing in
19 discussions with patients and families about affecting a change,
20 and then separately and perhaps the subject of a much longer
21 discourse is the issue of reporting and actually providing that
22 information to a licensing agency. And I think -- I won't go into
23 detail on that. We can deal with it with specific questions.

24 But I think, again, keeping that process as transparent
25 as possible, making sure that everyone understands their

1 responsibilities; the driver, as well as the clinician knows what
2 their obligations and responsibilities are in that jurisdiction
3 and then having a process that is as straightforward and simple as
4 possible and that also provides some communication back and forth.
5 It tends not to be a two-way street in most areas, so we're asking
6 clinicians to provide that information to a licensing agency, but
7 very often there's no information that comes back unless there's
8 an irate patient or family that then comes back and is very angry
9 about the nature of that. But the clinician is often clueless as
10 to what actually happened or transpired. So some way of feeding
11 that information back akin to the more typical medical
12 consultation where you ask someone to provide input, they then
13 send a letter or a note back saying this is what my impression was
14 or this is what happened, anyway, and I think that would
15 facilitate some of that interaction as well.

16 DR. CHEUNG: Thank you.

17 Just one more question before we move on to Dr. Kramer.
18 Dr. Dobbs yesterday talks about premature driving cessation,
19 particularly for older women. And do you think that, are these
20 drivers really underestimating their own competency, or perhaps
21 our current assessments or screening tools or process are actually
22 not picking up some of the problem that they actually experience?

23 DR. MAROTTOLI: Yeah. I think that's a very good
24 question. Obviously, premature is a relative term in terms of
25 this and we tend to typically hear about this when it's in the

1 other end of the spectrum and people go on too long, as the video
2 yesterday demonstrated so nicely. And those are the ones that
3 really come to the public's attention, come to our attention and
4 really sort of create a media flurry.

5 We tend to hear very little or know very little, in
6 fact, about appropriate cessation and premature cessation. And I
7 suspect that it does occur a lot, but there are a number of
8 studies, even looking -- even in cognitively impaired populations,
9 suggesting that by the time they reach either a dementia
10 assessment center or a geriatric assessment center, most people
11 have already stopped driving.

12 So, in fact, they're regulating in some way on their own
13 or with their family or primary physician's input. So they've
14 made that determination. It's a relatively small proportion that
15 go beyond that, fortunately; an infinitesimal proportion that
16 really is the problem one who refuses under any circumstance.

17 But I think it is worth understanding what contributes
18 to people stopping and this question of prematurely stopping. Is
19 it outside influences that force them to do that, other people's
20 impressions of their driving capability, or do they have some
21 innate sense that they're just uncomfortable with that and they're
22 better at figuring that out than we are. And therefore, it's not
23 really premature, but it's appropriate for that person and I just
24 think we don't really have a good way of measuring that precisely
25 and really identifying that information at present.

1 DR. CHEUNG: Thank you very much.

2 Dr. Kramer, would you please give us your remark?

3 DR. KRAMER: Sure. Well, thank you for inviting me. I
4 appreciate being here. My task was to talk about driver
5 enhancement through cognitive training, so I'll be a bit more
6 focused than the last two presenters.

7 And what I wanted to start by saying is that most
8 cognitive training programs are still in the experimental stage.
9 Think of it as a Phase II drug trial, I suppose, if we want to
10 apply it to drugs. But there are an increasing number of
11 commercial products that purport to improve driver training. In
12 fact, some of them even advertise that if you go through this
13 training program, you can reduce accident rates by 50 percent.
14 And I think it's worth evaluating them in terms -- with the same
15 level of scrutiny that we evaluate drugs in drug trials because I
16 think they can have same benefit or -- and/or harm depending upon
17 what the assessment is.

18 My bottom line, to start with a bottom line, is that
19 there is some interesting and potentially promising results from
20 these cognitive training programs. But if I was to evaluate them
21 by virtue of the same information that is used in National
22 Institute of Health consensus statements to evaluate research in a
23 particular field, and I did participate in one of these within the
24 last year on Alzheimer's and aging, I would say at present, given
25 the present state of refereed journal articles, the evidence is

1 weak at best, and let me tell you why I say that.

2 Even the gold standards, and by gold standard, I mean
3 the randomized control trials that have randomly put people into
4 one training group, another training group, or perhaps a control
5 group. And control groups are always tough because no control
6 controls have their disadvantages. It's a control group that
7 often gets used but perhaps isn't the optimal one.

8 When we look at those randomized control groups, control
9 studies, there aren't many, number one. They tend to be
10 underpowered quite substantially, number two. Number three, the
11 effect sizes tend to be rather small. And what I mean by that is
12 small in a statistical sense in terms of effect size, but also
13 small in terms of the number of variables that are relevant to
14 driving that show changes, that is, beneficial effects from
15 various cognitive training programs.

16 I'm not going to mention any particular studies unless
17 you decide you want me to do that. But perhaps one of the gold
18 standard studies compared one cognitive training program that
19 looks promising, by the way, in terms of on-the-road driving and
20 driving simulation -- those were the outcome variables prior to
21 and subsequent to the training program -- and found a benefit for
22 1 out of 19 variables. Simulator training, which has been around
23 for a long time, both in aviation as well as driving, and in many
24 fields, actually showed two beneficial effects for two different
25 variables.

1 So I'm not suggesting that cognitive training programs
2 aren't efficacious. I'm suggesting we need to collect the kind of
3 data that we collect for drug trials and other kinds of trials;
4 that is, set the same high bar and standard for these trials.

5 I think it's also the case that we maybe, as scientists,
6 and I am a scientist as well as a research administrator, haven't
7 been creative enough in terms of the kinds of cognitive training
8 programs we've pursued. And as we've already heard from our two
9 speakers, this is really a multivariate problem. It's not a uni-
10 variate problem in which it's just one aspect of cognition or one
11 aspect of perception or physical function or disease or
12 polypharmacy, but truly, a multivariate problem. And in terms of
13 cognitive training, we don't focus on the complete -- the richness
14 of this problem, the multivariate sense; we tend to focus on
15 particular areas. And I think this is even true with respect to
16 cognition.

17 Some of the programs focus on what's called speed of
18 processing, which is probably much more than that when you look at
19 the specifics of the training programs, but there are many other
20 aspects of sensory function, whether it's vision or hearing, motor
21 function, and cognition in terms of visual spatial memory,
22 executive control, as well as perception and speed of processing
23 that may be important. So I think we need to look at -- we really
24 need to look at the breadth of the cognitive changes that take
25 place and, of course, with respect to the assessments, how they

1 relate to driving performance to use them in a theoretically
2 principled way to target in terms of our training interventions.

3 I think, in addition to the randomized control trials,
4 which really are the gold standard, we need more observational
5 studies. Think of it as epidemiology for driving, in which we
6 track different driver populations based on the choices they make
7 in life, at least to give us hints as to what randomized control
8 trials we might perform in the future. And again, there are
9 precious few of those -- of the observational studies that would
10 provide information and hints as to what kinds of training
11 interventions we might pursue.

12 I think just like drug trials, we need broader
13 replication of the promising results we've seen. We need
14 independent validation -- these studies tend to be done at a very
15 small set of laboratories -- again, for us to have some assurance
16 that they really are broadly applicable. We need to go beyond
17 single laboratories or groups of researchers.

18 I think even more importantly, we need to understand
19 mechanism and I think for many of the training approaches that are
20 pursued today, there are most black box engineering approaches,
21 and I don't say that pejoratively because I taught in engineering
22 for 15 years at the University of Illinois. But they work in some
23 cases. They give you small, positive benefits. Of course, we
24 need replication, but why they work, just like why drugs have
25 particular actions. Knowing the molecular pathways tends to be

1 very important to understanding the process and more specifically
2 and maybe more effectively targeting the intervention. So we need
3 much more detail about mechanism and studies that focus on
4 mechanisms so we understand what's going on.

5 I think stratified sampling is very important and many
6 of the studies that have been done have focused on individuals
7 that are older and individuals that have very specific problems,
8 whether it's in vision or visual attention or what have you. So
9 we really don't know, if we look at these studies, how these
10 training interventions and these successes, even with small
11 effects, apply to the broader community of older and middle-aged.
12 In fact, middle-aged people are pretty much ignored in many of
13 these studies. So I think we need to move on with that.

14 Accidents are certainly the bottom line, the gold
15 standard in terms of the outcome variables, but it takes a large
16 study to get enough accidents to make much sense of the data. And
17 I think there are a number of studies in the literature now, that
18 if you look at them, the data doesn't make a whole lot of sense,
19 perhaps because the sample size is so small. So I think we need
20 to come up with better proxies, better proxy measures, just as we
21 do in terms of drug target effects, for accidents; that we can
22 have some faith in that are both valid and reliable in being
23 related to accidents so we can use them in simulator studies or on
24 the road studies or randomized control trials.

25 That's my statement.

1 DR. CHEUNG: Thank you, Dr. Kramer.

2 DR. KRAMER: Sure.

3 DR. CHEUNG: And I guess the take-home message is that
4 there is some positive sign, but at the same time it needs to
5 be -- you know, concerns and that it be cautionary, taking the
6 process.

7 You know, I'm wondering if you can give us a -- sort of
8 like a high level observation. Can we actually say that perhaps
9 some of these positive evidence of the effectiveness of all this
10 cognitive training, perhaps maybe they were -- you know, some the
11 people who takes all these cognitive trainings, actually the safer
12 subsets of the older driver.

13 DR. KRAMER: Yeah.

14 DR. CHEUNG: And so therefore, we really don't know a
15 lot about the driving history of them in comparison to those who
16 actually don't take all these cognitive training.

17 DR. KRAMER: Sure. I think this is a problem we have in
18 any study, be it a drug study or a driving study. Certain people
19 volunteer for studies and we always have to worry about those not
20 volunteering who might need it the most. But it has been the case
21 with a number of these -- not all, but with a number of these
22 cognitive training studies, that the researches have specifically
23 selected individuals who did poorly on some screening test. And
24 it's often a screening test of visual attention or processing
25 speed or what have you, probably both of the above.

1 So I think population is very important. Volunteers
2 tend not to be representative of the whole population. We need to
3 be careful about that, but at least in some of the studies, they
4 have targeted people who had deficiencies in certain functions
5 that have been related to driving.

6 DR. CHEUNG: Great. Thank you.

7 I did have one more question before we move on to the
8 next panelist. Yesterday, we heard a lot about, you know, the
9 newer technology, the newer vehicles, actually, perhaps collecting
10 a lot of data about their own driving. Do you think that the
11 advancement of that kind of technology may perhaps help us out
12 with, you know, what you have just described to us about a lack of
13 observational data that perhaps can be a better case for cognitive
14 training.

15 DR. KRAMER: I think that's certainly the case. I mean,
16 it seems very similar to the whole research domain of
17 bioinformatics and gene-wide screens. We can collect a massive
18 amount of physiological data, health data, genetic data. The
19 question then is what do we do about it? And we can take a brute
20 force approach. There are many modeling techniques that we can
21 use to look at the relationship of that data to some outcome:
22 accident rates, mortality, what have you. Or we can take a more
23 principled approach. And maybe we need to take both, and a more
24 theoretically driven approach based on some of the information
25 that we heard from the first two speakers about the kinds of

1 problems that older adults have and how those problems, in terms
2 of physical function, disease, polypharmacy, cognition, sensory
3 function, motor function, relate to driving.

4 So I think there are a number of ways to use the kinds
5 of data that the sensors that now exist and are possible in
6 automobiles might be used to build models in -- for large
7 populations and really stratify the populations. Of course, there
8 is always the issue of confidentiality here too.

9 DR. BRUCE: Thank you.

10 So we're actually marching down this multi-tier process
11 that we first introduced with the panel. So we start with
12 screening, trying to identify candidates who need to be evaluated.
13 We look at cognitive testing as one aspect, one type of that
14 evaluation. We presented the question to Dr. Kramer of, once
15 we've identified that, what do we think about cognitive training?
16 And we've gotten to the end of the table. Elin Schold Davis is
17 the occupational therapist who is often called in to actually take
18 what we have decided is a driver problem and see what can be done
19 to either further assess it or to remediate it.

20 So my first sort of general question to you is,
21 occupational therapy is a broad field and so I would like for you
22 to describe what aspects of it -- what you actually do and then,
23 more specifically, there is a driver rehabilitation specialist
24 component of it that I want some description of. Thank you.

25 MS. SCHOLD DAVIS: Thank you. Thank you. And thank you

1 for inviting me and including me in this esteemed panel. So I
2 appreciate the opportunity to speak on driver rehabilitation.

3 Yeah. Occupational therapy is a very broad field and we
4 address activities of daily living and instrumental activities of
5 daily living which are really core to people's functioning, their
6 abilities to do the things that they want to do. When we look at
7 driving, occupational therapists look at driving as an
8 instrumental activity of daily living as -- and what Dr. Eby said
9 yesterday, being the last in the panel is kind of handy because a
10 lot of things have been said. So I will go through some of these
11 very quickly, but to set the stage, again, we look at driving
12 concerns as an issue of function, not an issue of age.

13 We have issues with driving across all age spans, but
14 certainly, when we're looking at the older driver issues, we want
15 to be looking at the minimum skill set that's required for the
16 task of driving. So all occupational therapists, in their
17 evaluation process, for a person that finds themselves in the
18 rehabilitation setting or in the hospital setting will look at
19 this minimum skill set in the domains of vision, physical ability
20 and cognition.

21 And then we want to think about, would those impairments
22 challenge one's role as a driver? Would those impairments
23 challenge their critical roles of transporting other people,
24 driving grandchildren? So we find seniors equally as concerned,
25 making sure that they're safe to do these roles, participate in

1 these roles that they are responsible for, as well as doing these
2 activities.

3 And so we want to be able to provide an evaluation that
4 looks at that driver as an individual. As we've gone down the
5 table, when Dr. Molnar was talking about screening, we're looking
6 at more population-based criteria, cut points that help us
7 recognize flags and when there's a concern. The driver rehab
8 specialist is really there to look at the individual. And so
9 we're part of the team and part of the process. Not everybody
10 needs a comprehensive driving evaluation, but if it were you being
11 told by the results of a screening tool that you needed to stop
12 driving, would you want the opportunity to be having your
13 individual situation looked at, your individual skills and
14 abilities measured so that you have that opportunity to see if
15 there's anything that can be done?

16 When I think of any diagnosis as catastrophic as a
17 cancer diagnosis might be, the first question is what can I do
18 about it? Is there anything I can do to restore this ability?
19 And I think that's where the driver rehabilitation comes in to
20 assist with that.

21 Driver rehab dates back to the beginning, really, of the
22 vehicle. Franklin Roosevelt drove with hand controls. It
23 originated looking at people with disabilities and assisting them
24 with driving. It's important to keep in mind, when we see some of
25 the variability and programs around the country, part of it is

1 related to the fact that the issue of older drivers, the issue of
2 aging with medical conditions, really the issue of deciding when a
3 person should stop, is somewhat new. It's new and being placed
4 upon this field and it's really requiring a different skill set.
5 Helping anyone be able to drive is a different skill set than
6 deciding when they need to stop.

7 So thinking about the purposes for our evaluation and
8 our intervention, it's really to see if we can ready somebody to
9 drive and this could be the occupational therapy, the driver rehab
10 or the medical setting. And then we can look -- in looking at
11 what the key signs if somebody is in a declining condition, such
12 as a dementia, of when they should stop.

13 Who administers a driving eval? We've had some
14 discussion along with the different panel members, but I just want
15 to make the point that there are different domains of where people
16 enter this system. And different places -- unfortunately, we have
17 a language problem that I think driving evaluation is a one name
18 for many different services. These are very good services, but
19 they have different personnel, different training and different
20 outcomes.

21 At the driver licensing level, you have a performance-
22 based test that's really a pass/fail. At a physician level, you
23 have a medical -- you know, you're looking at the medical
24 condition. At a driving school, their mission is to teach people
25 to drive. A comprehensive driving evaluation by an OT is looking

1 at a mixture of the assessments that Lisa Molnar talked about,
2 pulling them together to a comprehensive evaluation. We look at
3 their history. We look at physical assessments, looking at
4 concerns like their arthritis and how that might effect their
5 driving, looking at getting in and out of a vehicle and loading
6 their equipment. We look at visual perception. We look at
7 cognition. We also add, for a comprehensive driving evaluation,
8 the performance-based, behind-the-wheel assessments so that we can
9 see how these impairments play out in the context on the road.

10 In many models, you need to kind of qualify to go on the
11 road. Sometimes you don't need that part if there's enough
12 impairment or lack of impairment to not need that specific on-road
13 piece, but it's part of the package.

14 There are several possible interventions because in
15 occupational therapy, if we do an evaluation, it's followed by
16 treatment. When we try to figure out what a person's problem is,
17 our mission is to then figure out what we can do about it. So our
18 goal is to remediate. And I think it's important that -- a lot of
19 times when we think about, I think, driving evaluations and older
20 drivers, and the high profile media cases might be represented by
21 a group that may fall into the dementia category in a group that
22 is declining and isn't a candidate for restoring these sub-skills,
23 but there's a bunch of people that are.

24 And we need to make sure that we not forget them and
25 that we have the services so that if they have a remediable

1 problem, that we can develop interventions to assist them.
2 Whether it's putting hand controls in their vehicle, extending
3 their pedals for driving, making sure they not only have a
4 scooter, but they can get it in their car, so they're still not
5 homebound because now they can't get anywhere with their mobility
6 device because they can't get it in their car, so that they can be
7 doing the things they want to do and their mobility is getting
8 them to the places that they want to be.

9 There are several possible interventions, be we also, as
10 occupational therapists, have the intervention if a person needs
11 to stop. And we have to provide mobility counseling and assist
12 people if you have an impairment that says -- that leads you to
13 not being able to drive, it likely puts you at risk, to just go
14 take public transportation, go hopping on a bus if you feel the
15 driving evaluation probably puts you at risk.

16 So the mission of our work is a spectrum and trying to
17 help get people to continue to driving if we possibly can or
18 helping them to safely transition from driving.

19 Thank you.

20 DR. BRUCE: Thank you.

21 We are delightfully on time and I thank you for your
22 remarks. They've been very pointed. It's a treat.

23 I do have one last question for you and that is, who is
24 a driving rehab specialist, how did I get to be one, and I'm going
25 to wait and see if the party questions don't cover any other

1 aspects that I would have had cued up for you, but --

2 MS. SCHOLD DAVIS: Okay.

3 DR. BRUCE: -- briefly, just describe to me how that
4 varies state by state.

5 MS. SCHOLD DAVIS: A driving rehabilitation specialist
6 is -- there is a -- is a little bit difficult to answer,
7 unfortunately, for the clarity for the panel. Part of it has been
8 the evolution of the field. Driver rehabilitation is a
9 professional that has been trained in how to evaluate and treat
10 driving.

11 There is an association called the Association for
12 Driver Rehabilitation Specialists, which is a multidisciplinary
13 field. The field addressing driving involves occupational
14 therapists. The majority of the professionals are occupational
15 therapists, but it also involves driving school educators, driving
16 instructors. It also includes rehab engineers and vehicle
17 modifiers. So there's -- just as in other areas of medicine,
18 there's a constellation of professionals that are involved in this
19 area.

20 DR. BRUCE: Am I tested and certified?

21 MS. SCHOLD DAVIS: There are the -- the Association for
22 Driving Rehab Specialists has a test that gives the credentials of
23 certified driving rehabilitation specialists. This makes sure
24 that that person has a basic understanding of driver
25 rehabilitation, but it's not specific to any professional field.

1 The American Occupational Therapy Association has a
2 certification in driving and community mobility. It's a
3 performance-based certification that makes sure that the
4 occupational therapist working in that area understands the
5 evaluation, the intervention and the mobility counseling side to
6 transition somebody from driving to non-driving, which is more in
7 keeping with the occupational therapy frame of reference for
8 living life to its fullest and being able to address getting
9 people off the road, as well as keeping them on the road.

10 DR. BRUCE: Thank you.

11 MS. SCHOLD DAVIS: Um-hum.

12 CHAIRMAN HERSMAN: Good morning. We'll move to the
13 panels and we'll begin with the first table and NHTSA will be
14 asking the questions. And if you could for the cameras, identify
15 yourself by name and organization? Thank you.

16 MR. MICHAEL: Yes. Thank you for the opportunity. My
17 name is Jeff Michael. I'm with the National Highway Traffic
18 Safety Administration.

19 Question for Dr. Marottoli. Are there validated
20 protocols available for physician screening of patient driving
21 ability? The analogy I'm thinking of here is screening and brief
22 intervention for alcohol abuse problems. A number of validated
23 tools are available for physicians and the availability of these
24 tools has, I think, fostered the growth of the screening and for
25 options for treatment. Are there similar validated tools

1 available for clinician use for evaluating driving ability?

2 DR. MAROTTOLI: Yes and no. So there are many tools
3 that are available, many of which have been validated, although,
4 usually those are for individual components or have been validated
5 in a relatively small sample. There are a number of composite
6 measures, so the AMA ADReS composite measure that was mentioned
7 before is based on individual elements, some of which have been
8 looked at and validated specifically for their driving relevance.
9 Others of which, it's sort of an amalgam of things. So the entire
10 grouping has not necessarily been looked at, but the individual --
11 some of the individual components have. And that is, I think, the
12 limitation that often comes up, is that there are individual
13 elements that have been done, but not necessarily a composite,
14 sort of multidimensional one that has.

15 MR. MICHAEL: Thank you.

16 Can I keep going?

17 DR. BRUCE: Are there other questions from your table?

18 MR. MICHAEL: Yes. I apologize. Another question for
19 Dr. Marottoli. Could you say something about the incentives and
20 disincentives for physician reporting to licensing authorities?

21 DR. MAROTTOLI: The incentives are easy. There are
22 none. There are many disincentives. So the -- we had actually
23 did a study a long time ago where we specifically asked, we polled
24 clinicians in Connecticut with 2,000 respondents and asked them
25 specifically about this issue.

1 The positive, the one positive -- and I'm being a bit
2 glib, but the one positive was the sense of obligation to societal
3 safety and public health, and that is a very real one. And people
4 who do participate in it do that, as well as the issue of
5 protecting, if they truly feel that their patient is at increased
6 risk and they feel the need to intervene to protect that person,
7 as well as those around them. So there are some positives to
8 that.

9 Those, unfortunately, are often outweighed by the many
10 negatives of that. One is the opaque process that often is in
11 place. Two is the very real negative effect on the doctor/patient
12 relationship or the clinician/patient relationship. And this is
13 something that most, if not all physicians and clinicians hold
14 very dear. And the nature of reporting typically changes that
15 from one of being an advocate to being more of an adversary. And
16 many clinicians are very reluctant to sort of make that
17 transition.

18 And then third is sort of the practical aspects of, you
19 know, what they assess and how they actually gather that
20 information and the timing of that and the cost of that. But
21 those don't necessarily effect the reporting aspect as much.

22 MR. MICHAEL: Thank you.

23 A question for Ms. Molnar. Are there screening tools
24 available for family use and have these been validated?

25 MS. MOLNAR: There are a number of materials available

1 for families to help them think about changes that an older driver
2 might be undergoing and how to initiate conversations about
3 driving concerns. There are also several self-screening tools
4 that have been developed over the last few years. And although it
5 hasn't been tested actually, about the effects on family members,
6 one idea is that these tools can be used by older drivers and
7 their families to initiate these conversations.

8 What the research has shown with regard to self-
9 screening tools is that they really represent, I think, a special
10 case of screening in that, their best strength is for increasing
11 self-awareness among older drivers and generating general
12 knowledge about declines that people might be experiencing, the
13 impact of these declines on driving and recommendations for
14 further evaluation.

15 So unlike other kind of more rigorous, I think,
16 screening tools, self-screening at its best really focuses more on
17 increasing self-awareness and some of the studies that have been
18 done, looking at how well how well the outcomes of various self-
19 screening tools kind of predict real problems on the road or
20 problems with declining abilities, kind of find no statistically
21 significant, but modest correlations between the outcomes of the
22 tools and actual driving. Some self-screening tools haven't been
23 evaluated at all in this way, but I think there's enough that's
24 positive that shows that these kinds of screening tools do have
25 promise for increasing self-awareness and might be used to

1 facilitate those kinds of family discussions.

2 MR. MICHAEL: Thank you.

3 Another question for Ms. Davis. It seems that changes
4 in driving ability might be better assessed over a period of time
5 rather than a single point of time. Would it be feasible or cost
6 effective to identify a minimal driving or cognitive performance
7 battery to serve as a baseline for drivers and to assess against
8 over a period of time?

9 MS. SCHOLD DAVIS: That's an excellent question. And if
10 we had our wish, I think many of us would wish that we could get
11 the discussions about driving to happen earlier. If they can
12 happen earlier, it gives us time to plan. It gives us time to
13 think about transitioning from driving.

14 So certainly, what we are working on in the Occupational
15 Therapy Association and really increasing occupational therapists
16 role at the clinical level or the practice level is to be
17 identifying driving as a concern, having red flags that show
18 concern about it, addressing strengthening those concerns that we
19 could, but also starting the discussion that we're -- just as we
20 do for financial planning, we do for housing planning, we should
21 be thinking about driving planning. And so at the medical level,
22 we can start screening and helping people understand how changes
23 may be heading them that way.

24 People are living longer with medical conditions that
25 they didn't drive with so long: MS, Parkinson's disease, as

1 examples. And if we can intervene earlier, help people have
2 strategies earlier, we believe they might be able to be on the
3 road longer and safer and enhance their ability to be self-aware
4 and be the leader in helping decide when the time is right to make
5 that change.

6 MR. MICHAEL: Thank you.

7 One more testing -- one more question about evaluation.
8 It seems that aging-related driving deficits may appear under
9 stress rather than in less stressful driving. Do the driving
10 evaluations conducted by therapists typically involve any
11 stressful situations such as heavier traffic, faster decision
12 times, darkness, glare, et cetera?

13 MS. SCHOLD DAVIS: That's an excellent question and it's
14 certainly something being debated and studied right now. As many
15 areas in medicine are working toward having a more evidence-based
16 criteria for how decisions are made, the same is true with
17 driving. And there is work going on trying to look at some of
18 these factors.

19 I think that, as the practice stands right now, the
20 experienced driving rehabilitation specialists would like to take
21 people on the road to give them real live experience with merging,
22 with traffic conditions and try to challenge them in planning, go
23 back and find where you last were, doing some navigation. There's
24 certainly some look at simulators and being able to give more
25 challenge, but then we have the -- we aren't sure if people are

1 really reacting in those simulated situations in a realistic
2 enough way to make a decision about their driving competence. So
3 we do, as driving rehab specialists, try to add the appropriate
4 challenge that we think is safe for both the driver and the
5 tester.

6 MR. MICHAEL: Thank you.

7 And finally, a question for Dr. Kramer. The cognitive
8 training sounds very interesting. Could you give a specific
9 example of sort of the theory of the relevance of cognitive
10 training for older drivers? That is, what is an example of a
11 driving deficit that could be addressed by a type of cognitive
12 training and then what would be the desired outcome?

13 DR. KRAMER: Sure. I think there could be a number of
14 examples. One would be that as we get older, we're slower to
15 respond, slower to extract information from the visual environment
16 which is a large part of the environment in driving. So there
17 have been training programs that have specifically looked at
18 whether we can broaden the amount of visual field from which we
19 can extract information per unit time. And these programs have
20 often tried to force attention farther and farther out into the
21 periphery, as I was forcing the microphone.

22 And there certainly is some evidence that you can train
23 these aspects of visual attention and visual perception that we
24 know decline as you age. But of course, there are many other
25 aspects of cognition that decline as we age, not just, you know,

1 visual sensory function or perceptual function, but decision-
2 making ability, various aspects of memory and so forth. And these
3 other aspects of cognition that show age-related cognitive decline
4 have been addressed less frequently in terms of driving-related
5 training.

6 MR. MICHAEL: Thank you.

7 That concludes our questions. We thank the panel for
8 their interesting presentations and for the answers to the
9 questions.

10 CHAIRMAN HERSMAN: Thank you.

11 And we'll move to the second table, AARP.

12 MS. LEE: Good morning. My name is Julie Lee. I'm from
13 AARP and with me is Rodney Peele from the American Optometric
14 Association. And thank you very much for all the information
15 you've shared so far this morning.

16 We have a couple questions for you. You've talked a
17 little bit about assessments and cognitive training and brain
18 training. And for the panel, I would like to know what your
19 opinion is on the benefit of older drivers taking a defensive or
20 refresher driver safety course?

21 DR. MAROTTOLI: Well, I'll take a shot at that one.

22 So I think they're very valuable and they're useful.
23 They have a lot of face validity in terms of the content of those
24 programs. If you look at the studies of their actual demonstrated
25 benefit, they're somewhat variable from, perhaps, slightly worse

1 to slightly better. There have been a couple of studies now that
2 have added on-road training to that sort of fairly succinct -- on-
3 road training to the classroom setting and those have shown
4 consistently positive benefit in terms of that.

5 I don't think that the sort of mixed data on the
6 classroom alone sort of is a detriment necessarily because I think
7 there is useful information that can be provided and certainly
8 recommend that people do. And it also just raises the awareness,
9 and getting back to the issue that some of the other panelists
10 have raised, just sort of making people aware of what they need to
11 attend to. I think there's a lot of information that's provided
12 in there. They're fairly easy to do. They're inexpensive and
13 there's also often an insurance discount that goes with that. So
14 there is actually an incentive for the person to take that. So I
15 think there are many potential benefits for that and I think they
16 can possibly be tweaked to make them even more beneficial.

17 MS. LEE: Okay.

18 MS. MOLNAR: I would like to respond also. Yesterday,
19 we heard a great deal about self-regulation or self-restriction of
20 driving as a way to compensate for declining abilities and kind of
21 extend the period over which people can safely drive. And to
22 self-regulate appropriately, people need information to become
23 more self-aware, so I also see the driver training courses as a
24 forum for providing that kind of information, generating
25 discussions among people.

1 DR. KRAMER: I think Dr. Marottoli was being humble
2 because one of the excellent studies was his that he published in
3 2007 in which he combined both classroom training with on-the-road
4 training. And in looking across the literature to prepare for
5 this panel, I did notice that the studies that combine both the
6 instructional training, the classroom training with some on-the-
7 road or simulator training tend to fare better in terms of the
8 outcome variables. So if we're looking for programs that might be
9 useful for older adults, knowledge is important, but so too is
10 feedback and actual practice with someone experienced to provide
11 that feedback, whether it's a driving instructor or whatnot.

12 MS. SCHOLD DAVIS: And if I may add one more comment?
13 And that is, again, strategies and interventions are not a one-
14 size-fits-all with this population. And I think insight-based
15 programs are excellent for the majority of senior drivers or older
16 drivers, but we need to help families and persons with certain
17 conditions where they're not a good match or we can't be expecting
18 of people to be coming away with the insight. And that
19 particularly is probably the group with dementia or cognitive
20 impairment. And we can't expect families to be using an insight-
21 driven approach to be expecting the change that they're looking
22 for. So it's important that families understand that what can be
23 good for many might not be the right thing for their situation.

24 MS. LEE: Okay. Thank you.

25 Since vision screening is low sensitivity and does not

1 ensure treatment, what do you recommend to the NTSB for vision
2 assessment and improved vision function for the aging driver?

3 DR. KRAMER: We're missing our vision person today, so
4 well, the default. I'll try. I think -- so it is a bit tricky
5 because obviously the associations for the most common measures of
6 static visual acuity are relatively weak in terms of their
7 association. But again, in terms of face validity, it has an
8 obvious relevance to the driving task and there is an association
9 that's there. People are also very familiar with it. Licensing
10 agencies are familiar with it. So I think -- and it is reasonable
11 to still have a general standard on that. The question is what to
12 supplement that with to perhaps enhance the benefit of that.

13 Visual fields and contrast sensitivity would seem to be
14 the two most likely candidates in sort of their ease of
15 measurement and also, familiarity to the general audience. It
16 depends a little bit on where you do those because not everywhere
17 can do them relatively accurately. They're a little bit trickier.

18 I mean, a visual acuity can be done anywhere fairly
19 simply and cheaply and everybody knows how to interpret it. It's
20 a little bit trickier when you actually quantitatively measure
21 visual fields in the horizontal frame. In contrast sensitivity,
22 you typically need a specialized chart, which most people don't
23 have, although, you could make those more readily available and
24 you could have more widespread, you know, use of them.

25 And again, as was mentioned yesterday, sort of a

1 combination of those have been shown to be beneficial in terms of
2 identifying people who are at risk for driving-related
3 difficulties and also, in terms of contrast sensitivity, fall risk
4 as well. So another added benefit if you want to implement its
5 usage, giving sort of another angle where that would be
6 potentially beneficial.

7 MS. SCHOLD DAVIS: And if I may add, just to respond to
8 the questions earlier about over-restricting. Certainly, there
9 is -- vision screening is a health screen as well for the health
10 of the eye and getting in to get a new glasses prescription; the
11 prompt to get in and maybe get cataracts treated is certainly,
12 oftentimes, for some people, that's where they get the trigger
13 that they need to get that assistance.

14 I also want to make a plug. There is a specialized
15 field called low vision driving and in some states, the visual
16 acuity and the vision guidelines allow for an exception when
17 people have training in low vision driving. It's quite -- I find,
18 quite a fascinating specialty area. It is only licensed in
19 certain states and sometimes people with low vision want to know
20 what states they can go to so that they are able to meet the
21 criteria to be able to drive.

22 MS. LEE: Thank you.

23 Couple more questions. Doctors are reluctant to tell
24 patients they should no longer drive, but occupational therapists
25 are trained to do so. Can you -- how can we get more doctors to

1 work with the occupational therapists to help us with this?

2 DR. MAROTTOLI: So, one is to make people aware, like
3 the first question on, you know, what is a DRS and how do they get
4 licensed and who are they. I think, one, many physicians I
5 have are not necessarily aware of the different therapy
6 professionals and what the distinctions are and what they do. So
7 many people cannot distinguish specifically what a physical
8 therapist does from what an occupational therapist does. And
9 then, within the spectrum of what occupational therapists do, the
10 sort of niche of driving rehab specialists is also not necessarily
11 recognized. So one is making people aware of what they do and
12 what the benefit is to their patients and to themselves.

13 The second issue, and one that Elin and I have talked
14 about many times in the past, is the dearth of people who are
15 actually available and trained to be able to do that. And there
16 are many reasons for that.

17 The main one from my perspective being economic and that
18 even in our area, many programs have closed and have used --
19 they've sort of transitioned their occupational therapists to
20 doing more traditional occupational therapy as opposed to driving
21 assessment simply because of the costs of the program and the
22 remuneration. And so it's easier for them to get paid and to make
23 more money doing it that way. So they've closed those programs
24 and moved them to different things. So the access to those people
25 is much more limited. So partly, it's sort of broader recognition

1 and enhancing the way that those are compensated.

2 MS. SCHOLD DAVIS: Is it fair to say, when you said
3 these programs are closing, it's not based on no need; it's been
4 based on -- they've been closed despite having the need. So we
5 certainly are -- one of the things that we've been doing at
6 American Occupational Therapy Association is working on educating
7 all occupational therapists about driver rehabilitation, because
8 we can be our own triage. We can't always expect physicians to
9 understand the difference between our sub-specialties, but we need
10 to be identifying driving by all practitioners.

11 If you can put this slide back up, I forgot to mention
12 it when I asked you to put it up before. And then I didn't
13 comment on it. It's just the idea that all -- we've been working
14 very hard that all occupational therapists are addressing driving
15 as an instrumental activity of daily living. And then, if there
16 are concerns that are flagged within the medical setting, they
17 will be finding and referring to a specialist.

18 We have a chicken and an egg problem of getting more
19 driver rehabilitation programs because we need people requesting
20 them or referring people to them so that we can get more programs
21 to grow, certainly using the more -- beginning with the medical
22 model, the screening for driving is certainly part of our typical
23 occupational therapy evaluation and that is reimbursed. It's as
24 you get into the subspecialty area that we have variability across
25 the country for reimbursement.

1 And this is just describing -- all of these are
2 different things all occupational therapists can do. Only the
3 green triangle is where you need the subspecialty, not unlike
4 oncology or other areas of medicine where many things are handled
5 by a number of people and you send people to the specialist when
6 they're -- when we've identified that that's the right place for
7 them to go. I do believe, as we get more efficient at getting the
8 right people to these specialists, it also helps make it more
9 financially appropriate.

10 MS. LEE: And as a follow-on to that, do insurance
11 companies pay for the OT evaluation and if so, how do we get more
12 insurance companies to buy into this evaluation?

13 MS. SCHOLD DAVIS: Reimbursement is variable. It's an
14 answer that doesn't please people, but it's just true. It varies
15 by state and it varies by interpretation of the statutes. Some
16 areas have reimbursement for occupational therapists performing
17 the complete comprehensive driving evaluation, particularly when
18 they really describe it by its functional components, which it is.
19 And in other areas, it's sometimes, for convenience, they have
20 actually pulled the whole program out of the reimbursement system
21 and they ask people to pay for it privately.

22 I think what can help is demand of trying to make sure
23 that we are getting reimbursement for the areas that at least fit
24 well within our practice.

25 MS. LEE: Thank you very much.

1 CHAIRMAN HERSMAN: We'll go to the third table and it
2 looks like the Alliance of Automobile Manufacturers is going to be
3 questioning for the third table.

4 MR. SCHMIDT: Yes. And I'm joined by Keli Braitman with
5 IIHS and Jurek Grabowski with AAA.

6 First question is a three-parter. The panel stated that
7 there is no one accepted screening tool. What does the panel
8 recommend as elements of a model screening and assessment system?
9 And then, what elements are known to be ineffective and will the
10 public view screening as profiling, especially in minority
11 communities? And how can this impression possibly be mitigated?

12 MS. MOLNAR: Well, I'll take a stab starting.

13 I think, in terms of what would be the optimal screening
14 tool, you know, I think the challenge is that the science really,
15 right now, lags behind the need by practitioners for tools and
16 instruments and procedures that they can use right away. We know
17 that -- and we've talked about the various functional abilities
18 that are important in driving.

19 And if you could put up -- I think there's -- I have a
20 slide on the MaryPODS study, which is some of the early work that
21 came out on screening tools for licensing agencies. And that
22 study identified a number of functional abilities that are
23 associated with crash risk and it also identified a battery that
24 had a number of tests for those abilities. So I think that's one
25 kind of starting point that we know that we have to look at the

1 kinds of abilities that relate to driving.

2 Part of the challenge in implementing something in a
3 licensing agency like this, as has been discussed, is that there
4 are a lot of other considerations in terms of constraints on time,
5 constraints on costs, constraints on the resources that are
6 available, trained personnel to do these kinds of tests. But we
7 do need to think about which abilities are related to safe driving
8 and start there.

9 And I think, similar to what Dr. Kramer spoke about in
10 terms of evaluating cognitive training programs, in thinking about
11 coming up with a good screen, we really need to think about the
12 kind of research that's necessary. And unfortunately, that
13 research is often time consuming and very expensive. We need more
14 longitudinal studies. We need studies that have sufficient
15 samples so that we can reach meaningful conclusions about the
16 impact on crash risk, for example. And we haven't really been
17 able to do those kind of studies.

18 Although, I think it's very promising that there's been
19 a lot more collaboration in recent years and there actually are
20 some research efforts under way to try to get at what would be the
21 best kind of screening tool, particularly that could be done in
22 physician offices. That research is being carried out by a
23 consortium of Canadian researchers. It's called Candrive and they
24 have funding for five years. They're using a sample that's
25 recruited from seven sites across Canada, as well as one site in

1 Australia and one site in New Zealand now.

2 They'll have sufficient numbers of drivers that they can
3 test a screen that they're identifying and look at crash risk.
4 They'll have about 1,250 drivers. So I think that's really
5 exciting and hopefully in the next few years, we might have some
6 more definitive results on that.

7 MS. SCHOLD DAVIS: If I may comment, I think one of the
8 best protections is making sure that screening is screening and
9 not -- doesn't become an evaluation. I think that we have to
10 recognize the context where these different screens occur, the
11 purpose of them and the scope of them. If we develop screening
12 tools at a DMV level, they should be referring somebody for the
13 next level of expertise. I certainly understand population-based
14 screening. I think it's very important.

15 I don't support screening everybody for things. You
16 know, I think that that's too costly and it's not probably
17 warranted. However, we need some kind of different -- at
18 different entry points, whether it's at the DMV level, obviously
19 you're going to have a different skill set and a different tool
20 than you'll have at a physician's office, than you'll have at a
21 seniors' center, than you'll have in different contexts. These
22 all might be entry points. They all might be places where
23 screening tools will be used, but we need to ensure that we're
24 getting people then to the right service so that their needs will
25 be met, they will not be over-restricted and they won't be missed,

1 ideally.

2 MS. MOLNAR: I could just follow up very quickly. I
3 wanted to add too that I think these issues of sensitivity and
4 specificity are really key. We have a lot of screening tools and
5 the research can really inform about what are the effects of
6 different cut points, those kinds of things, but ultimately, I
7 think policy makers have to weigh in and decide what's acceptable
8 in terms of sensitivity and specificity.

9 So, for example, if a screening tool can identify, you
10 know, all drivers who would have failed a road test, but they also
11 identify a considerable number of people who actually passed the
12 road test and passed those people on as well, those are
13 considerations that policy makers need to think about and weigh in
14 on, kind of what's the tradeoff between the potential for losing
15 mobility or forcing people to incur considerable costs for further
16 evaluation that may not be necessary, those kinds of issues that
17 go well beyond the state of the research.

18 DR. MAROTTOLI: I think one of the difficulties is it's
19 inherently a multi-factorial issue and so it's hard to come up
20 with a narrow set of tests that will sort of cover the full range
21 of that, which is ideally what you're trying to do with this
22 screening test and maximizing its sensitivity.

23 Getting to your last point, which I think is the
24 trickiest of that, the issue of profiling. I don't think, from
25 the perspective that we usually think of that in terms of racial

1 or ethnic or socioeconomic one, but I think age is the equivalent
2 here in terms of a visually identifiable or perhaps physical
3 frailty or other things that are visibly identifiable in terms of
4 singling out individuals who would subsequently undergo screening
5 and as opposed to other individuals. And that becomes a trickier
6 aspect, and I think one that needs to be guarded against, but the
7 question is, how do you identify who is at increased risk as an
8 initial step and then move that person through the system into a
9 more detailed assessment?

10 MR. SCHMIDT: Okay. The next question is, when drivers
11 are presented with information or evaluations suggesting that they
12 may not be safe to drive, what resources are then available to
13 transition them from drivers to non-drivers?

14 DR. MAROTTOLI: Nobody's reaching. Okay. I'll go.

15 So I mean, I think the difficulty is it varies from
16 location to location, so there's no set answer. In some places
17 there are none or very few, and others there are more. And so
18 part of the difficulty is that it's very hard to generalize. And
19 also one needs to figure out what those resources are in a given
20 community and what the possibilities are based on that person's
21 own sort of social network family and other resources.

22 The question is who does that and where does that get
23 done or does anybody do that? And that's part of the problem, is
24 that there's no readily identified individual or group of
25 individuals to whom that responsibility falls. And I think that,

1 perhaps, is the biggest gap. I think if you can figure out who's
2 going to work on that, then the question is can you muster those
3 resources? And in many places you can, even with informal ones,
4 but it would help to have a more systematized approach and a
5 standardized way of dealing with it.

6 MS. MOLNAR: I would just add that I think, from a
7 research perspective, it's been gratifying to see that over the
8 past several years there's more emphasis on research to help
9 facilitate the transition from driving to non-driving. For
10 example, Dr. Dobbs talked yesterday about the work that she's done
11 on putting together support groups for drivers with dementia to
12 help them move toward driving retirement.

13 So I think there's kind of two pieces. First, we need
14 to have more evidence-based practices about what are effective
15 ways to help drivers transition. We need to have something for
16 drivers to transition to when they're no longer able or they can't
17 drive. And there was a lot of talk yesterday about really a focus
18 on providing alternative transportation. Maybe not in the
19 traditional way we think about it, but in new ways that are
20 acceptable to people and available in the areas in which they
21 live.

22 And then also making that information available to
23 people. And I think there's a lot of discussion about, you know,
24 who should be responsible for doing that. I know we had a
25 licensing workshop a couple of years ago that was sponsored by AAA

1 Foundation. We brought together about 40 experts from around the
2 country in older driver issues and the consensus was that
3 licensing agencies, given all of their other responsibilities, do
4 need to think about how they can also participate in making
5 resources available. So I think it's really a community-based
6 approach.

7 MS. SCHOLD DAVIS: And speaking for the occupational
8 therapists in the rehab setting, which is probably a net where
9 we're capturing a lot of people that are facing medical
10 conditions, we're certainly working with our therapists to be
11 moving from identifying that a person should be stopping driving
12 to how else they're going to get around.

13 There's a number of tools that have been created that we
14 have been distributing to the OTs and that -- like, for example,
15 the Beverly Foundation has come up with a dementia-friendly
16 calculator to assist with determining what public transit options
17 would be appropriate and what kind of safeguards would need to be
18 in place for a person using those.

19 There's a field that's been gaining strength called
20 mobility management at the transit side, trying to help match
21 people with the public -- with the support services they need.
22 And travel training has been gaining -- there's a gaining interest
23 and gaining training and support through Easter Seals, has a
24 travel training program to try to bridge -- if a person should be
25 using alternative transportation, they might need to learn how and

1 we're trying to increase the number of professionals that know
2 about this and so they can employ it.

3 I think the upshot is where we find ourselves saying it
4 sort of takes a village. We need a number of groups and
5 professionals in different areas. It may differ in different
6 communities, but if each community works on trying to have a
7 network of services, we're hopeful that that will be an important
8 way toward a solution.

9 MR. SCHMIDT: Thank you.

10 CHAIRMAN HERSMAN: Okay. We'll go to the last table and
11 AAMVA will be asking the questions.

12 MR. MANUEL: My name is Tom Manuel. I'm with the
13 American Association of Motor Vehicle Administrators and with me
14 is Barbara Harsha. She's from the Governors Highway Safety
15 Association.

16 Our first question is why haven't we made progress in
17 developing screening and assessment tools that have been
18 evaluated, generally accepted and widely used, and can there be
19 anything done to expedite this?

20 MS. MOLNAR: I guess I'll start.

21 Well, I think we are making some progress, as I
22 mentioned, some of the more comprehensive studies that are
23 underway now. But I think that some of the challenges are that
24 the research that's needed to come up with really valid and
25 reliable tools, as I said, is often expensive and time consuming.

1 And we're not always able in this field to do the kind of
2 randomized control trials that are essentially the basis of work
3 in other areas like in biomedical areas. We can't necessarily
4 randomly select older drivers. By its very nature, older driver
5 research often depends on recruiting volunteers and then we get
6 into self-selection bias and things like that.

7 But I think apart from that, there's also been some
8 disagreement on the best way to validate measures. You know, what
9 is the gold standard for looking at outcomes? Should it be crash
10 risk? Should we be differentiating, you know, scores by crash
11 involvement? And you know, to that end, then we need large
12 samples. What's the rigor required? You know, there's still, I
13 think, a lot of discussion on what levels of specificity and
14 sensitivity do we need those kinds of things.

15 And then I guess, also, I think it goes beyond just
16 having valid and reliable screening tools. We have all of these
17 other constraints. For example, as we've talked a lot about,
18 licensing agencies face a number of constraints. Physicians have
19 a small amount of time with patients. Comprehensive driving
20 evaluations are expensive and we don't really have enough
21 certified driving rehabilitation specialists.

22 So there are a lot of these different issues that I
23 think make it maybe a little messier than in other areas.

24 DR. MAROTTOLI: I think a lot, also, of the same
25 methodological issues that I was describing before for the

1 interventions apply to screening as well. So you need individual
2 impairments of sufficient prevalence in the community that you're
3 looking at to find it and then, depending on the outcome that you
4 choose, you need a large enough study. So if you're dealing with
5 a relatively uncommon functional impairment or condition and a
6 relatively uncommon event such as a crash, then linking those two
7 together requires a large sample to be able to do that. And part
8 of the problem is gathering enough of that.

9 Some of the best efforts, as have been alluded, have
10 been sort of state based, large state-based programs where they're
11 having a large number of drivers that come through that can test
12 out a number of things and then follow those people or have the
13 records available to monitor that in looking at different systems
14 in doing that. The downside is gathering that information
15 sufficiently in that environment. Particularly if you have a
16 limited amount of time with those large number of individuals, you
17 typically have less detailed information on them, and so linking
18 those two together.

19 So I think, you know, gathering that information,
20 putting it together, and ultimately considering sort of larger
21 scale studies is the way to try and narrow that a bit.

22 MS. SCHOLD DAVIS: And if I can follow on that. I do
23 think that, as we look at the broad population, we may be seeing
24 more forward motion in subareas like dementia. I think that
25 we've -- I think we have more confidence and we're seeing some

1 more clarity in the tools and the criteria for driving retirement
2 from dementia.

3 I think, in a broader scale, when we talk about these
4 evaluation tools, I think there's been a recognition in the
5 transportation community that evaluations without options for
6 people, the evaluations don't get used because you're sentencing
7 people to being stranded. And so it's not about just evaluating.
8 It's about making sure we can help people stay mobile and we need
9 all the spokes on the wheel. So I think we've seen increased
10 energy in the transportation world of making sure we're getting a
11 family of services in place so that an evaluation that might
12 result in cessation would actually end with having a person not be
13 on the road. Otherwise, we're just pulling licenses and some
14 people may continue to drive despite that because they have no
15 other option.

16 MR. MANUEL: My next question is how does a license
17 agency reconcile screening that identifies gross impairment and
18 the lack of a license decision and the associated liability with
19 that?

20 MS. MOLNAR: I'm not sure I understand the question that
21 you're asking because I see the screening for gross impairments as
22 very distinct from later licensing decisions that would be based
23 on more in-depth assessment.

24 MR. MANUEL: If you're identifying someone that has an
25 impairment, how would -- you're not making a decision about their

1 licensing, but they're identified as an impairment, how would a
2 licensing agency, say, reconcile that difference? As an
3 impairment and you're -- they're continuing to drive, how would
4 they reconcile that? Or could they or can they?

5 MS. MOLNAR: Well, I think that's one important role
6 that medical advisory boards would play, that those are boards
7 that are comprised of physicians and other experts who not only
8 can help formulate policy about, you know, criteria for licensing
9 decisions, but can review on a case-by-case basis and would review
10 in more in-depth assessment information.

11 DR. MAROTTOLI: Yeah. I think that, again, from the
12 perspective -- it's usually in the context of a multi-tiered
13 assessment. So there's the initial determination that someone has
14 a gross impairment, as you've described it. That person would
15 then have to move on to another level of more detailed assessment
16 to determine whether or not that has any effect on their driving
17 capability, either with an on-road test, more detailed testing or
18 review of their record previously to see if there's been any
19 evidence of violations or crashes. And then making a
20 determination on some composite of that information rather than
21 necessarily assuming that just because that impairment is present,
22 that their driving is necessarily affected.

23 MS. SCHOLD DAVIS: One thing that might be correlated to
24 that as well is immunity for reporting and I do think that, as we
25 look at policy issues, immunity for reporting in all

1 jurisdictions, so that professionals that are concerned have this
2 immunity to report, is an important step forward and we don't have
3 that consistently.

4 MR. MANUEL: Is there a danger in using screening tools
5 that haven't been evaluated and are these tools better than no
6 screening at all?

7 MS. MOLNAR: I think that's a tough one because I think
8 there can be negative consequences when screening tools aren't
9 valid. You know, they can either cause someone to worry when they
10 shouldn't or not to worry when they should. And so I think it is
11 a dilemma. And as we've talked about before, people need
12 resources to use and yet if the science isn't there -- and so I
13 think with screening, that's really one reason it's so important
14 to kind of confine the outcome of screening to being this first
15 step and not to use it in and of itself as a licensing decision.
16 I think that would be extremely dangerous.

17 DR. MAROTTOLI: This is a little like the anti-jeopardy.
18 I'm hesitating as we push for the thing.

19 You know, I think that there is a danger to labeling and
20 I think it does have a tendency to stigmatize people and it
21 depends on the nature of that. But we haven't really delved
22 deeply into the issue of dementia or mild cognitive impairment,
23 but it is something that is fraught with a lot of angst for
24 people. And I think if you label someone as being impaired,
25 regardless of the nature of that impairment, that that can affect

1 them very adversely.

2 And so I think one needs to do that in a sensitive
3 context of what you're trying to do with that information. And
4 also, that -- not to use those terms loosely or lightly. And I
5 think that there -- you know, there's a wide range of ability
6 within any capability. And even when we get to the issue of
7 dementia or cognitive impairment, there's a very wide range of
8 manifestations in terms of that, many of which may have no effect
9 on driving capability until much later stages. And distinguishing
10 that becomes very difficult.

11 So I think the difficulty is not sort of labeling based
12 on the presence of that, but using that information to then work,
13 but not necessarily just sort of stopping at that level, but
14 actually figuring out in more detail, what the importance or
15 meaning of that particular deficit may be.

16 MS. SCHOLD DAVIS: I wholeheartedly agree and just want
17 to add the caution that self-screening tools run the same risk.
18 And so I think we -- that's -- just to be cautious about over-
19 interpreting or how we can mis-administer them. They could be
20 very valid given as they were supposed to be, and we have no
21 control how people are actually using them, and we have to be
22 careful for the language that we're giving people about what the
23 results mean.

24 MS. MOLNAR: Yeah, I just want to echo what was just
25 said and I was going to add that self-screening tools are intended

1 for people who are cognitively intact. And so they're not an
2 appropriate instrument for people with dementia who lack insight
3 into their abilities and they can be even detrimental if they're
4 reinforcing inappropriately that the driver is safe to drive when
5 they're not.

6 And so I think we -- in using self-screening, there
7 needs to be communication within the community of professionals
8 about who to recommend that kind of self-screening to and to make
9 sure that, hopefully, it's done by people who can appropriately
10 use it.

11 MR. MANUEL: My next question. When we're talking about
12 screening and assessments, do they find there's any markers or
13 indicators that identify those that may not be qualified to drive
14 or those that would be able to continue to drive?

15 DR. MAROTTOLI: Would you repeat that question again?

16 MR. MANUEL: When we're talking about the screening or
17 assessment tools that you have out there presently, are there any
18 markers or indicators that would identify those that would be able
19 to be disqualified to drive or those that would be able to
20 continue to drive?

21 MS. SCHOLD DAVIS: I think some of the work on the
22 screening tools is trying to, at the initial stages, what we call
23 sometimes, identifying or lopping off the ends of the curve. You
24 know, people that really don't have any -- show any impairment in
25 these subareas of vision and cognition or physical ability at the

1 time of the screening, that might be enough to make that
2 determination, if that's what you're talking about. And so
3 glaring -- sort of the glaring, the solid, the severe-severe, the
4 really mild to none decisions could be made to not, frankly --
5 that doesn't push them to the next level, and making sure that
6 people fall within a gray area with that have the next level of
7 access to looking more specifically at their needs.

8 I'm not sure if that answered the question.

9 MR. MANUEL: Okay.

10 DR. BRUCE: Could I restate that question?

11 MR. MANUEL: Go ahead.

12 DR. BRUCE: Are there some tasks that are more
13 predictive of driving performance than others, and is that what
14 this is all about as far as screening and assessment? I mean, it
15 could just be yes as an answer.

16 DR. MAROTTOLI: Yes, I mean I think there are. There
17 are different aspects, different domains. I think there are
18 different ways of potentially going about that that have been
19 actually demonstrated to be linked to either driving performance
20 and/or less commonly to crash risks, but there certainly are.
21 There are a range of different measures of each of the abilities
22 that we've talked about that are linked to those. The difficulty
23 is narrowing that down to a single measure that covers that.

24 MS. MOLNAR: And I would just add, in one of the
25 previous slides, looking at the battery that came out of the

1 Maryland work, for example, there were six abilities that were
2 linked with crash risk with odds ratios ranging from, I think,
3 about 2.6 to 4.9. And a lot of those had to do with visual
4 search. I don't know if you can bring that back up, but -- so
5 there, at least, is some empirical evidence, you know, that's
6 relatively strong for -- the first one. So these are the
7 abilities that had odds ratios of about I think 2.68 to 4.9.

8 MS. SCHOLD DAVIS: I would say also, in looking at those
9 in general as a rehab specialist, areas in the domain of cognition
10 are probably looking more toward the severity as toward the
11 stopping. You can have very severe physical impairments and be
12 able to compensate them through equipment and vehicle
13 modification.

14 MR. MANUEL: Here's my last question. We use age as a
15 marker in medical screening all the time. I mean, I turn 50 years
16 old and my physician insisted that I have barbaric screening. So
17 I'm at risk for certain kinds of disease, et cetera. And yet, in
18 this, we always hear function, not age, function, not age because
19 there's a concern about discrimination, of age discrimination and
20 taking away the driving privilege. How do you -- is there any
21 reason that we can't determine age as a factor when we begin
22 screening?

23 DR. KRAMER: I think one of the things that we observe,
24 regardless of our outcome measures with respect to age, is a
25 tremendous amount of variability. So to the extent that

1 variability in almost anything we measure increases as a function
2 of age, that suggests that chronological age probably isn't the
3 best marker. Not that we have great markers of functional age.
4 I mean that clearly is a deficiency in the measurement of driving
5 or anything else. But given this relationship between adult aging
6 and variability, I'm not sure that we could set a particular
7 chronological age at which to do some of this testing.

8 I think when you get to extreme ages, and we are and we
9 will, in the United States and throughout the world, maybe that
10 will be a more reasonable thing to do. But I think in the general
11 category of old age, there is tremendous variability in almost
12 anything we measure.

13 MR. MANUEL: Okay.

14 MS. MOLNAR: I would just add, if I could, that there
15 has been some research done on looking at age-based mandatory
16 screening in licensing agencies. Some of the work has come out of
17 Australia. And the only study that really did find a safety
18 benefit, as far as I know, was a study that looked at -- that
19 found that in-person renewal among drivers age 85 and over was
20 associated with benefit.

21 That being said, it's interesting. I think there's
22 widespread consensus among people in the field that assessment
23 should not be based on age. But at the recent licensing workshop
24 that brought together experts from around the country, one of the
25 recommendations that actually emerged and surprised, I think, a

1 lot of people was that there might be some room for age-based
2 screening. For example, in the form of having in-person renewal,
3 you know, required at a certain age so that people would have to
4 come into the licensing agency and could be observed, so --

5 CHAIRMAN HERSMAN: Thank you. Thank you for your
6 questions.

7 Dr. Garber.

8 DR. GARBER: Just a couple of quick questions.

9 Dr. Marottoli, as has been noted, a number of these
10 individuals who may be at risk are going to come to the attention
11 of their physicians, either they or their family members may bring
12 this up. Perhaps, except for radiologists and pathologists, most
13 of us have had that question asked to us at some point in time.
14 What formal training do physicians receive either in medical
15 school or through state requirements or through residency programs
16 in how to assess drivers?

17 DR. MAROTTOLI: No formal training in general. It is
18 very variable in terms of the extent to which they have training
19 in geriatrics or aging issues. And many times it will be covered
20 within the context of that, if indeed. But otherwise, it tends to
21 be pretty sporadic in terms of where the information is. I think
22 that's where the outreach efforts that have been undertaken in
23 recent years by the AMA in conjunction with NHTSA and other groups
24 to try and reach both practicing clinicians and more recently,
25 physicians-in-training is an effort to make people aware of this

1 issue.

2 It does -- if you raise the issue with people, and I
3 encounter this all the time when talking to house staff and to
4 physicians. The issue comes up a lot; it's just not
5 necessarily -- there's not any background or information that's
6 been provided to them prior to that. So I think the field is ripe
7 for those outreach efforts.

8 DR. GARBER: And there are some guides available. The
9 physician's guide that the AMA developed in conjunction with NHTSA
10 was mentioned as one. To what extent is that getting out to the
11 physician community?

12 DR. MAROTTOLI: I think -- I mean, I think there has
13 been an effort to do outreach with that, both on a local level and
14 more broadly. I think that it would encourage continued effort to
15 sort of get that information out there and also, how to access it.
16 As more of that information becomes available online, I think that
17 also makes it easier for people to access and to gather
18 information on it.

19 So I think there is a broadening awareness of the fact
20 that that information is there, but I think that the original
21 update of that in 2003 and then the current one now are major
22 steps forward from what was available before that. I know the
23 Canadian Medical Association does a similar thing as well on a
24 regular basis. So there's information available.

25 DR. GARBER: And I think one last question for me. I

1 think it was Dr. Dobbs who mentioned that one of the big problems
2 really is dementia and associated sort of neurologic impairments
3 that result in cognitive decline. As we've noted, many folks are
4 aware when their vision starts to fail or when they become
5 uncomfortable behind the wheel for other purposes.

6 To what extent is that really the major problem? To
7 what extent is that the thing that ought to be focused on because
8 those are the folks who will not likely -- their impairment
9 prevents them, in fact, from identifying their own impairment?

10 DR. MAROTTOLI: Again, I hate to keep saying it's
11 relative, but I think it is relative in this case. I mean, I
12 think to some extent, awareness of deficits is common to many
13 functional changes simply because they tend to occur very
14 gradually and people tend not to be aware of them until it comes
15 to their consciousness at some level. And so that's true of
16 vision. It's true of physical ability and it's true of cognition.

17 And I think the major potential difference is that with
18 physical changes or with visual changes, one can be made aware of
19 those if those deficits are pointed out to you and, therefore, you
20 can be more likely to learn compensatory strategies. That tends
21 to be less commonly the case in dementia. Although, if things are
22 pointed out to -- I mean you can effect changes in people who have
23 dementia and drive if you point out what those deficits are to
24 them and explain why those deficits are likely to have a negative
25 effect on their driving. It's just a matter of sort of going

1 through that process. And part of it is sort of identifying what
2 those cognitive abilities or limitations are and then having that
3 discussion.

4 So it is trickier and I think it is an area of focus
5 because of the inherent lack of awareness with that, but I don't
6 think it's necessarily unique to cognitive impairment.

7 MS. SCHOLD DAVIS: If I can add on to that answer? Can
8 I have this slide up, please?

9 I absolutely agree. One of the things I've been a
10 little worried about in the last few minutes, I've been thinking,
11 we're talking a lot about screening and it seems to be a one-way
12 road again, the screening towards stopping driving. And the panel
13 yesterday -- the panels yesterday talked a lot about self-
14 awareness, self-limiting behavior and wanting people to make good
15 choices for themselves. And screening efforts or education
16 efforts should be for the majority, except for this subgroup of
17 dementia that we're talking about, we're really trying to help
18 people make -- with the exception or the different slant, I should
19 say, with the dementia group, we want to help people to make good
20 choices.

21 What we found with projects like -- I just put CarFit.
22 It's an education program that we have been rolling out with AAA
23 and AARP for the last five years. We find people afraid to come.
24 They're afraid to come and learn about how to make sure their
25 seatbelt's on right because they believe we are covertly trying to

1 take away their license. And so I think one of the struggles that
2 we can have with education programs, screening programs that are
3 truly -- our goal is to try to help people drive safer, longer,
4 try to get information in the right hands, where people can be
5 fearful. And rightfully so, because they're afraid if they expose
6 themselves, they're putting one toe in that taking-away-my-license
7 camp.

8 So I think it's really important that we think of
9 screening or that we think of our interventions as, I think we are
10 all quite universally agreed, I'm guessing, that we want people to
11 continue to drive safer, longer. We really want access to people
12 to share with them things that we think that would be useful to
13 help them drive safer, longer, and really only begin the road for
14 driving cessation for that group where that's the only just and
15 right thing to be doing.

16 CHAIRMAN HERSMAN: Mr. Magladry?

17 MR. MAGLADRY: You've been talking today about
18 essentially, remediation for events that occur in people's lives
19 that reduce their capabilities of driving. One of those that you
20 mentioned early on is FDR, and there's a fairly easy solution to
21 that. If you can't use your feet, let's use your hands. But
22 yesterday, we also talked about technological solutions to a
23 number of these problems. We're not quite as far as having the
24 car drive you completely, where you could sleep on your way to
25 work, but there are potential solutions here today and coming in

1 the relatively near future that may compensate for some of the
2 things that you've been talking about this morning. The cognition
3 issues are pretty difficult, but there's other solutions.

4 And I wonder to what extent you consider in looking at
5 screening or assessment tools, the availability of a technological
6 solution that would take that issue off the table. And
7 conversely, if you know the extent to which engineering companies
8 are looking at your material to try and find the solutions to your
9 problems?

10 MS. MOLNAR: I think that the technological advances
11 really hold promise for our people that are -- for people that are
12 challenged with various medical conditions. I think, off the top
13 of my head, early on with dementia or cognitive loss, there's a
14 high risk of getting lost and if we get lost, there's dire
15 consequences. If we have a GPS, if we have a OnStar system in the
16 vehicle where the person can be located using technology, maybe
17 that will assist with making some of these decisions of how far we
18 can wait for a person to be able to drive with some diminishing
19 abilities.

20 Certainly, if we can employ the use of some of these
21 technological devices earlier, as people get more used to using
22 navigation assistance, it might be able to assist them with the
23 fear of getting lost or of not knowing the directions. That's
24 different than the cognitive confusion of getting lost, but just
25 simply navigating.

1 I think there really is some promise for some of these
2 technological aids for us and I would bet -- I know that I've had
3 some conversations with vehicle manufacturers and I would think
4 that there is some interest in figuring out what some of these
5 needs are in more of a universal design concept that what's good
6 for one is good for all and trying to consider the needs of the
7 aging senior and their vehicles.

8 DR. KRAMER: I do worry a little bit about pushing too
9 hard and technological solutions, especially with regard to
10 perception and cognition. And the reason I say this is that we
11 know that there is something to the old adage use it or lose it.
12 And often there are technological solutions proposed to offload
13 difficult aspects of cognition or perception that may actually
14 even accentuate decline in cognition. So this could very well be
15 a slippery slope that I think we really need to tread cautiously
16 and not over-engineering solutions that may lead to more rapid
17 declines than perception and cognition. And we don't know the
18 nature of that slope. We don't even know if it occurs, but it's
19 certainly a possibility.

20 MS. SCHOLD DAVIS: I do think there is an opportunity,
21 now that we have advances in technology that allow us to get
22 objective driving data on people, to possibly use that technology
23 to provide information to people about their driving. We've been
24 involved in a couple of studies at the University of Michigan
25 using instrumented vehicles with people with early stage dementia,

1 having them drive as they normally would for a couple of months,
2 collecting their data on their trip taking, their exposure, their
3 self-regulatory behaviors and then having them come back in and
4 showing them, essentially, a summary of their driving and talking
5 with them about problems they may have experienced.

6 So this is just some pilot work we've done and I don't
7 know where it might go in terms of actually being useful as a way
8 to provide feedback. But I guess I would just add that, I think
9 rather than thinking about using technology to replace screening,
10 I think that what we really need to move toward is much more of a
11 systems approach, similar to what's used in many other countries.
12 For example, in Australia, they have what's called a safe system
13 approach and it's based on the assumption that drivers are always
14 going to make kind of honest mistakes and therefore they need to
15 make the roads and the vehicles as forgiving as possible.

16 So the hallmarks of those systems are safe roads, safe
17 vehicles, safe speeds, strong efforts to reduce impaired driving
18 so that it's more forgiving for the driver. But I think there are
19 always going to be situations where drivers do lose capabilities
20 and we can't replace the screening element.

21 MR. MAGLADRY: Thank you.

22 CHAIRMAN HERSMAN: I know we'll get a little bit into
23 this in the next panel, but I think, in general, large
24 organizations, society in general, we're not very good at doing
25 individualized assessment. I think everybody likes, even though

1 you might be subjected to some testing that you don't want, I
2 think everyone likes that, well, when you turn 50, these are the
3 kinds of tests that you need yardstick. And I think that it's
4 very difficult.

5 You know, we have established ages. You turn this age;
6 this is when you go to school. It doesn't matter where your
7 development and, you know, whether you're ready; this is when you
8 start school. This is when you can drive. This is when you can
9 drink. You know, this is when you start to collect Social
10 Security. You may be ready to work for a lot longer after that,
11 but this is when these things happen. And I think, as a society,
12 we're just not well-equipped and it's a very colossal
13 responsibility to try to figure out how to do individualized
14 assessment.

15 And it seems like all the pieces of this are so
16 compartmentalized. There's different parts of this that have to
17 come together and we're not so good at bringing all of those
18 different pieces together. And so, you know, I ask -- when we
19 look at transportation, we see a little bit of a patchwork system
20 too. We have a mandatory retirement age for pilots. Maybe it's
21 misguided listening to this conversation here, but it was recently
22 raised from age 60 to age 65. But here you have very rigorous
23 oversight. You have two, for scheduled passenger service, two
24 people in the cockpit who have to be qualified and who can perform
25 the same tasks. They get medical exams on a regular basis by a

1 certified examiner to take a look at them.

2 We're not so good at kind of trying to figure out how to
3 do some of these things in other areas because those medical exams
4 actually allow people to be screened out early if they need to be,
5 you know, or identify problems and make sure that they're treated.
6 What can we do that's feasible? Because that's a very small set,
7 comparatively, of people when you look at 30 million drivers over
8 65 and it's not even clear what the right age is. As we talked
9 yesterday, what is an older driver? I'm not sure when that even
10 starts.

11 What can we realistically expect society to do as far as
12 screening and assessment? Because I think what I heard was
13 screening is not -- kind of you're cutting off the ends of the
14 curve. I appreciated that example. But then you have to connect
15 to all these things. Once they get that, then they need to go get
16 a vision test or they need to go get some sort of additional
17 assessment. How do we make sure all those components are talking
18 to each other?

19 And we haven't done a very good job of it and apparently
20 this has been going on since the 1930s, even though we haven't,
21 you know, really figured it out. What is it going to take to get
22 us to the point where it actually does work? Do we need national
23 legislation?

24 You know, we do have fitting stations for child seats.
25 All 50 states have those. We made recommendations about doing

1 that to make sure the seats fit for kids. What do we need to do
2 for older drivers? What is going to be kind of the catalyst
3 that's going to bring all of these pieces together and make them
4 function?

5 DR. KRAMER: I think partly, this is a scientific and
6 partly a policy decision. I think the scientific part of it is,
7 can we come up with screening instruments that have high
8 sensitivity and specificity in terms of ferreting out those
9 individuals that have problems and deciding that those that don't,
10 actually don't have problems.

11 But policy makers, to some extent, are going to set
12 those thresholds. It probably won't be the scientists. It often
13 isn't. We can provide the information. We can provide the data.
14 It should be valid and reliable across the population and so
15 forth. And I am not an expert in screening, but from what I've
16 heard and what I've read recently, we may not have those tests
17 that we have this degree of confidence in with respect to validity
18 and reliability, sensitivity and specificity.

19 So first, we need those tests and we need your help as
20 government experts to get the funding to do the right studies.
21 And we've heard about that. We don't have sample sizes that are
22 sufficient to look at the gold standard, whether it's crash
23 probability or other gold standards we've set. We don't have the
24 studies that transpire over a sufficient number of years to do the
25 longitudinal monitoring. We need those kinds of studies and we

1 need different instruments to actually predict the outcome
2 variables we're interested in. And then I think the policy makers
3 have to get involved and decide what cutoffs are appropriate.

4 And until we have both the scientific and the policy
5 end, I think we will, as we have gone with chronological age, to
6 set various event times for vision screening or other kinds of
7 screening that different states do at different ages. So I think
8 before we can get to using functional measures, we need functional
9 measures that have the scientific credibility that we have
10 confidence in and then we need to work with our policy makers to
11 decide what those cutoffs should be that send people in different
12 directions, either for remediation or perhaps for training to use
13 public transportation.

14 CHAIRMAN HERSMAN: Dr. Kramer, do you have any
15 confidence that those longitudinal studies in the scientific
16 community could agree on a measure by 2025?

17 DR. KRAMER: I think if the funding is there to start
18 the studies, the longitudinal studies. We've heard about several
19 studies, mostly in other countries, not in our country, that are
20 pursuing some of these issues. I think clearly, the funding has
21 to be there.

22 You know, the National Institute of Health has had a
23 number of consensus groups that have designed studies. For
24 example, there's something called the National Institute of Health
25 Toolbox for designing assessment instruments for different

1 purposes, whether it's different disease or just normal aging,
2 nonpathological aging.

3 So I think it is possible to put together groups of
4 experts in different areas, and this shouldn't be one lab, I would
5 suggest. This should be a group of experts who comes together and
6 picks the best instruments we have today, perhaps it adds a few
7 additional instruments, and begins this study so we can start to
8 collect the data that's sufficiently powered so that we can come
9 to some conclusion as to whether we have an instrument that we
10 would want to make policy decisions on the basis of. I think it
11 is possible.

12 DR. MAROTTOLI: I think, in the meantime, we do have
13 multiple points of entry and I think that that's a reasonable
14 approach to take. I think one is, you know, defining for people
15 what their own responsibilities are. So the driver has the
16 responsibility. You know, their families should be made aware of
17 what things they can look for. Clinicians and physicians should
18 be aware of the things that they can look for. So it shouldn't
19 all be on one group, be it the licensing agency, be it the
20 clinical group, be it individuals or patients.

21 But I think that, you know, sort of having everyone be
22 aware of potential things that they can look for and then moving
23 forward. And then, potentially setting the thresholds at a very
24 high level so it's clear that the most impaired individuals at any
25 given condition or impairment, we focus on that and then sort of

1 determine whether that threshold or bar should be moved further
2 down and to minimize the risk of sort of falsely labeling people,
3 making sure that people who have the most severe impairment are
4 identified.

5 MS. MOLNAR: And taking a step even farther back, I
6 think that in a lot of other countries that have systems
7 approaches, the issues of older drivers are encompassed within a
8 broader strategic vision. And I know recently, I've been reading
9 about the efforts in the U.S. toward zero deaths, which involves
10 trying to come up with the same kind of strategic vision for
11 transportation safety as exists in a number of other countries
12 that have been very successful in keeping their traffic fatalities
13 and serious injuries down. And so I think that offers an
14 opportunity to start to think about how all these pieces need to
15 fit together, the vehicle design, the roadway structure, driver
16 screening and assessment issues and so forth.

17 MS. SCHOLD DAVIS: And certainly funding is a barrier.
18 It's a barrier at multiple levels. We can identify impairment.
19 We can identify risk and then sort of make it optional to get
20 evaluated. And we put the burden on even the licensing agencies
21 if they want to know if somebody -- if they want to know more
22 information, have an evaluation done. There are inconsistent
23 funding approaches. Oftentimes, people have to fund their own
24 evaluation to decide if they should lose their license or not.

25 It's the question, from a policy standpoint, is driving

1 a right or a privilege? You know, if we see somebody at risk,
2 where does the funding become our responsibility to make sure we
3 understand a person's abilities? When is it up to them to be
4 making sure? It is inconsistent and it is certainly a barrier.

5 CHAIRMAN HERSMAN: The issue of polypharma has come up
6 and we have very clear guidance as far as illicit drugs and
7 alcohol use and impairment. I'm curious, from the folks who look
8 at this on the medical side, do we have any good guidance? I
9 mean, I think we're talking about different thresholds on where to
10 make some cuts here. Is there any understanding about all the
11 multiple medications and how impairing they might be? As a start,
12 to maybe have a list of meds that might be impairing that people
13 need to consider or that physicians need to consider and that
14 people need to be counseled appropriately or have limitations.

15 DR. MAROTTOLI: So there is a fair amount of information
16 on individual types of medications and their potential risk and
17 effect on driving safety; less so on combinations of medications
18 in terms of quantifying that risk, although there is an evolving
19 literature on that. There are also some ongoing efforts to try
20 and put that information together in a useful way that both
21 clinicians can use, but also pharmacists as another group. And
22 then, that individuals can access as well. So I know that there's
23 an ongoing study now that's sort of working on trying to put that
24 together.

25 MS. SCHOLD DAVIS: I would like to give the example from

1 the remediation side. There are medical conditions people are
2 aging with that require a number of medications. And there are
3 some driver rehabilitation programs that assist people with
4 understanding the impact of those medications on their driving by
5 taking them out driving when they are highly medicated, taking
6 them out driving when they're low on their medication to assist
7 with their self-awareness and ideally, helping people that must
8 take a number of medications be able to self regulate and make
9 wise choices because they're able to offer them that assistance.

10 CHAIRMAN HERSMAN: And I think one of the challenges
11 that you all identified and perhaps we'll talk about this on the
12 next panel, is the role that physicians think they play. And I
13 think our concern, as we've seen in a number of investigations,
14 physicians for commercial drivers who don't feel that they have a
15 concurrent obligation to report, that they believe that their
16 primary obligation is to take care of their patient, the health of
17 their patient, and trying to understand how you impart to them the
18 societal obligation if somebody has significant medical
19 conditions, whether they're a school bus driver or passenger car
20 driver.

21 And I -- maybe I'll close with a kind of a good news/bad
22 news on the vision side just from some personal experience. And I
23 think this is kind of an example to me about how separated the
24 system is and how many different moving parts of it. And I went
25 in to get my commercial driver's license renewed and I don't have

1 any physical, you know, issues that would prohibit me from getting
2 a license. But I ended up having to go to an audiologist that was
3 separate; to an optometrist to get the vision exam; you know,
4 obviously the lab and screening and all of these things.

5 And it was clear to me that all of those individuals
6 were not talking to each other because I ended up having my exam
7 form signed before the vision test was even completed. I'm not a
8 risk, for sure, but it just was clear to me that the primary
9 person who was responsible for aggregating all of that information
10 hadn't done what needed to be done.

11 And ultimately, my optometrist hadn't given me the
12 test -- one of the tests that I needed to sign off on the form.
13 And so I just was kind of a little bit of a guinea pig. When I
14 went into the optometrist, I asked him about vision tests for
15 older drivers and if he gets referrals from the DMV. And one
16 comment that he made to me was, you know, it's really hard for him
17 because he felt like all he's asked to do is to say can they read
18 the chart. And he said a lot of times, they can read the chart,
19 but they can't navigate around my office and they can't comply
20 with, you know, directions when I'm trying to explain to them what
21 they're supposed to be doing. He said that I don't really have a
22 role in saying anything about that; I'm supposed to say can they
23 read the chart.

24 And so I think it's just an example of how difficult it
25 is, how difficult this issue is where you have lots of inputs.

1 And maybe people who have good observations, but there's not
2 really a mechanism for them to perform that way.

3 The good news story on this is that my mother, and after
4 listening to some of the presentations yesterday, my mother's one
5 of those drivers that's self-selected. She doesn't -- she chooses
6 not to drive at night, not to drive in bad weather. She's very
7 comfortable having her friends pick her up, things like that. She
8 always hands the keys to me whenever I come to visit her and --
9 but so she's self-selected out.

10 She said she doesn't see well at night. Well, guess
11 what? She had cataract surgery not too long ago, in this last
12 month, and she called me on the phone and she said Mrs. Magoo can
13 see. She said I can see the leaves on the trees. I can see.
14 Everything's great.

15 And you know what struck me yesterday listening to that
16 panel is, I bet my mom isn't going to go back and say now I can
17 drive at night and now I can drive in these other conditions.
18 She's already pulled herself down to where she's not comfortable
19 doing these things because of that physical decrement that she
20 had. But now that she's gained that back, I don't know kind of
21 what decisions that she makes coming after that.

22 And so, Ms. Davis, I would love to be able to see, you
23 know, a screening program work for people, like you said, so it
24 can go in reverse. Not only to take the people out that need to
25 be out, but also to help people who maybe have more performance

1 than they know to get back in.

2 So you all have sure made me think. So this has been
3 another great panel. I think trying to comprehend all of these
4 pieces and put them together is the real challenge that we have as
5 policy makers.

6 I know we have a number of other questions. We're a
7 little bit late on our schedule. I hope that maybe you all would
8 be available for those questions that didn't get asked to share
9 with our researchers and our team, your thoughts on those issues.

10 Thank you for being here and thank you to the panelists
11 for your questions. Okay. And we're going to have the movie
12 again. And for those who missed it yesterday, I know you want to
13 see it. It's going to show at 12:00 and we actually have a lunch
14 break until 12:30 today. So we'll adjourn, come back for the last
15 panel at 12:30.

16 (Whereupon, at 11:15 a.m. a lunch recess was taken.)

17

18

19

20

21

22

23

24

25

A F T E R N O O N S E S S I O N

(12:40 p.m.)

1
2
3 CHAIRMAN HERSMAN: Welcome back. Our last panel of the
4 forum will consider state programs and practices. This panel is
5 going to look at a variety of state Department of Motor Vehicle
6 licensing approaches that have been enacted in by state
7 legislatures in recent years and consider the ongoing work of the
8 state DOTs to determine if statutory changes to the licensing of
9 aging drivers has had a safety impact. The panel will also look
10 at non-statutory DMV programs and other organizational programs
11 designed to ensure that aging drivers are safe drivers,
12 particularly in the areas of medical assessments.

13 Stephanie Davis and Steve Blackistone have prepared
14 questions for this panel. Ms. Davis, will you please introduce
15 the panelists?

16 MS. DAVIS: Thank you.

17 First, I would like to introduce Dr. Carl Soderstrom.
18 Dr. Soderstrom was appointed chief of the Medical Advisory Board
19 of the Maryland Motor Vehicle Administration in 2005 after serving
20 as associate chief for three years. For 25 years prior to joining
21 the MVA, Dr. Soderstrom was a member of the surgery traumatology
22 faculty of the R. Adams Cowley Shock Trauma Center of the
23 University of Maryland School of Medicine and a senior researcher
24 at the school's National Study Center for Trauma and EMS. He is
25 currently adjunct professor of surgery at the University of

1 Maryland and an associate faculty member at the Johns Hopkins
2 University, Bloomberg School of Public Health, Department of
3 Health and Policy Management.

4 Dr. Soderstrom has authored over 100 scientific
5 publications, many of which focus on substance abuse and injury,
6 particularly as related to driving. His current research efforts
7 center on medical fitness to drive. Dr. Soderstrom served on
8 and/or testified in many traffic injury prevention efforts,
9 including the NTSB's hearing on medical oversight of the
10 noncommercial driver. He has just completed a two-year term as
11 president of the Association for the Advancement of Automotive
12 Medicine. In 2009, Dr. Soderstrom was appointed by the Secretary
13 of Transportation to serve on the Medical Review Board of the
14 Federal Motor Carrier Safety Administration. This year, he joined
15 the NSC's Crash Injury Research Engineering Network Team.

16 Dr. Soderstrom earned his medical degree from the
17 Downstate Medical Center of the State University of New York in
18 Brooklyn, New York. After completing his general surgery
19 residency at the Beth Israel Medical Center in New York, he
20 completed a year of trauma surgery fellowship at the Shock Trauma
21 Center of the University of Maryland.

22 Next is Dr. Loren Staplin. Dr. Staplin is the founder
23 and principle partner of the consulting firm TransAnalytics. He
24 has worked as a senior research scientist with the Center for
25 Transportation Safety at the Texas Transportation Institute, vice

1 president for transportation safety at the Scientex Corporation,
2 and senior associate with Ketron, Inc. Before joining Ketron,
3 Dr. Staplin worked for three years at Lehigh University as an
4 assistant professor and research scientist. He has successfully
5 led 25 federal and state research grants and contracts since the
6 early 1980s.

7 Dr. Staplin was principle investigator for the National
8 Highway Traffic Safety Administration's sponsored project, Model
9 Driver Screening and Evaluation Program, which validated a set of
10 functional measures as significant predictors of at-fault crash
11 risk among older drivers. He led the development of the Federal
12 Highway Administration's Highway Design Handbook for Older Drivers
13 and Pedestrians and is supporting its current update. He also led
14 development of AAA's Roadwise Review, an educational product for
15 self-screening of safe driving abilities by seniors on their home
16 computers.

17 Dr. Staplin received his doctorate in experimental
18 psychology from Arizona State University in 1979. He currently
19 serves as chair of the Committee on Operation, Education and
20 Regulation at the Transportation Research Board.

21 Dr. Jane Stutts. Dr. Stutts recently retired from the
22 University of North Carolina's Highway Safety Research Center,
23 where she held the position of associate director for social and
24 behavioral research. During her 32-year career at the research
25 center, Dr. Stutts managed projects for a wide range of public and

1 private sponsors and authored over 100 journal articles and
2 research reports. Her work focused on the behavioral aspects of
3 traffic safety, including older drivers, distracted and drowsy
4 driving, motorcycle safety, bicycle and pedestrian safety and
5 novice driver education.

6 At the national level, Dr. Stutts served the
7 Transportation Research Board in a variety of capacities,
8 including committee chair, participation on several national
9 panels and, most recently, chair of the System Users Group, which
10 includes the Committee on Older Person's Safety and Mobility.
11 Since her retirement, she has continued to consult in the field,
12 including a recently completed project for the AAA Foundation for
13 Traffic Safety to develop a database of state driver licensing
14 practices and policies related to older and medically at-risk
15 drivers.

16 Dr. Stutts received her undergraduate degree in
17 psychology from Wake Forest University and her Ph.D. in
18 epidemiology from the University of North Carolina at Chapel Hill.

19 Ms. Essie Wagner. Ms. Wagner has been working on older
20 driver issues for 19 years. She is a program analyst working for
21 the National Highway Traffic Safety Administration's Safety
22 Countermeasures Division on Older Driver's Safety Programs.
23 Ms. Wagner is responsible for the implementation of the agency's
24 Older Driver Program activities, working with organizations,
25 including the American Medical Association, the American

1 Association of Motor Vehicle Administrators, the American Society
2 on Aging, and other organizations that have an interest in older
3 driver safety.

4 She received her BA in psychology from the College of
5 Wooster in Ohio and went on to get an MA in applied psychology,
6 human factors from George Mason University. Before joining NHTSA
7 in 1998, she worked for seven years with the Federal Highway
8 Administration where she conducted and monitored extensive
9 research on older driver issues, including the development of the
10 Older Driver Highway Design Handbook.

11 I would like to begin by asking the panel, we've heard a
12 lot of research yesterday and this morning and I would like to
13 ask, what do we actually know about what states are doing to
14 address the safety and mobility needs of the older driver?

15 DR. STUTTS: And I think I will take the first stab at
16 that, mainly because I think one of the main reasons I was invited
17 to participate in this panel was the recent project, the
18 opportunity I have had to work on a project with support from the
19 AAA Foundation and with assistance from AAMVA to develop a
20 database and a website of state policy, programs and practices.
21 So if the technical panel or the panels here have any questions
22 about specific state policies or programs or what states do this
23 or that, then I think I may have a good resource to draw from in
24 answering those questions.

25 I have one slide here -- just a couple slides showing a

1 little bit about the database for those who may not be familiar
2 with it. It is housed on the AAA Foundation seniordrivers.org
3 website. There's the address there up at the top of the slide.
4 There are two parts to the database, and I know you can't read all
5 the type there, but the first part is what we called the LPP,
6 license, policies and practices. And this is just sort of a nuts
7 and bolts of current state practices regarding, particularly,
8 older and medically at-risk drivers. And again, this is focused
9 on driver licensing agencies and all. So just a current nuts and
10 bolts of what are the policies and practices in place by the
11 various states.

12 The second part of the database is the noteworthy
13 initiatives and you know, in addition to just serving as a
14 resource and compounding a lot of information that was already out
15 there in various sources, but hadn't been pulled all together.
16 But in addition to just doing the nuts and bolts, we wanted to go
17 in and ask the states what are you doing that you think is really
18 pertinent and really helpful to older drivers, what initiatives
19 could we possibly promote to other states and all. So we pulled
20 these into -- together into a separate section of the database
21 called noteworthy initiatives and have about 40 initiatives there
22 that we pull from.

23 Just to show you a couple slides on what it looks like.
24 If you go into the license, policies and practices database here,
25 this is just the first screen. It pops up the first table that

1 you come to is on vision requirements for licensing, but you
2 actually have the option. There's a pull-down box here up at the
3 top of 18 different tables of information. So we cover -- and you
4 click on a table and then pull up that information, whichever
5 you're most interested in at the time.

6 So the database covers vision standards for driving,
7 renewal requirements for driving and this is things that are
8 available in other databases as well, but we've tried to pull it
9 all together. We have tables on physician reporting, reporting by
10 family members and law enforcement. We have a table on the
11 medical review process, both for states with a medial advisory
12 board in place and those without a medical advisory board.
13 Information on referrals or what are driver licensing practices
14 regarding possibly referring to an OT for assessment or other
15 outside referrals. Information on restricted licensing practices,
16 any particular training that they do for their local examiners and
17 their staff and then also, information about whether or not they
18 have a website with information for older drivers or medically at-
19 risk drivers and what information is available in their handbook.

20 So a lot of different information covered there and,
21 again, I would stress that some of this information is available
22 on other sources. There are very good websites out there. GHSA
23 has a very good website. Insurance Institute does, but they tend
24 to focus more on just the renewal requirements and maybe
25 particular policies that are age-based or in effect for older

1 drivers, but we try to cover a broader spectrum of issues that
2 driver licensing agencies are involved in.

3 This is just a sample of the table up close, and one
4 nice feature of the website is that you can sort of click on any
5 column and it sorts the column. So like I was doing to prepare
6 for this forum, if you asked how many states do this, how many do
7 that, it makes it very easy to see, you know, where your state is.
8 If the DMV is interested in seeing how they stand with respect to
9 other states, it makes it easy to see where you stand.

10 The other half of the database is the noteworthy
11 initiatives. And if you click on this, I don't have the opening
12 screen to look at, but you can search for particular noteworthy
13 initiatives. You can search by state, what is a given state doing
14 or you can also search by topic area. And you can pull up -- we
15 have a total of 40 initiatives and this is just an example of one.
16 I think this is from Iowa and this is their practice of doing
17 tailored drive tests there.

18 And we have information there describing the initiative
19 and I think, very importantly, we put contact information because
20 we're wanting the states to be able to -- you know, if they're
21 interested in this initiative to have someone there that they can
22 contact and talk with and find out more about it. And we also
23 identify the status of the evaluation of these initiatives. And
24 I'm not going to get into any specific points now. We'll wait to
25 see what, you know, specific questions come up, but I will say

1 right off the bat that there are very few of these initiatives
2 that have been evaluated. That's it.

3 MS. DAVIS: Thank you.

4 Dr. Staplin, you have conducted several studies
5 attempting to define functional fitness to drive in terms of at-
6 fault crash risk. Should licensing policy and practice change to
7 take fitness to drive into account in an aging society?

8 DR. STAPLIN: Thank you for the invitation to appear
9 before this panel.

10 I think yes, it definitely should. I think that, first
11 off, we need to recognize the public health mandate that licensing
12 authorities are charged with carrying out. Our society accepts
13 driver qualifications, broadly speaking, and I'm sure most would
14 agree with the aphorism that we all need to see to drive. So we
15 accept vision testing when we enter licensing and in some states,
16 that renewal. We accept more stringent qualifications
17 requirements for commercial drivers, even more stringent for those
18 carrying hazardous materials.

19 So there's a lot that has to do with an analysis of risk
20 that sort of dictates how much we will accept or tolerate in terms
21 of qualifications requirements. Until now, risk analysis has
22 pretty much been limited to a consideration of consequences, but
23 ideally, risk analysis would also take into account the
24 probability or the likelihood of a harmful event.

25 We haven't been able to do that very well up to this

1 point, but with the advent of the linking between functional
2 fitness, functional measures of fitness to drive and outcomes that
3 are perhaps somewhat disputed, but are, I think, broadly
4 recognized as important, specifically, crashes and even more
5 particularly, at-fault crashes. With the ability to start tying
6 those things together, we begin to have the ability to speak to
7 likelihood or probability in addition to just crash consequences.

8 I'm going to take a little bit of an exception to some
9 of the points that were made earlier in that, I think, in fact, in
10 this country, over the past decade or so, there has accumulated a
11 respectable body of evidence using large population-based samples,
12 representative samples that have been tracked over a period of
13 years permitting prospective analyses of these relationships
14 between function and crashes. And again, at-fault crashes in
15 particular to the point where no researcher would ever say we have
16 all the evidence we need, but we do have a pretty respectable body
17 so far. And enough, in fact, to have allowed us to take some of
18 these relationships and build them into programs that are being
19 implemented in licensing jurisdictions, either on an ongoing or a
20 pilot basis. I'm thinking in particular of Maryland and
21 California. Probably, we'll talk more about those examples as we
22 go on.

23 Could I just have a slide real quick, please, here?

24 As a quick case in point, I want to put up a schematic.
25 Let's go back to the first -- yeah. I want to acknowledge a

1 colleague of mine, Jack Joyce, who was mainly responsible for this
2 work. When he was recently -- he retired as the chief of Driver
3 Safety Research at the Maryland MVA.

4 I put this up here because -- next slide please -- we
5 talked earlier about how hard it is to pull elements together into
6 a workable system in a licensing arena. And this is a system that
7 was developed and was presented internally. I'm not suggesting
8 that its implementation is pending, but a lot of feasibility
9 analysis went into this. And there are some key aspects here that
10 I think deserve note.

11 One is that, if a customer -- licensing agencies refer
12 to drivers as customers these days -- customers go through the
13 normal process. A few, in this case, by age, are diverted into a
14 brief screen focused on cognitive measures. Most, the very vast
15 majority, pass. A few are tagged for further evaluation by a
16 medical advisory board. Over time, there is a continual process
17 improvement to improve the ability to set cut points so that you
18 have the sensitivity and specificity that you want and which are
19 compatible with the agency's resource allocations. It takes time,
20 obviously, to do this and you want to make sure that the money
21 you're spending is targeted at that segment of the population
22 where you're most likely to pick up those with age related
23 functional deficits.

24 And finally, there has to be, at the end of all this, an
25 outreach by the licensing agency to promote awareness, to

1 facilitate, to as big a degree as possible, transitions to other
2 transportation alternatives. That's enough for that, please.

3 I want to stress also, that this whole issue of
4 screening for functional fitness to drive is a very important
5 crosscutting issue. We heard yesterday from people who were
6 responsible for developing the next version of the highway design
7 handbook and for people who are involved in vehicle design
8 improvements targeted towards older persons' safety.

9 These human-centered design initiatives need to have
10 some kind of benchmarks. We can't accommodate everybody by
11 building safer highways. We can't accommodate everybody by
12 building safer cars. We need to have, not a moving target, but an
13 understanding of what level of capacity the design community can
14 expect in the general driving population, a set of minimum
15 qualifications that are going to be established and enforced
16 through the licensing process.

17 Three closing points real quickly. The point was made
18 before and I want to reiterate that screening does not equal
19 assessment. That when you do implement a screen, it leads to, not
20 directly to a licensing action, but in a system such as that
21 diagram earlier, additional opportunities for observation and
22 assessment and tracking.

23 Second, I would say that, you know, the perfect is the
24 enemy of the good. That applies to a lot of things. There is no
25 perfect screening tool. I certainly didn't mean to suggest that

1 we're there yet, but I think we are pretty far along the path of
2 getting to something that is scientifically defensible and
3 practical for an agency to implement.

4 And finally, I would say that the prime research
5 opportunity is now, to develop and validate and calibrate such a
6 tool. We have not been able to link vision, acuity at least, to
7 crash experience because we've had vision screening criteria in
8 place for so long that we have pretty effectively removed people
9 with the worst vision from the population. And this restriction
10 of range makes it impossible to have a significant relationship.

11 Right now, we don't do functional screening. If we want
12 to have a program, not just by 2025, but in, let's say five to ten
13 years, now we need to have an ambitious research agenda that, in
14 one or more states, for at least a limited period of time, obtains
15 this kind of screening data for a large number of people and
16 follows them so you do have the power to do that analyses and
17 identify the tools that are going to be the most appropriate in
18 this regard. Thanks.

19 MS. DAVIS: Thank you.

20 Dr. Soderstrom, we heard Dr. Staplin refer to the
21 Maryland data for older drivers. Could you describe the role of
22 the Medical Advisory Board and how an at-risk driver would be
23 referred to the Medical Advisory Board?

24 DR. SODERSTROM: Yes. First of all, it's -- can I have
25 my slides, please? It's quite an honor to be on this panel and be

1 included with all of the other esteemed people that have been with
2 all the other panels the last day and a half.

3 Because my deceased colleague and mentor, Dr. Rolly was
4 unable to attend this meeting in 2003, I had the opportunity to
5 testify before the Board and I have to say that this meeting --
6 that meeting, I think, was a seminal meeting in the sense that it,
7 for the first time or one of the very first times, brought
8 together people from many different jurisdictions in the United
9 States. And we suddenly began to find out that we had 51
10 different ways of doing things. And so some really good things
11 have come out of that initiative. And so this is a great follow
12 up meeting to that.

13 Our Medical Advisory Board, we think, is the oldest in
14 the world. It was founded in 1947, then found two after that came
15 from Florida and Delaware. And there are many Medical Advisory
16 Boards. About two-thirds of states have them, but they function
17 in very different degrees throughout the United States.

18 My colleague noted, if you look carefully at the picture
19 of our Medical Advisory Board, that's a picture from 1949. There
20 are ashtrays all over the table, so they weren't as healthy as
21 we'd like them to be in those days.

22 I get appointed and the other members of our board get
23 appointed by state law by the administrator of the MVA to give an
24 advisory opinion for cases of any licensee or applicant for
25 license, if the administration has good cause to believe that

1 driving a vehicle by him or her would be contrary to public
2 safety. So that's our job is to give advice and maybe we can
3 discuss later, there's actually several different venues in which
4 we can give advice.

5 The way that people come to us, the paths to the MVA
6 are -- they can be court referrals. They can be requests for
7 reexaminations from policemen who encounter a driver with a --
8 have a concern about their fitness to drive, the self-reported
9 conditions at the time of application or renewal, a report from
10 clinicians, concerned citizen letters. I will say that a letter
11 that says I'm concerned about the driving of my ex-husband is very
12 different from the, I'm concerning about the driving of our father
13 who's had a couple fender benders in the last couple months and
14 we're concerned about him. And then we also get referrals from
15 customer service agents.

16 Dr. Rolly, John Everhart, I'm not sure exactly who gets
17 credit for this, but this is basically our philosophy. It's safe
18 mobility for life. It's about mobility for quality of life, safe
19 mobility for life of the client and other users of the roadway.
20 And we want people to drive as long as they are safe and consider
21 each driver on a case-by-case basis. And we accomplished this
22 with medical assessments, reeducation, rehabilitation and training
23 programs.

24 This raises an important philosophical. This is a true
25 letter from years ago and I took out all identifiers, a letter

1 from a physician that was referred to us. The above-married
2 couple had been patients of mine for three decades and I love
3 them. They both have very significant physical and mental
4 impairments concerning which I can supply full details to the
5 appropriate medical board.

6 The impairments are such that I feel strongly that they
7 should not be driving. Mrs. X, after several worrisome episodes,
8 promised me a year and a half ago that she would not drive and I
9 understand that her family were all partners to that compact. I
10 am now advised by their caregiver they have purchased a new car
11 and have the intention of driving it.

12 The important part of this letter is please advise the
13 appropriate medical agency. I stress that this recommendation is
14 not based on their age or their diagnosis. So it's really all
15 about function and it's not about any specific diagnosis that we
16 focused our efforts on.

17 This is an example of someone who is extremely fit.
18 She's my mom. She's 91 years of age. I will challenge anyone in
19 the room to say that she has less senior moments than all of us in
20 a week than we have in a month or she has in a month and we have
21 in a week. And just to raise a little provocative question, in
22 the past we used to ask physicians who filled out a report this
23 question; in my professional opinion, this person is
24 physically/mentally capable of safely operating a motor vehicle at
25 this time. And the answer was yes, no and comment.

1 Frequently, the comment was I don't know, you tell me or
2 please make an assessment instead of checking yes or no. So this
3 brings us into a new era of how we should go about doing this and
4 that is, based on your assessment of this patient, do you have any
5 concern about his/her ability to safely operate a motor vehicle.
6 And then the question is -- the answers are -- possible responses
7 are yes, no and not sure. If yes or no, not sure, please explain.

8 So thank you for letting me make these opening comments
9 and maybe stir a few questions up along the way.

10 MS. DAVIS: Thank you.

11 I would like to turn questioning over to Mr. Steve
12 Blackistone.

13 MR. BLACKISTONE: Thank you.

14 And let me ask Ms. Wagner a question from -- regarding
15 the NHTSA perspective on all of this. We've heard a lot of ideas
16 and some specifically from the other panelists about things that
17 can be done by the states to enhance the ability of driver
18 licensing authorities. From NHTSA's perspective, what are the
19 things that can be done, that states should be doing to enhance
20 their ability to address older driver safety?

21 MS. WAGNER: Wonderful. Thank you so much for having me
22 and for asking this question. Can we have my -- thanks.

23 NHTSA takes a sort of a comprehensive approach to
24 addressing older driver safety, if we can manage that. The way
25 that we go about it is we try to find the people who have a way to

1 identify the at-risk driver and I use this graphic here. We have
2 the families and friends and the older drivers and the general
3 public who have some way of seeing that something's not right
4 that's going on.

5 But we also have professional organizations and
6 professional individuals who have the ability to recognize
7 somebody and that's driver licensing, healthcare professionals.
8 We've heard a lot about those. Social services are very important
9 as well; for example, your area agencies on aging, other
10 organizations that may be involved in that. We also include, for
11 example, the Alzheimer's Association and people who can do some
12 educational activities, as well as law enforcement.

13 All of these have the ability to identify an at-risk
14 driver, but they also have the ability to do something about that
15 individual. And I also want to point out that all of this is
16 using a firm research basis. We don't want people to go ahead and
17 just say oh, you have to stop driving because you're old. And it
18 goes alongside everything that we've been talking about over the
19 last couple of days here.

20 And that brings us to, just a good example of how we've
21 managed to address this from the national perspective at NHTSA.
22 We developed the driver fitness medical guidelines in partnership
23 with AAMVA, who are here today, and these are really -- these are
24 voluntary guidelines and that is an approach that we have to use
25 from NHTSA's level is a voluntary approach for assessing and

1 monitoring the potentially at-risk drivers. And that includes a
2 lot of the folks we've been hearing about over the last couple of
3 days; people with dementia, people with Parkinson's, epilepsy, I
4 think, has been mentioned as well.

5 It covers vision, it covers cognition, it covers
6 physical function and the way that the DMVs need to be able to
7 interact with these individuals to assess them and monitor them
8 over the course of the renewal cycle for that individual. But the
9 nice thing about these particular guidelines is that, also, they
10 help identify the ways that the DMV should be working with other
11 types of organizations.

12 For example, it has educational information in there
13 about what DMVs should be saying to physicians and other
14 clinicians about, you know, how should you be counseling your
15 patients about this. So we have ways to do that and we also have
16 educational information in there about people -- you know, for
17 people with those medical conditions that put them at increased
18 risk. So we really do want, in this case with this example, we
19 want the DMVs to be paying a little bit more attention to
20 monitoring theses individuals, but also, getting more of these
21 individuals into their system so that they're not causing an
22 advanced risk to the public.

23 That same sort of model is used in other areas with
24 education of medical providers themselves, with the physicians,
25 pharmacists, occupational therapists and so on. So it's that kind

1 of approach where we do need to have multiple players engaged and
2 making those referrals to the people to the side, if you're going
3 back to this image. We want driver licensing to be talking with
4 law enforcement and we want law enforcement to be making those
5 referrals to the DMV. But we also want law enforcement to be
6 talking to social services saying, well, if this individual is
7 found driving at, you know, 2:00 a.m., driving erratically and
8 they're not otherwise impaired, we want them to be taken care of
9 appropriately. We don't want them to be, you know, thrown into
10 the drunk tank or whatnot. So that's generally our approach to
11 that.

12 Thank you so much.

13 MR. BLACKISTONE: Great. Thank you very much.

14 I have a number of other questions, but let me turn it
15 over to Dr. Garber before I monopolize all of the time here.

16 DR. GARBER: I just have one quick follow-up question
17 for the panel, which is, if I take an eight-hour drive from Boston
18 to D.C. or at least, if I do that in the middle of the night when
19 there's no traffic on the roads, I'm going to pass through seven
20 states in the District of Columbia. I can add in the Commonwealth
21 of Virginia if I go over the Potomac.

22 How do the different MVAs share information about their
23 drivers? If I am found in a particular locality to not be able to
24 drive, is there a problem with me getting a driver's license in
25 another state? And how do the states that are next to each other,

1 where someone may have a physician in one state, work in another
2 state and actually have a driver's license from a third state, how
3 do they share information to determine whether they are
4 consistently applying those sorts of evaluations to the folks that
5 live in those states?

6 DR. SODERSTROM: I'll start by responding to that
7 question.

8 You're absolutely right, Mitch, that -- well, you state
9 a premise. What the premise is, is we don't have a good way of
10 communicating right now at all. Because Maryland is a little
11 state and because of a lot of people pass through our state or
12 work in our state that live in another state, from time to time,
13 our office ends up speaking to individuals at other jurisdictions
14 and/or if they have an MAB. But right now, that dialogue is
15 something that needs to be explored and we are in the process of,
16 as a first baby step, hopefully in the near future, to get
17 together with colleagues at least for the contiguous states around
18 us to begin to get to know each other, get to know each other's
19 rules and regulations and kind of get, philosophically, all on the
20 same page about how to do things.

21 You're right. A perfect example would be a number of
22 years -- well, I won't specifically give you a case, but you could
23 have a condition called narcolepsy and if you don't have any
24 symptoms and you're not having any episodes of cataplexy, in the
25 State of Pennsylvania, you can be free of all those symptoms and

1 problems for six months and be allowed to drive, whereas, in the
2 State of Maryland, it's one year.

3 Because of a dialogue we actually had with Pennsylvania,
4 we came to a middle ground decision on that one, but right now, I
5 don't think the dialogue is existent and it needs to take place.

6 DR. STAPLIN: If I could just add a quick comment? I
7 think if and when a brief cognitive screen is to be adopted, there
8 does definitely need to be some federal regulation with request --
9 with respect to methodology and criteria so that the process is
10 standardized across jurisdictions. The time to -- the opportunity
11 to do that is, of course, when it's first implemented. So the
12 problem you speak of is a very important one.

13 You talk to people in the sun states, Florida, you know,
14 gets a lot of people from other states coming down for the winter
15 and the licensing officials, Department of Highway Safety and
16 Motor Vehicles are very frustrated by the different standards for
17 licensure in other jurisdictions, so that's a very important
18 point.

19 DR. STUTTS: Now just one additional comment to add to
20 that is that, you know, recognizing differences between states and
21 how they treat things and all, it also implies that, you know, in
22 order to make a decision about which is best, that we know which
23 is best, that we've done some evaluation and we know that, you
24 know, one state's policies or practices or requirements are better
25 than others in terms of ensuring safety on the roadway.

1 And at this stage, we really don't have a lot of that
2 evaluation information to make a decision. And so states or --
3 you know, for the most part, they're making their policy decisions
4 and requirements, you know, best -- you know, based on best
5 available evidence, but that is very weak evidence compared to,
6 you know, what the medical community typically requires for making
7 decisions like that. It's often based on consensus or just expert
8 opinion or you know, at the bottom end of the scale just because
9 they've always done things that way.

10 So you do have some implications there that right now,
11 we don't have the guidelines in place to what's the best system to
12 undertake.

13 MR. BLACKISTONE: Let me follow up with a -- what's,
14 perhaps, a very practical question and that is, we recognize that
15 virtually every state has very severe budget problems these days.
16 Resources are going to be very limited, not just this year, but
17 probably for some years in the foreseeable future. Given that
18 background, where should the states put their limited resources?
19 Where do you start? And I suspect this is going to be an even
20 greater constraint in the coming years than it has been in the
21 last few years, if that's possible.

22 MS. WAGNER: I'll try tackling that and hope the others
23 will jump in as well.

24 Going into the basic guidelines here that we provided to
25 the states last year would be, probably the best place to start.

1 It will help them in reducing some of the litigation that may come
2 in, in terms of ADA compliance. So there may be some funds that
3 could be freed up that way. However, it's really more about
4 the -- you know, making sure that we have safe people on the road.

5 I would love to have Medical Advisory Boards in every
6 state. I would like to have functioning Medical Advisory Boards
7 in every state, but what I want them to do more than that is to
8 adopt these guidelines and to actually make sure that they are
9 screening and identifying the people who are at risk on their
10 roads.

11 MR. BLACKISTONE: Are there other takers?

12 DR. STUTTS: I'll just --

13 MR. BLACKISTONE: Dr. Stutts?

14 DR. STUTTS: -- add to again, that sort of assumes that
15 they're going to be some -- doing something about older drivers to
16 begin with. And the only thing I would preface that by is to say,
17 you know, particularly when I've been contacting states lately to
18 see if they're interested in undertaking certain initiatives or to
19 assist in evaluating certain initiatives, it's quite obvious that
20 older drivers is not at the top of their radar screens. They're
21 dealing with --

22 MR. BLACKISTONE: No, it is not.

23 DR. STUTTS: -- REAL ID, you know, all kind of issues.
24 Commercial motor vehicles are getting a lot of attention. Young
25 drivers and alcohol are always at the top of their list, so you

1 know, I think our very first challenge is to really bring it to
2 their attention and get them wanting to do something. And then we
3 can choose what.

4 MR. BLACKISTONE: Exactly. It is a matter of
5 priorities.

6 DR. STUTTS: Um-hum.

7 DR. SODERSTROM: If I could chime in, I think we need to
8 look at the practices and always reevaluate what we're doing. The
9 Maryland Medical Advisory Board was -- has a long legacy of being
10 founded by some various clinicians. And one of the things we
11 looked at in the last several years was kind of how we did
12 business and we needed to get more efficient. Well, it wasn't --
13 something that we looked at, we became a lot more efficient
14 because we began to realize, since these are good clinicians who
15 serve on the board that, to some degree, we were practicing as
16 their clinicians.

17 In other words, if they had a certain condition such as,
18 let's say diabetes, uncomplicated, insulin-requiring diabetes, we
19 might be asking for a report every year or two years. Well,
20 there's really no -- there's no real reason for us to do that. If
21 you are -- have some unhealthy practices, I'll use the number 300.
22 If your cholesterol is 300 and you're running around with a blood
23 sugar of 300, that's your problem not being in very good health,
24 but that's not an issue for the Medical Advisory Board to keep
25 on -- keep tabs on you.

1 So we -- I think it's -- one has to improve efficiencies
2 about what conditions are reportable. As science comes in, we
3 have to think about, what are the conditions that really, really
4 count. For instance, again, going with diabetes, anyone who had
5 diabetes in the past was supposed refer themselves to the MAB,
6 well, the higher risk is obviously in insulin-requiring diabetics,
7 so let's take that route and drop out with the oral diabetics.
8 Although, I understand with the new -- there are some people who
9 are on insulin that weren't on insulin before.

10 But we really have to look and look at our practices and
11 streamline those practices. And one of the things that a Medical
12 Advisory Board can do, which we've done in Maryland, is we're very
13 fortunate to have a driver wellness division with 12 nurses. And
14 I said that there's ways that we can give advice. Well, if you
15 have a well functioning medical advisory board, you don't have to
16 have the board review every case that comes in. We can work
17 with -- we can -- we do work with our driver wellness division to
18 come up with algorithms of where cases can be solved and taken
19 care of. And most importantly, it's a way to trim down the
20 system.

21 In many states, I understand from the first time I was
22 here, is once you get in the -- once you get in the hopper, you
23 never get out. You need to be able to close cases. If I have a
24 brain injury and I recover from that brain injury to a certain
25 level of complete recovery or a good level with OT that I drive a

1 certain way, that case should be closed.

2 So in the midst of looking at budget constraints in the
3 future, I think all of our states with MABs or are thinking of
4 them really need to look at what actions they're doing and are
5 they efficient actions that they're doing.

6 MR. BLACKISTONE: Thank you.

7 Dr. Soderstrom, if I might follow up on a comment that
8 you made, which I think is an important one. When you said that
9 we really should be looking for impairment and not necessarily the
10 age or the diagnosis, but yet, I reviewed the Insurance Institute
11 for Highway Safety's summary or analysis of state driver licensing
12 laws and they identified 18 states that shorten the renewal time
13 or time between renewals for older drivers. The states vary in
14 age from when that accelerated renewal starts between 61 and 85,
15 kind of a broad range there.

16 How do we discern what an appropriate age is for when we
17 need to begin taking greater look at older drivers? The reality
18 is, the states are going to be looking for some guidance on that
19 and it's going to be very difficult to say just look for
20 impairment.

21 DR. SODERSTROM: Dr. Blackistone, why did you do this to
22 me?

23 MR. BLACKISTONE: I'm just telling you what the states'
24 laws are now.

25 DR. SODERSTROM: I guess, when you look at these panels

1 that we have in discussions and forums, we're dealing with a very
2 difficult issue right now and that is, what is old. In my family
3 system, I'm 66. I just entered middle age, so --

4 I think we could work our way backwards and possibly say
5 that people are 110 years of age probably need to be assessed and
6 then start working your way backwards. But the question is, I
7 think, where is old, what is senior, what is elderly, and I don't
8 think we have the answer to that question right now. And I -- the
9 panels yesterday and today make it very clear that one 85 is not
10 equal to another 85. So I don't know where -- what the magic age
11 is, but we have to speak to the -- to your question with science
12 and I don't know if science has enough answers right now to tell
13 me where. I'm not going to tell you my opinion about where I
14 think it is, but I definitely do not think it's 65 and I
15 definitely don't think it's 70 and I definitely don't think it's
16 75.

17 MR. BLACKISTONE: I totally understand the dilemma.

18 DR. SODERSTROM: Yeah.

19 MR. BLACKISTONE: I'm just wondering what to say when
20 I'm confronted by state legislators who are asking me that
21 question.

22 DR. SODERSTROM: Well, it was kind of alluded to before.
23 Legislative processes and press processes are very interesting.
24 As you probably, all of you know, last summer in Cape Cod in
25 Massachusetts, there were six or seven crashes in driving -- older

1 drivers in which some really horrible outcomes happened, where
2 people died and were seriously injured. And because of cluster,
3 these occurred in a two-month period, there was an immediate
4 public outcry of, we need to do something about this. And we got
5 calls, I'm sure you got calls on this, I'm sure Jane got calls,
6 Loren got calls.

7 So I don't think we should let public outcry drive the
8 conversation. Unfortunately, it does drive the conversation to a
9 great degree. But I think we need some science right now about
10 what constitutes when I'm frail or fragile. And again, that's
11 another ten minute discussion because that's going to become a new
12 diagnose sometime in the next five years, fragility. I don't
13 think I answered the question very well.

14 DR. STAPLIN: A quick follow-up, Dr. Blackistone. One
15 thing you could say to a legislature who poses that question to
16 you is you could show them data that would support the notion that
17 if, for whatever reason, you would like to screening at the age of
18 25, you'll need to spend \$10,000 to find one person who might have
19 an issue with impairment. If you would like to spend only \$75,
20 then you can start screening at age 90. I mean, there's a
21 definite relationship there that is, you know, demonstrable. So,
22 you know. So think about that.

23 MR. BLACKISTONE: That's an interesting response. So
24 unless others have comments, I'm -- go to the panels.

25 CHAIRMAN HERSMAN: Okay. We'll go to the first table

1 and go to FHWA.

2 MS. ALICANDRI: We have a couple questions here. The
3 first one is for Dr. Soderstrom. Do you see ways to foster
4 broader clinical engagement in older driver safety to encourage
5 better patient assessment and reporting?

6 DR. SODERSTROM: That's a great question. One of the
7 recommendations that came out of the last -- the 2003 effort was
8 that part of the curriculum in medical schools should be that this
9 subject be on the table. As far as I know, it still hasn't been
10 accomplished.

11 When I was at the trauma center for many years, I know
12 it was not part of my modus operandi to send you home with four
13 rib fractures, a neck collar on, a cast on your left leg and a
14 cast on your left arm and tell you probably not to drive.
15 Probably didn't even think about it.

16 In Canada, they're doing some very nice things. In the
17 State of Maryland right now, we're going out to all the university
18 hospitals and their major departments and all the community
19 hospitals and other facilities to try to get physicians to put
20 the -- not just physicians, all clinicians to put this on their
21 radar. We need to educate them to think that, if someone in front
22 of you is 16, 96 or 116 is -- they just said they have a new
23 symptom, they -- I just put them on a new medication, I just am
24 going to do something to them, where does driving fit into that
25 equation?

1 So the education piece is beginning in many places, but
2 it's far from complete. I would dare say, in most jurisdictions,
3 in most states, clinicians have absolutely no idea, one, whether
4 there's a Medical Advisory Board in place. They have no idea at
5 all whether they have any obligations or the driver has any
6 obligation about reporting or talking to the DMV or MVA.

7 MS. ALICANDRI: Thanks.

8 Dr. Staplin, you said we're pretty far along the path to
9 having a scientifically valid screening tool, which, to some
10 extent, contradicts what I think we heard in the previous panel,
11 which is, we're not really sure what the right screening
12 techniques are, we need to do a little more work to get there.
13 And maybe it's a half full/half empty glass kind of issue, but
14 when do you think we're going to have that? When will I be able
15 to say to my father, well, just go the DMV, take this one 20-
16 minute test and see what happens?

17 DR. STAPLIN: Thank you.

18 I honestly think that we could be at that point,
19 certainly within a decade and probably less. I think that where
20 we are right now is that we have a solid understanding of the
21 constructs that most significantly predict the risk of an at-fault
22 crash.

23 Now the way constructs are operationalized, those are
24 the actual tools and tools need to have certain properties, they
25 need to be standardizable, they need to be reliable and so forth.

1 But I think the key constructs have been reasonably well validated
2 at this point. I think it's always important to gather additional
3 data and to refine our understanding of those relationships.

4 But I think, honestly, that certainly, within a decade,
5 we could have something that is -- that will pass scientific
6 muster, ultimately will, as a previous panelist pointed out, be
7 implemented in terms of sensitivity and specificity so that, you
8 know, where you put the cut and say who passes and who fails will
9 be as much a political as a scientific decision.

10 So there are a number of those issues that have to be
11 worked out, but I think those are outside of the realm of the
12 issues that you are bringing up. So I don't think we are that far
13 away, quite honestly.

14 MS. ALICANDRI: I guess a follow-up question for anybody
15 that wants to try it is, Dr. Soderstrom, I think you said we need
16 some more science about what constitutes old for screening
17 purposes. So if Loren's telling us we could have a tool in ten
18 years, when would or what do we need to do to get to the point to
19 say who should be using that tool when they show up at the DMV?
20 Should it be the 65-year-old, the 75-year-old, the 85-year-old or
21 the 95-year-old? When will we know that?

22 DR. SODERSTROM: Rather than pick an age, our practice
23 has been, for years, we do use functional capacity screening. We
24 use it when we have drivers that are referred to us, in which
25 there are indications of cognitive problems. It's not a matter of

1 that -- of how old you are, but rather, that your clinician, the
2 police report that came in, the actions with the counter personnel
3 at the agency pointed to, there may be a cognitive issue involved.
4 So it's not a matter of age, about who gets screened. It's
5 rather, an issue of if there's some manifestation of a cognitive
6 dysfunction.

7 Another very important thing we have to remember when we
8 think about older people is dementia is very different than
9 delirium. And there are many older people, as they go along in
10 life, they may be placed on a new medication or be put in a
11 stressful situation or have an illness -- a stressful situation
12 and illness that may cause them some confusion. That's not
13 dementia. That's simply a little bit of delirium. And
14 unfortunately, I think a lot of clinicians are fast to pull the
15 trigger and label someone as being -- having a dementia when
16 really, what was, they had a confusional episode or delirium
17 episode that was a one-time phenomenon and is now gone and they
18 are not demented.

19 DR. STUTTS: And I would just add, too, when you try to
20 pick a specific age, not just to assume that that screening is a
21 one-time event that starts at a particular age, that there are
22 other things that DMVs do and there are other ways into the
23 system. And one thing that pops to my mind is training your line
24 examiners to observe for potentially at-risk drivers. That
25 there's some states who do this very well and examiners can be

1 that very front line screening. And if they see something that
2 they're not certain about, then they might be the referral to some
3 additional screening or testing and such. So that can be a good
4 avenue to open the door and not require it of everybody.

5 DR. STAPLIN: And Beth, one thing when you're talking
6 about what age is appropriate, if screening were to be
7 implemented, an argument for starting at an earlier rather than a
8 later age is that, probably the most sensitive indicator is
9 someone's departure from their own baseline. So if you had
10 several years of data on an individual and there was an abrupt
11 change in function, that would be a logical trigger.

12 MS. ALICANDRI: Thanks.

13 Another question from our table is for everybody, I
14 guess. To what extent are the licensing agencies really able to
15 limit older driver risks and extend mobilities by providing
16 provisional or restricted licenses? Are such licenses effective?
17 Do we really think drivers are complying with them? Are they
18 really giving that balance of mobility and safety that we're
19 really looking for when we do restricted licensing?

20 DR. STUTTS: I'll take a stab at that. Restricted
21 licenses are something that almost all states use. They don't use
22 it to the same extent. We did ask specific information about what
23 types of restrictions you are able to impose on licenses and for
24 example, almost all states do restrictions for daytime driving
25 only, often with vision limitations and impairments and all.

1 They -- it's also fairly frequently to restrict to certain lower
2 speed roadways, non-freeway driving and a fewer number may
3 restrict to specific distances or geographic locations and all.
4 So, there are a range of restrictions there.

5 Typically, the drivers who are restricted more beyond
6 daytime driving only or beyond a restriction that might routinely
7 be imposed because of vision impairments and all, they are often
8 drivers that are in the medical review system in any case and so
9 that allows the option of following up with them and examining
10 their safety. There have been several -- a few studies that have
11 looked specifically at restricted licensing. I know the Insurance
12 Institute just looked at the practice in Iowa and I think they
13 basically concluded, and I think we heard about this the other
14 day, that when restrictions were imposed on licenses, that they
15 did appear to be imposed to the right target audience, the drivers
16 who had certain impairments, vision or physical impairments or
17 cognitive.

18 So they seem to be targeting the people who would most
19 likely be at risk. And then they also found that the people who
20 had restrictions did appropriately limit their driving, so they
21 were less exposure. They could not go that final step of showing
22 that they actually had reduced crash risk, but other studies that
23 have been conducted, the one by Marshall, et al, using
24 Saskatchewan data. I think, basically, they show that the drivers
25 with restricted licenses, while they may have a slightly higher

1 crash rate than drivers who don't have restricted licenses, it's
2 still very much in the norm and it's, in fact, lower than the
3 crash rate for many other drivers.

4 So they will basically conclude that it is a beneficial
5 measure to take, that it is keeping these drivers within a -- you
6 know, restricting them so that they are able to continue to drive
7 with reasonable safety.

8 MS. ALICANDRI: Great.

9 DR. SODERSTROM: My colleague and friend, who I greatly
10 esteem, Dr. Bonnie Dobbs mentioned yesterday that she was kind of
11 opposed to individuals that have early onset dementia, being able
12 to -- being allowed to drive, comparing it being kind of an
13 alcohol impaired driver. The American Neurological Association
14 this past April, put out a guide, kind of a consensus statement
15 about where that would fit in with driving. And so they're
16 suggesting that there are people with very early cognitive issues
17 that can drive within certain circumstances. And for years, on a
18 very, very case-by-case basis and with a lot of evaluation,
19 depending on the circumstances in which we live, we allow people
20 to have geographic driver's licenses.

21 Very limited daylight driving, maybe just to get to
22 church, the doctor, visit the grandkids. But as Dr. Stutts
23 alluded to, once they get into the system of that, we have to be
24 very, very, very careful to follow them on a very careful, regular
25 basis and make sure that, because they are -- they're in a

1 continuum that probably is going to end up with having the need to
2 forfeit one's driving privilege, but it's very important.

3 So that's a -- it's an interesting thought right now
4 that the American Neurologic Association does kind of support
5 where we are right now with it, but again, it's consensus. It's
6 not hard science that given certain circumstances, you can have
7 certain limitations and drive.

8 DR. STAPLIN: There is an initiative, a project just
9 begun by NHTSA to look at that specific question. So hopefully
10 in, you know, 12 or 18 months, we'll have a more definitive
11 answer.

12 MS. ALICANDRI: Thank you very much.

13 CHAIRMAN HERSMAN: And we'll move to the second table
14 and if you'll, again, introduce your name and your group when you
15 begin speaking. Thank you.

16 MS. SCHOLD DAVIS: Thank you.

17 My name is Elin Schold Davis. I'm from the American
18 Occupational Therapy Association and I have questions with myself,
19 AARP and the American Optometric Association. I'll try to get the
20 angles right here. We've got cards flying here, so bear with me
21 as I try to give you some questions.

22 Dr. Soderstrom, can you clarify for us, the difference
23 between functional screening and cognitive screening at your MAB?

24 DR. SODERSTROM: It's the current battery of elements
25 that we use, really kind of have both. They have some cognitive

1 aspects relative to executive functioning, divided attention.
2 Some functional aspects of it is the idea of having someone walk
3 down a ten-foot line and come back and almost everybody should be
4 able to do that in seven seconds. There is beginning to be a body
5 of literature that's going to tell us that those are going to be
6 very important things in the future because they're going to point
7 to some -- that thing that's going to get into that diagnosis
8 eventually, called frailty.

9 Another screening question -- another part of the screen
10 is have you had a fall in the last three years. That is, again, a
11 physical function, but that has been shown by several studies, in
12 Maryland and elsewhere, that just having had a fall in the last
13 three years has some link to your risk of being at fault in a --
14 being in a crash at which you are at fault in the next -- in the
15 near future. So it's kind of a mix of kind of physical and
16 cognitive matters.

17 MS. SCHOLD DAVIS: Okay. Thank you.

18 My next question is, I know I talked in the earlier
19 panel about adaptive devices and vehicle modifications. And I
20 know that Medical Advisory Boards are inconsistent around the
21 country. Does your Medical Advisory Board have a role in ensuring
22 that vehicle modifications or the addition of equipment is
23 monitored at all and is that an important recommendation for why
24 all states should have some kind of oversight?

25 DR. SODERSTROM: We have a really incredible situation

1 in Maryland right now that, again, my colleague, Dr. Rolly
2 started. We have a very regular dialogue of every three months,
3 we meet with all the occupational therapists in the state and we
4 host a meeting. It's not our meeting. It's our meeting in the
5 sense of, it doesn't belong to the MVA. So we stay in touch with
6 each other. We all try to stay on the same page and make sure
7 that we're, in some kind of consistent manner or form, evaluating
8 people.

9 There's -- because we also brought the adaptive
10 equipment dealers into the equation and invited them to our
11 meetings to make it complete, it's very unusual now that any
12 driver couldn't go up to an adaptive equipment dealer and ask them
13 to put something into their car. They'll say no, you really need
14 to go the route of having been assessed by an occupational
15 therapist to yes, do you need this. They'll -- you need to go to
16 that individual, those professionals. They will assess whether
17 you need this. They will teach you how to use it and recommend
18 the right one before they will take care of that issue.

19 I think it was brought up earlier. One of the sad
20 things right now though is that, one, the number of occupational
21 driving therapists are, unfortunately, quite low for the need in
22 this country right now and unfortunately, third-party payers
23 rarely pay for that. So it's an expense when you have to go that
24 route.

25 MS. SCHOLD DAVIS: Thank you.

1 This is just -- this is to the panel. From your
2 professional perspectives, which current state programs offer the
3 most comprehensive assessment of driving capacity and how can
4 states do a better job of learning from each other about
5 successful models for driving assessment?

6 DR. STAPLIN: I want to spare Dr. Soderstrom from having
7 tell self identify Maryland as being a leader in this, but they
8 really do deserve recognition in that regard. There are some
9 innovative things going on in California as well. We're all
10 eagerly awaiting to hear, I think, at TRB this January, on what
11 the outcome of their three tier pilot assessment program has
12 yielded. So I would say those two states are, right now, sort of
13 leading the pack.

14 DR. SODERSTROM: If I remember from -- thank you, Loren.
15 That was very kind of you.

16 If I remember correctly, I'm going to leave someone out,
17 but an effort by TransAnalytics a number of years ago and then, by
18 NHTSA, looked at different capabilities of different states. And
19 another one -- and I'm going to leave out probably two more, but
20 definitely, one of the states that was -- got pretty high rankings
21 about doing things well was Virginia.

22 And this goes -- Loren's comment goes back to what
23 Dr. Garber suggested, is we better start dialoguing with each
24 other real fast so we can do things on a consistent basis with
25 some science.

1 MS. SCHOLD DAVIS: This next question follows up, I
2 think, on what you said. Is there any research underway that
3 compares state policies that are evidence based with those that
4 are not in order to determine the most effective?

5 DR. STUTTS: Precious little. The good news is that the
6 Maryland activities and the California are both undergoing
7 rigorous or Maryland had undergone rigorous evaluation, both with
8 NHTSA and California DMV has done its own evaluations there. But
9 other than that, there are precious few that have been evaluated.

10 I will mention, I mean, that's sort of, the states
11 themselves have not taken the initiative to evaluate it. I would
12 remind, a study that was brought up yesterday too. There was one
13 study that looked across the board at states by Grabowski, et al.,
14 but looked at state practices to identify those that might -- you
15 know, which state driver licensing renewal practices and driver
16 licensing practices are related to safety. And that study found
17 that the only renewal requirement or licensing requirement that
18 was related to safety was having in-person renewal. And I think
19 the other practices they were looking at were more frequent
20 renewal or the road tests that are required in Illinois and New
21 Hampshire and then, just vision screening, et al.

22 So the in-person renewal and I think, in particular,
23 just for the older drivers, 85 and above, that was the only one
24 that showed a significant relationship to crash safety. So it
25 would be good to do more studies like that, to replicate it and --

1 but they're very difficult to do. You've got lots of -- I mean,
2 even they pointed out that the states that have one policy, they
3 have the other things in place too. So they're -- it's very hard
4 to do that kind of study, do it well and be confident with the
5 results you get.

6 MS. WAGNER: Right. I just want to add to that was the
7 study that was done by the University of Alabama Birmingham team
8 evaluating the license change in Florida, when they started
9 requiring vision testing. And that was, more or less, a de facto,
10 in-person renewal policy that came in and they did find that there
11 were changes in fatality rates in Florida and compared to the
12 neighboring states, Georgia and Alabama, that didn't have those
13 changes in those age groups that were affected.

14 So I think that the in-person renewal and perhaps the
15 way that it was done in Florida may have some good effects.

16 MS. SCHOLD DAVIS: Do you remember the age that that
17 was?

18 MS. WAGNER: It was older than 80.

19 MS. SCHOLD DAVIS: The added vision test?

20 MS. WAGNER: It was 80 and older? I thought it was 81.

21 DR. STAPLIN: I think it's older than 79.

22 MS. WAGNER: Older than 79. And that was, as I
23 understand it, partially a financial decision that they made of
24 how many people that they could process and how many people can
25 be -- you know, go through the system and be taken out of the

1 driving pool as well.

2 MS. SCHOLD DAVIS: Yes?

3 DR. SODERSTROM: If I could just make one comment about
4 that study? It was -- by enforcing this rule and saying that you
5 had to be visually tested at the age of 80, it turns out that that
6 one little speed bump in the road, 20 percent of drivers in the
7 State of Florida did not renew their license, which was kind of
8 interesting. And of the 80 percent that continued to pursue
9 getting licensed, whether it was just a test of their vision at
10 the MVA or at the DMV or going through their visual clinician,
11 about 98 or 97 percent of them did eventually pass the test.

12 So it's kind of interesting, by just putting a --
13 something in place, does that cause a lot of drivers to drop out
14 of the driving pool just because they think oh, I probably won't
15 be able to pass at that stage.

16 DR. STUTTS: And I would like to reinforce that, that
17 you always have to look at the effects that you don't anticipate
18 and really look carefully at laws you put in place.

19 Just one sort of general comment, when we're looking at
20 laws that are put in place in different states and whether or not
21 they're effective or not, and we seem to sort of focus on states
22 that have imposed some additional qualifications or requirements
23 for older drivers and all. That that -- you know, that really is
24 not the only issue here. I give Florida as an example. We talk
25 about states that require more frequent renewals for older drivers

1 and all and I mean, Florida is one state, for example, that
2 there's standard renewal processes eight years and then, past a
3 certain age, they reduce it to six years. So they do have an age-
4 based requirement there.

5 But then you've got to counter that with many other
6 states that have four or five years in-person renewal for every
7 driver. So just the fact that a state has, you know, some age-
8 based requirements for older drivers, realize that there are lots
9 of states that might have that same requirement, but they have it
10 for all drivers as their typical way of functioning. So again,
11 that's a different level to pull out.

12 And I think what we've seen a lot in the states, you
13 know, over the past decade or so, is that as their resources and
14 all have been tightened up, what they've done, instead of passing
15 stricter requirements on older drivers, particularly in terms of
16 length of renewal cycles or frequency of renewal, they will extend
17 it for the middle age group. They will leave it for the young
18 drivers and then extend it for the middle age group and not change
19 it for the older age group. And that's easier for them to do
20 because they're not up against a lot of fight by people who don't
21 want to put a new requirement specifically on older drivers, but
22 it has the same effect, essentially.

23 MS. WAGNER: And if I may add onto that. I think that
24 calls out the issue of years. And when we're talking about people
25 who, you know, could have a stroke tomorrow, are much more likely

1 to have a stroke tomorrow than the younger population, we can't
2 put all of our eggs into the licensing basket. We really do need
3 to make sure that we have that constellation of professionals that
4 you spoke of earlier who are engaged in looking at people who can
5 potentially be -- you know, that had their risks reduced or be
6 rehabilitated to a safer level of driving.

7 So we need to make sure that everybody's involved in
8 this. It can't just be a licensing issue.

9 MS. SCHOLD DAVIS: Thank you.

10 Do I have time for one more quick question? I think
11 this will just be a quick comment. Dr. Soderstrom, you made me
12 think when you made the comment about the MAB, once you open a
13 case, it's difficult to close one. And as we work at trying to
14 get more programs to address driving or address driving risk, I
15 think one of the barriers might be that once we -- we've had kind
16 of a don't ask, don't tell policy in many different domains in our
17 country. If we just don't bring up the topic of driving, we
18 aren't responsible.

19 And I was just wondering, is there a policy suggestion
20 or as we look at the recommendations from this panel, to really
21 looking at the perceived risk if a professional steps up and takes
22 on talking about risk, that they're not sort of having to own the
23 problem and they can't close the case, if you will, or can't send
24 it on to the next responsible party?

25 DR. SODERSTROM: I'm not quite sure I understand how you

1 posed the question. We close cases. If you have an acute issue
2 that brought you to our attention and that issue was solved, then
3 we close the case and you don't get any other letters about --
4 from the MVA for the rest of your life unless that should reoccur.
5 I'm not --

6 MS. SCHOLD DAVIS: And --

7 DR. SODERSTROM: I think there's a nuance to your
8 question I'm not understanding.

9 MS. SCHOLD DAVIS: I think there's sort of a liability
10 concern sometimes if -- so if they're in a crash the next week and
11 come back and say why didn't -- you know, what was your
12 responsibility of having not flagged or been still responsible for
13 that person?

14 DR. SODERSTROM: You mean for the MVA or for the -- for
15 our jurisdiction?

16 MS. SCHOLD DAVIS: Well, I think the MVA is one area and
17 I think we also see that in healthcare. I think we see that with
18 physicians. I think we see that with medical providers, the fear
19 that if they've brought it up, that they are somewhat liable.

20 DR. SODERSTROM: It works all different ways. I mean,
21 it -- one can have litigation from all directions. I think
22 there's a lot of clinicians out there that are very nervous that,
23 on the one hand, you talk about keeping a doctor -- a
24 clinician/patient relationship going. And on the other hand,
25 you're wondering that, am I going to be liable even though the

1 state doesn't require physicians or other clinicians to report
2 somebody. Am I going to be liable when the medical record
3 eventually shows, as in cases that have been reviewed on the
4 national level, that gee, the last time this person or the last
5 three times they saw their clinician, clearly, someone at some
6 point should have questioned, was there an ability to drive here.

7 MS. SCHOLD DAVIS: Thank you.

8 DR. SODERSTROM: We're not in favor by the way of
9 clinicians having to report people to the MVA. We are very much
10 in favor of all laws that allow for immunity for reports that come
11 in good faith from clinicians.

12 MS. SCHOLD DAVIS: Thank you.

13 CHAIRMAN HERSMAN: Thank you.

14 AAA?

15 MR. GRABOWSKI: Hello. I'm Jurek Grabowski from AAA
16 Foundation for Traffic Safety and I'll be representing questions
17 from the Alliance of Automobile Manufacturers also.

18 Unfortunately, I think the table before us stole our
19 thunder, but I'm going to go ahead and ask this question because
20 it has a slightly different spin.

21 Reporting of potentially unfit drivers to state
22 authorities has a multi-factorial process involving DMV,
23 physicians, families. While all citizens are stakeholders in
24 driver safety, some of the aforementioned groups may be afraid of
25 various liabilities. Can you list a few of the liabilities and

1 are there any states that have -- or are there or should there be
2 laws in any states similar to Good Samaritan laws for their
3 protection?

4 MS. WAGNER: Well, the first one is getting written out
5 of the will if you're a family member and that is actually a
6 concern that many people have. And then it goes outward from
7 there. You have the physicians who are afraid that their patients
8 are not going to, you know, come back any more and they're not
9 going to receive the treatment that they need to have in order to
10 maintain basic wellness.

11 But there are other states out there that, you know,
12 they provide anonymous reporting, as long as you sign it, for
13 family members. You can't just be, you know, referring your
14 neighbor because you don't like them. You actually -- you need to
15 provide basic, good information. Law enforcement often don't know
16 how to make that referral, so that's why we've been making sure
17 there's good training out there. Social services are oftentimes
18 more concerned about making sure that the client is taken care of,
19 rather than -- you know, they're concerned about the well-being of
20 the individual as opposed to, you know, the potential for them to
21 lose their license.

22 So there are a lot of barriers out there, but if you
23 have a good referral program that, you know, makes sure that
24 there's a full investigation that goes through for each individual
25 that is referred in, it's not that bad.

1 DR. STUTTS: I would just add too, you know, what Carl
2 said too, that particularly for physicians, the -- having
3 legislation that gives immunity from prosecution to physicians is
4 a big thing to get them to report. It's not the only thing, but
5 it is a very important thing. And you know, the confidentiality
6 of reports, and that varies greatly across the states.

7 What we think, ideally, is for a state to have
8 legislation in place that just -- that both, provides
9 confidentiality and immunity from reporting. And that's just not
10 the case in all states.

11 When we asked about this, you know, in terms of reports
12 being confidential, I think we had six states that said yes, they
13 were without exception and then there were 16 more that said well,
14 they're confidential unless they're subpoenaed or requested by law
15 or some others that said well, they're confidential unless the
16 driver requests them. And I mean, it's a legal position that a
17 DMV will say well, we -- you know, if there's a report about you,
18 we can't prevent you from requesting it. And so it's sort of a
19 gray issue in terms of what you can do.

20 Beyond the legislation that's in place in a state, I
21 think it's very important that the state DMVs have an effort to
22 make that legislation known to the -- you know, to the physicians,
23 to the law enforcement, to the public, whoever because you can
24 have that legislation and even some of the DMV people we talk with
25 did not know, you know, what the legislation was in their state.

1 But you can have that.

2 Unless they know about it, then it really doesn't make a
3 big difference there. And so that's where we're, you know, sort
4 of trying to encourage some things like for reporting, make a form
5 for reporting available, readily available from the DMV website,
6 having that information available. And then on that form, state
7 exactly what the legal, you know, requirements or what it is so
8 that people can readily find this information and feel confident
9 when they're filling out the form. And this goes for family
10 members, law enforcement, whoever.

11 DR. SODERSTROM: Can I make a comment? I believe at
12 last count, from the GAO report that was -- came out two years
13 ago, I think there were nine states that had requirements that
14 physicians report unfit drivers or drivers who they have concerns
15 about to the licensing agency.

16 The problem with most of those states, which is well
17 identified and I want to -- I can't wait to see Jane's report, but
18 in the TransAnalytic study that Kathy Lococo did a few years ago,
19 most of those -- some of those states that required reporting by
20 physicians were so amorphous that if you had particularly a
21 practice and you had a large number of just older people in that
22 practice, that if you wanted to comply specifically with that law,
23 you would almost have to hire a part-time person to be sending in
24 because it was just very, very vague.

25 A state -- I think a state that has a good law that we

1 know a lot about is, if you're going to have a mandatory reporting
2 law, is Delaware. Let's say I'm driving, on the way up to New
3 York and I have a seizure and I got to Christiana Hospital. That
4 physician who takes care of me must send a letter to the state
5 that I'm licensed in, whether it's Missouri or Washington State,
6 California or Maryland and say yesterday, I treated Carl
7 Soderstrom for a seizure.

8 That's a pretty discrete episode that definitely
9 requires taking someone's driving privileges away for a while to
10 make sure that condition is controlled. But if there are going to
11 be reporting laws mandatory, they can't be amorphous. And
12 unfortunately, the report that Kathy Lococo put out through
13 TransAnalytic show that four or five states, they were very, very,
14 very vague.

15 MR. GRABOWSKI: I guess that will lead to another
16 question that we have. So have or should Medical Advisory Boards
17 from all the states have a standardized database in which reviews
18 are entered into for researchers or for policy makers to review,
19 just to get a better picture of what the overall population is?

20 DR. STAPLIN: To go back to Dr. Garber, we've got to
21 start talking to each other first. That would be the Holy Grail,
22 I think, eventually, is that one, we all are talking to each
23 other, that we're all doing things in a very consistent fashion
24 and that we have a database of input and outcomes. And then we
25 can really be talking from science.

1 Jane Stutts alluded to this before, I believe, that when
2 you look at science for the decisions we're making, as I have --
3 as noted, I have the privilege to be on the Medical Review Board
4 of the Federal Motor Carrier Safety Administration and they do
5 these very large literature reviews on various subjects. And it
6 starts out with the classic, we entered all of these different
7 terms. We came up with 5,224 articles on the subject and then it
8 whittles down to, we came down to eight studies that had anything
9 to do with this and driving. None of them had anything to do with
10 commercial truck drivers. And of the eight studies, one was of
11 good quality, three were of moderate quality and four were less
12 than that.

13 So we just -- what you just said is -- would be the Holy
14 Grail, eventually, for what we're doing.

15 DR. SODERSTROM: As long as we're going to have that,
16 let's throw in an active codes process in those states too so the
17 crash outcomes can be factored in.

18 MR. GRABOWSKI: So have states looked outside the U.S.
19 for potential model programs that could be used by the states?

20 MS. WAGNER: Well, we're definitely looking at what's
21 going on in Canada and particularly, in regard -- because Canada
22 has certain advantages that we don't. Their driver licensing
23 authorities are inextricably linked to their health insurance
24 companies. So they're able to get some really good medical
25 information and look at the crash risk of individuals who have

1 medical conditions. So we're really looking forward to being able
2 to hear some of the results of those studies.

3 And in terms of other driver licensing opportunities, we
4 have 51 here. That's probably enough to go by otherwise.

5 DR. STUTTS: And I would just add, I think the
6 Canadian -- what the Canadians are able to do really is something
7 we should be looking at. From a DMV's perspective, it's very
8 difficult to get -- you know, DMVs, for example, look to European
9 programs. They, you know, they do things a certain way in their
10 state and they do things very differently in Europe. So a lot of
11 what's going on there may or may not be applicable in our state.
12 And I don't -- I think our states are best.

13 I think some of the programs that have been the most
14 successful have been things like the Maryland project and the
15 California efforts, where they see a nearby state doing something
16 that has worked well for them. And then, you know, can we get
17 other states to try this model. And I think that's the most
18 successful model to try to build on.

19 DR. SODERSTROM: Just the way -- and I agree that our
20 Canadian colleagues are doing a lot that we are paying attention
21 to and we will continue to pay attention to. We also have to make
22 it our business to pay attention to what's going on in the EU and
23 there are a lot of good reports that are coming out of Monash
24 University in Australia.

25 So part of our job is to, with this great world of

1 communication that we're in now, we really don't have an excuse
2 not to know what's going on elsewhere. You just have to find that
3 time in a 168-hour week to find out all the different models and
4 variations that are out there.

5 DR. STAPLIN: I would just like to acknowledge some work
6 that's recently been done in the EU with respect to medication
7 labeling, explicitly with regard to its impact on driving. The
8 French have developed a system. I'm not sure if it's going to be
9 adopted throughout the entire system, but it's a real innovative
10 accomplishment, I think, that we should look closely at.

11 MR. GRABOWSKI: All right. And for our last question,
12 I'm going to go back to a comment that Dr. Wagner said --
13 mentioned about the insurance companies. What role can/should
14 insurance companies play in the identification referral of drivers
15 for screening/assessment and could this be tied to a continuation
16 of coverage when claims are filed or traffic infractions are
17 identified? And lastly, would state mandates be required to make
18 this happen?

19 MS. WAGNER: I'm looking for a lifeline here.

20 That's a really challenging question and I don't even
21 know where to begin to answer that. I think it would be
22 wonderful, for example, if health insurance were to contribute to
23 driving assessment, the in depth assessment that was discussed
24 earlier today except I -- you know, I come up with good ideas. I
25 don't necessarily find the ways to implement them in terms of

1 that.

2 Do you guys have any other -- any help for me?

3 DR. SODERSTROM: I think you gave a good answer.

4 MR. GRABOWSKI: Okay. That's it for our table. Thank
5 you.

6 CHAIRMAN HERSMAN: Thank you.

7 And we'll go to the last panel and the last table, Ms.
8 Harsha.

9 MS. HARSHA: Barbara Harsha with the Governors Highway
10 Safety Association and with me is Tom Manuel from AAMVA.

11 First of all, I would like to thank Dr. Soderstrom for
12 helping me have my father reviewed and evaluated by the Maryland
13 Medical Advisory Board and helping to have a successful resolution
14 of his driving problems. This was several years ago. And if it
15 weren't for Carl, I think he would have continued to drive when he
16 shouldn't have. So thanks, Dr. Soderstrom.

17 DR. SODERSTROM: I would need to make a quick comment
18 that anything that happened relative to your father had nothing to
19 do with me. Since we are colleagues, it was referred to the right
20 person and I didn't even actually know the outcome. So thank you.

21 MS. HARSHA: Well, someday, I'll tell you.

22 I guess my first question is to Dr. Staplin. As I
23 understand it, you did a federally-funded study with the Maryland
24 MVA on fitness to drive and you came up with a protocol which I
25 understand was successful. Why hasn't this protocol been adopted

1 by other states and what are the challenges to adoption?

2 DR. STAPLIN: Well, I certainly can't speak for other
3 states. The barriers to adoption are, you know, political.
4 They're financial. There are lots of barriers. I think that,
5 unfortunately, what's likely to happen in this country is that the
6 adoption of screening procedures will be driven by some media
7 event. I think that what has been learned in Maryland provides a
8 set of tools to sort of have on the shelf that are being
9 continually improved because, as has been noted on this panel,
10 Maryland is using functional capacity testing within the domain of
11 its review of medically-referred drivers.

12 There is, in addition to the work that was done earlier
13 in this decade in Maryland, the -- there are -- there is ongoing
14 work to obtain new population-based samples. There is another
15 study about to be launched within a few weeks that's going to add
16 several thousand more drivers using the same set of functional
17 screening measures, again, prospectively looking at their safety
18 outcomes over a period of a couple of years.

19 So we are accumulating what will be, within a couple
20 years from now, probably close to four or five thousand. That
21 gives you enough to have in each of those cells in your odds ratio
22 analysis, enough of those who had at-fault crashes and were above
23 a criterion, a candidate cut point on one or more of your
24 functional measures.

25 So as that evidence builds, I think the acceptability of

1 using that tool will probably grow as well, but ultimately, I am
2 afraid what will drive the implementation of screening will be
3 some sort of, you know, catastrophic event that gets a lot of
4 media attention. And I should say, I really don't mean to appear
5 as an advocate for screening so much as someone who is resigned to
6 the fact that we are incrementally moving in that direction and
7 when one of these events occurs that triggers a change in policy,
8 we want to know as much as we can and have the best evidence
9 available so we can make the right choices.

10 MS. HARSHA: Okay. Question for Jane Stutts. Has any
11 state looked at the concept of graduated de-licensing and is that
12 something that is deserving of further research?

13 DR. STUTTS: We did not find any evidence of that.
14 That's something that's sort of near and dear to my heart. It was
15 a phrase I think that Pat Waller introduced back in the 1980s. So
16 a while back. She was the first one I know that really, you know,
17 looked at young drivers and said well, why don't we, at the other
18 end of the age spectrum, talk about graduated de-licensing.

19 In practice, some of the states are doing that and I
20 think the initiative that comes closest to that is the offering
21 local or tailored drive tests, and this is something that Iowa and
22 Kansas and a couple other states, to a lesser extent, do. But
23 particularly in Iowa, Kansas and I think, Minnesota, they offer
24 the option of -- for drivers who are unable to pass the standard
25 license renewal requirements. The vision testing, the, you know,

1 road test if it comes to that or whatever.

2 And Iowa is set up so that if you fail that test two
3 times, you've got one more try and you can opt for a local drive
4 test. And for that, the examiner goes out and you take a road
5 test just in the area, the streets, the roadways that you most
6 need to drive on near your home. And if you can show that you can
7 drive safely in that environment, then they will license you with
8 all these restrictions. So it's just a level of restrictions that
9 you can only drive during the daytime on these routes. You know,
10 you can't drive on eight-hour trips to Florida or whatever.

11 So in a, you know, real practical sense, that is sort of
12 a graduated de-licensing. And what -- we're in the process of
13 just really starting an evaluation of that because it was an
14 initiative that we did not want to necessarily promote strongly to
15 other states until we knew that it didn't have any, you know,
16 significant, adverse safety outcomes. So we are still evaluating
17 it and just getting started on that. But what we've been told
18 that, in practice, it really is a stepping stone down from
19 driving, that people cannot qualify for their full license.

20 Well, maybe for you know, Iowa and Kansas, I think it's
21 both two-year renewals by the time -- at age 70 and over. They
22 require for this and they may do it one time, they may do it two
23 times, but eventually, they know they're going to be stopping
24 driving. So it is, in a sense, a sort of graduated de-licensing
25 and I think it's a good -- may be a good solution. We're looking

1 to, you know, really evaluate it more closely.

2 MS. HARSHA: Dr. Soderstrom, you said that not all
3 states have Medical Advisory Boards and they're not all robust
4 Medical Advisory Boards. What can be done to encourage states to
5 adopt or implement Medical Advisory Boards and what are the
6 barriers?

7 DR. SODERSTROM: Well, I think one of the things is you
8 get what you pay for and we in Maryland, we pay our doctors a
9 certain amount of money. It's not a heck of a lot of money. In
10 fact, I consider the fine men and women that are on board, when
11 they're in their busy practice, I consider that the amount of
12 money that we pay them is really nominal and what they're doing
13 for us is a great deal of public service. And I appreciate that,
14 but you -- a little money can go a long way.

15 It's important, I think, that -- another thing is that
16 when you have a medical advisory board, if it's presented right,
17 it's an incentive. It's very much an honor to be on it in some
18 states. That's -- it's -- that's worth -- that's a kudo. My
19 brain is a little fried right now and I can't -- that light is
20 very, very bright and I can't think of any other brilliant idea
21 right now. If something pops into my head, I'll get back to you.

22 MS. HARSHA: Okay. Thank you.

23 DR. STUTTS: Barbara, could I -- I just want to add one
24 thing there, that I certainly support the Medical Advisory Boards
25 and think every state should have one. But I would note that, you

1 know, right now, we're about 15 states that do not have Medical
2 Advisory Boards and it's not like they have nothing in place to
3 deal with medical issues and driving. They often do have, you
4 know, good procedures and policies in place.

5 I mean, California, Colorado, Ohio, Oregon or some of
6 those states that do not have functioning Medical Advisory Boards,
7 but for example, they will routinely -- the two issues that
8 Medical Advisory Boards typically deal with are the, you know,
9 policy issues on helping to set state policies regarding licensing
10 and then also review of individual cases. So some of these
11 states, for example, for policy issues, when they come up to
12 having policy -- a policy needing to be addressed or they're
13 reviewing their guidelines and such, they will call in specialists
14 to help with that. They may have physicians on staff that help
15 with that and help with the decisions and all.

16 So they do have other ways of dealing with that and the
17 same thing for reviewing individual cases. Some of the states
18 may, you know, rely heavily on the driver's own physician, but
19 also, they may have their own physicians on staff or someone they
20 can refer to. So I just don't want to leave the impression that
21 the states without the Medical Advisory Boards aren't dealing with
22 the issue at all because they -- most of them have found some way
23 to handle it.

24 MS. HARSHA: Thank you. Thank you for that
25 clarification.

1 Final question to Dr. Staplin. There are so many
2 unknowns and so much more research that needs to be done on this
3 issue. And given that, how can we convince the DMVs to make older
4 driver safety and mobility a higher priority? What arguments can
5 we use to convince them to pay more attention to this issue?

6 DR. STAPLIN: Again, I wish this was going to be a
7 rational process. I mean the demographic argument is certainly a
8 strong one. I think, you know, when someone drives through the
9 front window at the licensing agency office, as we saw on YouTube
10 a couple weeks ago, that certainly makes a strong point, but those
11 kinds of events, of course, should not drive the argument.

12 I don't know. I think bringing attention to the -- not
13 just the -- I don't want to call it a problem because, overall,
14 older drivers are probably the safest group of operators on the
15 road. It's -- when there are issues related to age, it's not,
16 certainly, because of a lack of skill or a -- you know, it is sort
17 of propensity for risk taking. These are people who have been
18 skilled drivers and have learned tactics and strategy over a whole
19 lifetime. So it's a -- for a select few, a loss of the abilities
20 needed to execute those safe driving skills learned over a
21 lifetime that's important.

22 And it is expensive, relatively, to identify those few
23 people. How important is it to save X number of crashes, to save
24 X number of injuries and fatalities? I don't know. If those
25 injury and fatality savings in themselves aren't a sufficient

1 argument, then I'm afraid we ultimately are going to be left with
2 the media deciding that this is an issue that needs to be in the
3 forefront. And essentially having that public opinion drive the
4 policy process at the state level.

5 MS. HARSHA: Not unlike other highway safety issues.

6 DR. STAPLIN: Indeed.

7 MS. HARSHA: Thank you.

8 CHAIRMAN HERSMAN: Thank you.

9 Dr. Garber.

10 DR. GARBER: I have just one quick question. There's a
11 pretty good body of literature that shows that the single best
12 predictor of having an accident is having had a previous accident.
13 And that's for everybody, for teens, for adults, for older
14 drivers. Unfortunately, a lot of the property damage only
15 accidents and a lot of even the on-road incidents, we found, are
16 not reported for medically related issues, medical conditions that
17 may involve older drivers.

18 So how do the MVAs -- how do you guys get -- best get
19 referrals from those types of incidences? Those are, in fact,
20 some of the best predictors that we have. How do you get that
21 information? How do you ensure that you're getting accurate
22 information on those types of incidents?

23 DR. SODERSTROM: In Maryland, we get about 1,400 cases
24 referred by the police each year that run into -- that are at a
25 traffic scene where something has occurred in which they think

1 there may be a medical issue involved. Our analysis of 500 of
2 those cases show that most of them do involve a crash.

3 Another way that drivers come to the attention of the
4 Maryland Driver Wellness Division is if they have a certain number
5 of points that accrue relative to their insurance company. So in
6 kind of an indirect fashion, if you're involved in a number of
7 fender benders and getting your car fixed an awful lot of times,
8 they have a system where they'll just notify the driver wellness
9 division that works hand in the glove with us to say we want to
10 let you know that this person has a seemingly and inappropriate
11 number of crashes in the -- or incidences in the last period of
12 time.

13 CHAIRMAN HERSMAN: Mr. Blackistone.

14 MR. BLACKISTONE: Thank you.

15 I just wanted to follow up on a couple of points that
16 were made during the -- earlier, during the discussion. First,
17 which is somewhat of a follow-up on Dr. Garber's question.

18 I know, with respect to young drivers, there often is an
19 effort to try and attempt whenever there is a police contact -- to
20 identify times, whenever there is a police contact with a young
21 driver. They get stopped for some reason or another, but not
22 given any sort of citation. Is anything like that done with older
23 drivers? Has there been any research on police contacts with
24 older drivers that don't necessarily lead to a citation or a
25 result from an accident?

1 DR. SODERSTROM: We published a paper on that subject
2 last year. It turns out that when police encounter drivers at a
3 traffic incident, we looked at whether they -- if there was a
4 violation involved in this contact with the driver, whether they
5 gave a ticket in addition to referring them to the MVA because of
6 a concern of a medical condition. It turned out that if you are a
7 younger driver, and by younger driver, I believe in this case, it
8 was 55, more often than not, you got referred and you got a
9 ticket. Whereas, if you were an older -- I'm sorry. It was 65.
10 But if you were 65 years of age or older, if you had a violation
11 associated with this incident, you got referred, but you very
12 frequently didn't get the ticket.

13 And that's an important -- and we would encourage --
14 NHTSA has a very good training program for police. We would
15 encourage that the police person gives that older driver the
16 ticket for the violation that was involved with the traffic
17 incident because this is the finest generation. These are people
18 that are rule obeyers. Their traffic records have been fine.
19 This is really the first time they've been in a crash and
20 sometimes, we bring in people for interviews with a family
21 conference or something and their advocate, their spouse, their
22 kids say well, come on, it couldn't have been that serious an
23 episode. The policeman didn't even give them a ticket to start
24 with.

25 So we would like -- we think that police officers, if

1 they are going to refer drivers that have -- for whom they have a
2 medical concern, to give them the ticket in addition to referring
3 them. But the bias goes in the direction of not giving -- at
4 least in our small study, of not giving the older driver the
5 ticket they richly deserve --

6 MR. BLACKISTONE: Absolutely.

7 DR. SODERSTROM: -- plus the referral.

8 MR. BLACKISTONE: Absolutely. And then a final
9 question. I -- there was a discussion earlier about imposing
10 driver license restrictions. And I think, Dr. Stutts, you
11 mentioned a number of the kinds of restrictions that are done.
12 What about compliance with other classes of drivers who know
13 driver license restrictions or suspensions are often not obeyed?
14 What about with older drivers? Is there any indication that they
15 tend to obey license restrictions more or are they like younger
16 drivers?

17 DR. STUTTS: The Insurance Institute study that I cited
18 earlier, looking at Iowa data and licensing restrictions did tend
19 to find that they did comply with those restrictions that they had
20 on their licenses. And again, I think this goes back to sort of
21 the generation that they are. You know, they do tend to be
22 compliant with restrictions. And while I know, we've all heard
23 stories about taking away a license and older people may still
24 continue to drive and all, but I don't think that that is the
25 norm.

1 And again, that's something that we're going to be
2 looking at in much more detail. Loren Staplin is going to be
3 doing, for a study that's just gotten underway for NHTSA, looking
4 at, you know, both the restriction -- both the safety effects and
5 the compliance with restrictions.

6 MR. BLACKISTONE: What I hear you saying though,
7 potentially, is it's something we should continue to look at
8 because this generation may be different than the next generation.

9 DR. STUTTS: And it may be changing as we get up there.
10 Yes, it may change.

11 MR. BLACKISTONE: We who are baby boomers weren't always
12 quite as compliant.

13 DR. STUTTS: A little headstrong, but --

14 MR. BLACKISTONE: Thank you, Madam Chairman.

15 CHAIRMAN HERSMAN: I'm curious, Dr. Soderstrom, this is
16 a little bit off topic, but because you've talked about your
17 involvement with the FMCSA's Medical Review Board, I was just
18 curious if you could share with us what you think a couple of the
19 kind of strongest accomplishments of the MRB are that have
20 translated into action or policy changes at FMCSA?

21 DR. SODERSTROM: I have to tell you, I'm a new member to
22 the board, so I'm not -- I've just been involved, basically, in
23 several meetings. The board has -- is mandated to have five
24 members to it and three retired. And so we haven't met for quite
25 awhile.

1 I'm not sure. I know they've made a lot of good
2 recommendations as far as obstructive sleep apnea and some other
3 issues, but I'm not sure if a lot of those recommendations have
4 been followed through with. But they're good recommendations.

5 CHAIRMAN HERSMAN: Okay. Thank you very much.

6 Ms. Wagner, you and I had a little bit of a sidebar
7 conversation --

8 MS. WAGNER: Yes.

9 CHAIRMAN HERSMAN: -- yesterday, after the session
10 because I think that you have some information about some
11 pedestrian fatalities and I just wanted to --

12 MS. WAGNER: Absolutely.

13 CHAIRMAN HERSMAN: -- give you an opportunity to share
14 that.

15 MS. WAGNER: Why, thank you.

16 The question yesterday was related to what are the
17 additional risks that older people have as pedestrians. And in
18 terms of the fatalities that we see out there right now, older
19 people represent 18 percent of the pedestrian fatalities, as
20 opposed to the 13, 14 percent of the population that they are. So
21 they are definitely over-represented.

22 Most of those fatalities are happening in urban-ish
23 areas. That could be urban, suburban and they're much more likely
24 to be intersection-related crashes than a younger person will
25 have. So that means that the countermeasures that we have to use

1 will be much more intersection related. And that includes the
2 engineering that needs to go into place, as well as making sure
3 there's good enforcement to make sure that, you know, people are
4 not running red lights, for example, as well as making sure that
5 the individuals themselves, both the drivers and the pedestrians
6 have good education so they know what those risks are and what is
7 the proper behavior that's expected of them.

8 CHAIRMAN HERSMAN: Thank you.

9 Mr. Staplin referred to the concern that probably we all
10 have and we often see this in the aftermath of a major accident,
11 is that there's a response that sometimes comes. And sometimes,
12 the response tends to swift. Sometimes it takes a little longer,
13 but the quality of the response depends on how much data and
14 information is there, really, to support the decisions that get
15 made. And so I guess the good news is, is that we have 51 little
16 incubators of trying to figure out what works. But I guess the
17 bad news is that we also have 51 different incubators of trying to
18 figure out what works.

19 And so I would ask, Ms. Stutts, you talked about Iowa
20 and I think they have, certainly, a different model than has been
21 propagated throughout the country. Can you help me understand,
22 and I'm sure each of you has an experience in a different state
23 that you could talk to. What has prompted a state like Iowa to
24 take on the restrictions? That certainly had to be a difficult
25 lift for them, not -- maybe not politically popular for a certain

1 group of people. What was the impetus for them to be able to do
2 that and in other states where they've maybe made some tough
3 decisions if the other panelists want to comment and help us
4 understand how these changes occur?

5 DR. STUTTS: That's a good question. As for Iowa
6 particularly, I do not know exactly what prompted them to do this.
7 It is something we need to find out because, as we move to try to
8 promote an initiative in other states, we need to know, well, how
9 did this come about? You know, what parties needed to be
10 involved, what pieces in place?

11 It could have been something as simply, you know, all
12 states have the option of putting restrictions on licenses. So it
13 may not have been a particularly, you know, difficult legislation
14 or anything that they had to pass. It was more of an internal
15 policy of encouraging to really making use of that ability that
16 they had and thinking about it in terms of older drivers.

17 Another issue that's closely related to that, for
18 example, is that almost all DMV examiners, the line examiners have
19 the option of asking drivers to take a road test. That is
20 something that's available to them, but states may vary greatly in
21 terms of the extent to which the examiners take advantage of that.
22 And I think a lot of it boils down to is just what kind of
23 direction they get from their head of their driver licensing,
24 what -- you know, how important that person sees older driver, how
25 they communicated, how they train their examiners and such.

1 And in the case of Iowa, they have Kim Snook who just
2 has always been, you know, right at the forefront of doing things
3 for older drivers. So you know, in that situation particularly,
4 it really involves a champion there in the state doing that and
5 someone willing to take it on.

6 DR. STAPLIN: I want to reinforce what Jane just said
7 about having a champion. The efforts in Maryland that have been
8 referred to here a number of times were, in large part, driven by
9 the activities or the involvement of the then administrator, Anne
10 Ferro and the then head of the MAB, Dr. Robert Rolly and has since
11 been carried on by Dr. Soderstrom.

12 So having people who are champions for the cause
13 certainly makes a difference, but with respect to Iowa in
14 particular, they were also early adopters of the federal
15 highway -- the highway design handbook for older drivers and
16 pedestrians. And you have to believe that, in large part, it's
17 driven by demographics because, after Florida, Iowa and
18 Pennsylvania, two more northern states, have the highest
19 proportions of older persons as drivers in their states.

20 MS. WAGNER: And if I may add, Iowa was very concerned
21 about the severe lack of transportation options that they were
22 able to provide. So they recognized that they had to do something
23 and if they could let people drive a couple more years, then they
24 were not going to be a burden in other areas.

25 DR. SODERSTROM: I would also like to acknowledge that

1 we have been very fortunate, as brought up by Loren, that
2 literally, for 63 years, we have had an -- we've had administrator
3 after administrator in Maryland that sees the value of a medical
4 advisory board. And when we think about fiscal cuts and we're
5 always -- we feel very confident and we know right from the top,
6 that we're considered a valuable resource to the state and that
7 continues through the current administrator, Mr. John Kuo.

8 CHAIRMAN HERSMAN: Thank you all.

9 And my last question has to do, maybe, with a kind of --
10 maybe trying to encapsulate or summarize the issue. Is this
11 challenge that we have in front of us, is it about older drivers
12 or is it about doing a good job handling medical issues? Are they
13 the same thing or are they different things?

14 DR. STAPLIN: In an aging society, certainly, you're
15 going to have a greater prevalence of medical issues and
16 medications that are used to treat them which are going to result
17 in these functional issues that we're most concerned about with
18 respect to traffic safety. I don't really see how you can tease
19 them apart for, you know, for the foreseeable future. I mean the
20 medical conditions certainly are a trigger, but ultimately, it is
21 function as has been underscored here and in other panels that we
22 care about.

23 And you know, it's not just medical conditions and
24 medications, but normal aging. Normal aging causes a decline in a
25 lot of these key abilities as well. Not to usually as severe an

1 extent, but I don't think you can just say age is not important in
2 this discussion.

3 DR. SODERSTROM: Chairman Hersman, the 2003 event by the
4 NTSB, they used five examples of cases to kind of set the stage
5 for discussion and I don't believe that any of them involved older
6 drivers. Four involved epilepsy and one involved a driver who had
7 a hypoglycemic episode. So I think you're absolutely on target.
8 It's about health and driving, which is the issue right now that
9 you're leading the charge on right now.

10 DR. STUTTS: I would sort of add to counter that a
11 little bit, that when you talk about getting information out to
12 the public and helping the public understand the problem and
13 communicating with even law enforcement and such, that it is
14 important or helpful to focus in terms of aging drivers because
15 that is a target audience out there. That's the one you want to
16 get the message, you want to communicate with.

17 And I'm thinking a lot because, for example, a number of
18 states and those that seem to be the most progressive are states
19 that have really put together coalitions of interested parties to
20 address the issue of aging drivers, medically at-risk drivers,
21 whatever. But very important parties to bring to the table, along
22 with the DMV, you know, bring your occupational therapist in,
23 bring your state divisions on aging. They're the ones that have
24 all the information on alternative transportation and other
25 resources for people. Bring together AARP because they have all

1 kinds of resources there, AAA.

2 So you know, I don't want to just ignore the fact
3 that -- you know, I don't want to talk about things in terms of
4 just aging drivers, but I think it is important to know that those
5 are the parties that we're needing to bring in and we need to
6 communicate with. And it helps to have them at the table.

7 CHAIRMAN HERSMAN: Thank you all so very much. This has
8 been a great final panel to wrap everything up for us. And I want
9 to particularly thank all the parties for sitting through these
10 sessions. You all, to a person, did a fantastic job staying on
11 point, staying on time and actually asking questions and not
12 making statements, which is always a challenge when you have an
13 open mic. And so thank you all so much for being so professional
14 and for representing your organizations so well. We know that all
15 of you all are partners in this effort of education and advocacy
16 and so we appreciate what you're doing.

17 So before concluding, I have a few housekeeping
18 reminders. As I mentioned in the opening, because of our time
19 constraints, we simply couldn't include and accommodate everyone
20 who wanted to participate in our forum. So any individuals or
21 organizations who wish to submit written comments may do so until
22 November 30th, 2010. So please check the NTSB's website under the
23 forums webpage for the particulars.

24 We will be posting a written transcript of the
25 proceedings on our website and also, an archived video of the

1 proceedings will also be available for a short period going
2 forward.

3 On behalf of my fellow board members, I see, Member
4 Rosekind is here from the beginning to the end, I would like to
5 thank all the panelists and the parties for their participation.
6 Certainly, our discussions over the last two days have been
7 excellent and they are going to help inform the Safety Board and
8 our staff as we move forward.

9 My appreciation also to Shaleece Haas, who's in the
10 back, for sharing her documentary with us. The stories of Martin
11 and Herbert certainly personalize the issues for all of us. Thank
12 you to the staff, some who are with me on the dais and some who
13 are out in the audience. Deb Bruce, hiding behind the table over
14 there, you and your team of hardworking professionals never cease
15 to amaze me in what you can do, so thank you for making this forum
16 possible.

17 The discussions that we've had over the past two days
18 really reminded me of the aphorism, a rising tide lifts all boats.
19 This was first coined by Sean Lemass who was an Irish politician
20 and it was later quoted and made famous by President Kennedy. But
21 I think this phrase so aptly describes much of what we've
22 discussed over the last two days.

23 The older driver is certainly a rising tide, as people
24 live longer and continue to drive well into their older years.
25 Whether it's introducing inflatable seat belts to make an accident

1 more survivable, providing the driver with a heads-up display of
2 exactly the information that they want to see, making roadway
3 signs easier to read or creating new tools to assess a driver's
4 fitness, the safety improvements that we make for some improve
5 highway safety for us all.

6 We've made great strides in safety since the first
7 driver's license was issued almost a century ago. Hopefully
8 through the sharing of best practices and experiences and the
9 active participation of the licensing agencies, the physicians and
10 the communities where these older drivers live, we can reach
11 responsible and informed decisions on how to make the roadway safe
12 for all of us. And to do so in a way that balances individual
13 independence, mobility needs and safety. These goals are not
14 mutually exclusive in our society. Collectively, we have the
15 opportunity and the obligation to address them concurrently and
16 with some urgency. 2025 will be here soon enough.

17 This concludes our forum and if you all don't mind to
18 indulge me, I have some personal things that I would like to
19 share.

20 Today is not just a milestone for the Safety Board, but
21 we also have a personal milestone. Mr. Bruce Magladry, who's the
22 director of the Office of Highway Safety, is going to be retiring
23 early next year. Bruce is -- this is his last official
24 performance in the boardroom. He has served -- Bruce, before
25 coming to the Safety Board, was a police officer. He worked for

1 13 in Baltimore County, Maryland and 12 of those, he was a
2 Detective.

3 He came to the Safety Board in 1988 as an investigator
4 in our Human Performance Division. He investigated accidents in
5 all modes of transportation when he came here. He worked on Jim
6 Danaher and Jerry Walhout, who are kind of famous here at the
7 Safety Board. Bruce worked extensively on the Board studies of
8 fatigue, alcohol and drugs in truck crashes. And in 1997, he
9 joined the Office of Highway Safety as the chief of the
10 Investigations Division. In 2001, he became the deputy director
11 and in 2006, he began serving as the director of the office.

12 I have witnessed, during my six years here at the Board,
13 Bruce's leadership on big accidents like the Big Dig, the Boston
14 tunnel ceiling, collapse and the Minneapolis bridge collapse.
15 Both accidents were particularly complex and they required Bruce's
16 skills as an organizational leader, sometimes as a diplomat and as
17 well as those detective skills that he acquired so early in his
18 career in Baltimore.

19 Bruce has mentored me through the years and sometimes it
20 was hard and sometimes it was easy. You know, when I -- Dianne --
21 or Beth mentioned to me that it seems like it was 15 years ago
22 when we talked about older driver issues when I first came to the
23 Board. It was only six years ago, but time goes by fast. But
24 motorcycle safety and older drivers were two issues that I was
25 very, very interested in when I came to the Safety Board.

1 And you know, Bruce and I have worked through these
2 issues together and I was struck. We had a motorcycle safety
3 forum in 2006 and Bruce had to leave from that forum directly
4 because his first grandson, Finn was born and two weeks ago, he
5 welcomed his third grandson. And so I know that Finn and Bruce
6 and baby Henry are looking forward to having Grandpa Bruce and his
7 wife, Judy, with them more often, but we will certainly miss you
8 here. We wish you the very best and thank you for your service.

9 MR. MAGLADRY: Thank you.

10 CHAIRMAN HERSMAN: Do you want to say a few words?

11 MR. MAGLADRY: I'm not usually a speechless guy, but I
12 think I am today. Thank you very much.

13 CHAIRMAN HERSMAN: We stand adjourned.

14 (Whereupon, at 2:40 p.m., the hearing in the above-
15 entitled matter was adjourned.)

16

17

18

19

20

21

22

23

CERTIFICATE

This is to certify that the attached proceeding before the
NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: Safety, Mobility and the Aging Driver

PLACE: Washington, D.C.

DATE: November 10, 2010

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been compared to
the recording accomplished at the hearing.

Timothy Atkinson
Official Reporter