NATIONAL TRANSPORTATION SAFETY BOARD

PUBLIC HEARING ON THE MEDICAL OVERSIGHT OF NONCOMMERCIAL DRIVERS

L'Enfant Plaza
Washington, D.C. 20594

Tuesday, March 18, 2003
8:00 a.m.

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Board Member

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I N D E X

I N D E X

P R O C E E D I N G S

8:15 a.m.

OPENING REMARKS

CHAIRMAN GOGLIA: Good morning and welcome. My name is John Goglia. I am a member of the National Transportation Safety Board and the chairman of this hearing.

The Safety Board is an independent government agency mandated by Congress to investigate transportation accidents in all modes, to make recommendations to prevent similar accidents from occurring, and to provide independent oversight of government and private entities involved in our nation's transportation system.

Today's hearing is the Safety Board's third public forum in the past four years to focus on medical issues that affect driving safety.

Now, before we go on to the meat of today, I have a statement to read about emergency procedures for this room.

In case of emergency of some sort, such as a fire, the building alarm system will activate and a voice message will instruct persons to vacate the building. You should proceed then to the nearest exit. There are emergency exits in the front on either side of the stage and, of course, the back of the room. Also for your convenience, restrooms and telephones are located in the foyer to the left of the exit, and I also would like to add if you have any cell phones, pagers or beepers, that you turn them

off or put them on silent mode so as to not disrupt the proceeding.

In January of 2000, in support of our investigation of a motor coach crash in New Orleans that killed 22 people, we conducted a hearing to evaluate the effectiveness of the commercial driver's medication certification process. The driver who caused that accident had continued to operate a commercial vehicle despite having several life-threatening heart and kidney conditions. In November of 2001, the Safety Board co-hosted a forum with the Food and Drug Administration to consider the role of over-the-counter drugs and prescription drugs in accident causation.

Since 1987, the Safety Board has investigated more than a 150 accidents in all modes of transportation in which over-the-counter medicines or prescription drugs caused or contributed to the accident. In that same period, we conducted at least 10 major highway accident investigations involved drivers with medical conditions, such as sleep apnea, diabetes, heart disease, poor vision, and alcohol and drug dependency.

The hearing that begins today supports an accident that occurred in November of 2002 involving a driver who had an epileptic seizure just prior to the accident. In the past five months, the Safety Board has identified five additional accidents in which drivers had debilitating or incapacitating medical conditions. While investigations into these accidents are on-

going, we know that at least one of the drivers had been in prior accidents due to his medical condition and the most recent accident took the life of a father and three children.

During the next two days, we will seek to understand why these types of accidents occur and what can be done to prevent them. This morning, we will talk about the current research into a few representative medical conditions and explore. Next, we will discuss how information on medically-high-risk drivers is collected and routed to state licensing authorities and medical review boards. Our final topic of the day will be the ability of state agencies to manage licensed drivers who suffer from potentially-impairing or -- I'm going to have trouble with this word -- debilitating medical conditions.

Tomorrow, we will learn about the programs that train doctors, law enforcement officials, licensing authorities and others to report, manage and counsel medically-high-risk drivers. The discussion will then turn to current options, including awareness training, rehabilitation programs, and alternative transportation initiatives to help drivers with impaired or debilitating conditions to cope with those conditions. Finally, we will wrap up an eventful two days by examining public policy considerations that affect the design and implementation of driver medical oversight programs.

Before we continue, I would like to acknowledge and thank all the parties, witnesses and Safety Board staff who

contributed their time and expertise to this event. Seated with the Board of Inquiry, with me, today are Ms. Elaine Weinstein, Director of Office of Safety Recommendations and Accomplishments; Dr. Vern Ellingstad, Director of Office of Research and Engineering. To my right, Mr. Joseph Osterman, Director of Office of Highway Safety; and to the far right, Dr. Rafael Marshall, Hearing Officer from the Office of Highway Safety.

Assisting the Board of Inquiry will be a Technical Panel from the Safety Board's Office of Highway Safety, Safety Recommendations and Accomplishments, and Research and Engineering, and we will introduce the panel members as we go along. Since I've already messed up three words, I'm not going to mess up some of their names.

Also here from our Office of Public Affairs is Mr. Keith Holloway. I don't see him, but he'll be here soon. Oh, Lauren, are you taking his place? Okay. Lauren is in the back of the room. And the Safety Board has designated as Parties to the Public Hearing those agencies, organizations and individuals whose special knowledge will help us develop pertinent facts for this initiative. We have five sets of parties.

Occupying the first Advocacy table are representatives from the American Association of Retired Persons, the American Sleep Apnea Association, Alzheimer's Association, Epilepsy Foundation of America, and the Parkinson's Disease Foundation.

Occupying the second Advocacy table are

representatives from Highway and Auto Safety, the American Insurance Association, and Mothers Against Drunk Driving and AAA as well.

Occupying the Medical table are representatives from the American College of Emergency Physicians, the American Medical Association, the Association for the Advancement of Automotive Medicine, and the Association for Driver Rehabilitation Specialists.

Occupying the State table are representatives from the American Association of Motor Vehicle Administrators, the Governors Highway Safety Association, the International Association of Chiefs of Police -- another disconnect -- National Committee on Uniform Traffic Laws and Ordinances, and the National Conference on State Legislatures.

Finally, occupying the Federal table are representatives from the Centers for Disease Control and Prevention, the Federal Transit Administration, and the National Highway Traffic Safety Administration.

Thank you all for coming.

A Safety Board public hearing is a fact-gathering exercise. It is not an adversarial proceeding. We will not debate or analyze the facts and conclusions presented. Rather, we will spend our time examining current safety problems and studying possible solutions. The Safety Board will use the information gathered at this public hearing to develop possible

recommendations and other materials on medical oversight of noncommercial drivers.

The procedures for this hearing are as follows. As the chairman of the Board of Inquiry, I will be responsible for the conduct of the public hearing. I will make all rulings on the admissibility of questions, documents, or information as factual evidence and all such rulings will be final. Witnesses will serve on panels devoted to specific topics. The Technical Panel will question the witnesses first, then I will call on the Parties at each table to question the witness. We will conclude with questions from members of the Board of Inquiry.

A transcript of the public hearing and all exhibits entered into the record will become part of the public record of the Safety Board's Washington, D.C., office. Anyone desiring to purchase a transcript should contact the court reporter as the Safety Board does not provide copies of the transcript. In addition, the Safety Board's Accident Investigation Report and other publications are available on our website which is www.ntsb.gov.

Thank you very much.

Dr. Marshall, will you please introduce the first panel of witnesses?

Introductions and Topic Overview

DR. MARSHALL: Before we do that, Mr. Ken Suydam would like to give a presentation. Mr. Ken Suydam is the Investigator-

in-Charge of the Hagerstown accident, and he will now provide us with a presentation. It's an Accident Overview and Investigation Overview.

Thank you.

MR. SUYDAM: Thank you, and good morning.

On November 3rd of 2002, a 1983 Chevrolet Caprice, operated by a 55-year-old female, was northbound on U.S. Route 11 in Hagerstown, Maryland. As the Chevrolet crossed the intersection of Brower Avenue, it struck the left rear of a 2000 Nissan, operated by a 76-year-old female. The Chevrolet continued north, and at the intersection, next intersection, it struck the rear of a 1993 Pontiac Gram Pre operated by an 81-year-old female. The Chevrolet engaged the Pontiac and both vehicles continued north several hundred feet before striking a wooden utility pole. The accident resulted in fatal injuries to the Pontiac driver and minor injuries to the Nissan driver. The Chevrolet driver was not injured and told the investigating Maryland State Police that she was taking seizure medication.

Shortly after the accident, a team from the Safety Board's Office of Highway Safety was dispatched to Hagerstown to conduct an investigation. The team spent five days on scene documenting physical evidence from the roadway and vehicles, interviewing witnesses, obtaining medical records and working in cooperation with the Maryland State Police.

During the course of our investigation, the

investigative team became aware of other recent local accidents that involved drivers with medical conditions, including in Washington County, Maryland, which was a seizure accident on June 7th of 2001. A Windstar Van was westbound on I-70 and failed to negotiate a curve, ran off the roadway, traveled through the median and entered into the eastbound lanes, impacting several other vehicles, including a Chevrolet Lumina. The driver of the Lumina was fatally injured and the van's passenger told the investigating State Police that the driver had suffered a brain injury several years ago and experienced black-outs and had a history of seizures.

Frederick County, Maryland, is also a seizure accident, and that was on November 23rd of 2002. A driver with a history of seizures failed to stop at a red traffic signal and ran into the rear of stopped vehicles, resulting in fatal injuries to a city official from Frederick, Maryland, and his three children.

Investigation revealed that the driver had suffered from epilepsy in the past and had been involved in accidents in November of 2000 and August of 2001. The driver voluntarily surrendered his driver's license to the Maryland authorities in October of 2001 and was reissued the license in February 2002.

Accidents involving motor vehicle drivers with medical conditions are not new. The Safety Board has concluded that such conditions contributed to or caused a number of previous accidents, including Buffalo, Montana, which was a visual

impairment accident of March 10th of 1998.

A 41-passenger school bus carrying five children, ages 7 through 15, was eastbound on Buffalo Canyon Road. The bus stopped at a highway grade crossing with the Burlington Northern Santa Fe Railroad tracks. After stopping, the 36-year-old bus driver conversed with students on board and adjusted various on-board controls. The bus driver then accelerated from a stop and on to the tracks and was struck by an oncoming freight train. Two children in the bus received fatal injuries.

Research following the accident revealed that the bus driver had a visual impairment identified as Keratosis that should have prevented him from meeting the visual requirements to drive a school bus as outlined in federal and state law.

Franklin, North Carolina, is an alcohol impairment accident that occurred on August 16th of 1997. A tractor semi-trailer traveling downhill on a curve on U.S. Highway 64 when the load broke loose and struck a school bus. The tractor semi-trailer overturned and slid to a stop. The school bus driver and one passenger were killed, one school bus passenger sustained moderate injuries. The truck driver and seven bus passengers sustained minor injuries. Witnesses stated that the truck was traveling in excess of the speed limit and was on the wrong side of the road just before the accident. The truck driver was arrested for driving under the influence of alcohol.

An investigation revealed that he had been convicted

twice before of driving commercial vehicles while intoxicated. The Safety Board determined that the probable cause of that accident was the truck driver's failure to control his truck due to alcohol impairment.

New Orleans, Louisiana, is a congestive heart failure accident that occurred on Mother's Day, May 9th, 1999. A 1997 55-passenger motor coach was traveling eastbound on Interstate 610. The bus was carrying 43 passengers and was en route from La Place, Louisiana, to a casino approximately 80 miles away, located in Bay St. Louis, Mississippi. As the bus approached an underpass in City Park, it departed the right side of the highway, went on to a grassy side slope and struck an earthen embankment. Twenty-two passengers were killed. The bus driver and 15 passengers received serious injuries.

Investigation revealed that the bus driver had suffered from congestive heart failure for several years prior to the accident and was receiving medical treatment five days a week for a number of debilitating medical conditions.

Jackson, Tennessee, is a sleep apnea accident that occurred on July 26th of 2000. An eastbound tractor-trailer pulling a loaded semi-trailer and traveling at an estimated speed of 65 miles per hour collided with the rear of a Tennessee Highway Patrol vehicle that was providing rear protection for a moving construction zone. Witnesses reported that the trooper's vehicle exploded and caught fire at impact, resulting in fatal injuries to

the trooper.

Further investigation revealed that the same driver had been diagnosed with sleep apnea several years earlier following an accident in which he ran into the rear of a Utah State Police vehicle, injuring two troopers. Safety Board determined that the probable cause of the Tennessee accident was the driver's incapacitation owing to the failure of the medical certification process to detect and remove a medically-unfit driver from service.

Although the Safety Board has addressed medically-related accidents in the past, clearly we need to learn more about this complex issue. Currently, there are approximately 42,000 deaths a year or a 115 deaths a day on our nation's highways. Drivers with impairing medical conditions contribute to these statistics. Most of us who have traveled here to this hearing today probably came by car and imagine how many motorists you passed which might have had a medical condition. So, please consider the following.

Epilepsy. 2.5 million people in the United States currently have epilepsy and 80 percent of them report little or no relief from their current treatment. There are approximately 300,000 new cases reported each year at a cost of $12.5 billion a year.

Diabetes. 17 million people in the United States have diabetes and one million new cases are reported a year in people

over 20 years old. 450,000 deaths were reported in 1999 as a result of diabetes at a cost of $98 billion a year.

Sleep apnea. Second-most common sleep disorder which affects approximately 18 million Americans. People with sleep apnea are seven times more likely to be involved in an auto accident and hospital-related costs exceed $42 million a year.

Cardiovascular disease affecting 61.8 million people in the United States currently have cardiovascular disease at a cost of $329 billion a year.

Alzheimer's Disease. One in 10 people over 65 have Alzheimer's. One in two people will have it over the age of 86. 14 million people in the United States will have Alzheimer's Disease by the year 2050 at a cost of over a $100 billion a year.

There are 14 million alcoholics in the United States that abuse alcohol or who are alcoholics. Alcohol is the factor in seven percent of all auto crashes and 41 percent of all fatal auto crashes. 1.5 million people were arrested for driving under the influence in the year of 2000. There's also one death every 32 minutes in an alcohol-related auto accident.

Recognizing the complexity of this issue, the Safety Board has gathered representatives and groups with a stake in medical oversight of noncommercial drivers, including doctors, first responders, state motor vehicle administrators, advocacy groups, federal regulators, and others.

Our goal is to explore and address some of the

following potential national issues: the effectiveness and usefulness of state oversight of licensed drivers who suffer from impairing or debilitating medical conditions, including driver licensing and medical review boards; the differing state rules and restrictions regarding medical oversight; the identification of medically-unqualified drivers through enforcement, state licensing and reports by medical personnel; information available to the public, medical, personal, enforcement and licensing authorities regarding impairing medical conditions; the lack of data available for determining the extent to which medical conditions are a factor in traffic accidents.

Over the next two days of this hearing, we'll discuss the background and state of the research, collection and routing of information on drivers with impairing conditions, the role of state oversight, programs to aid doctors, licensing authorities, law enforcement and drivers themselves, educational efforts and public policy.

The Safety Board would like to thank the witnesses and the parties for their attendance and we look forward to a productive hearing.

Thank you, Member Goglia, Members of the Board of Inquiry. This concludes my opening remarks.

DR. MARSHALL: Okay. We'll now proceed into the first hearing session, and I'd like to take a minute for our witnesses to seat themselves.

(Pause)

DR. MARSHALL: Okay. Dr. Garber, the Medical Officer of the Safety Board, will now introduce the Technical Panel and the witnesses.

Background and Research

DR. GARBER: Thank you, Dr. Marshall.

For this panel, I will be joined at the NTSB Technical Panel front table by Dr. Paula Sind-Prunier and Ms. Michele McDonald.

The purpose of this session is to determine the current state of knowledge regarding medical conditions that have the potential to affect an individual's ability to operate a motor vehicle. The specific backgrounds of these witnesses may allow some more detailed discussion of certain specific representative conditions, including seizure disorder, diabetes, sleep apnea and cognitive impairment, to include dementia.

The witnesses for this session will be Dr. Bonnie Dobbs, who is the Associate Director of the Rehabilitation Research Center at the University of Alberta; Dr. Dana Clarke, who is the Medical Director of the Utah Diabetes Center; Dr. Allan Krumholz, who is a Professor of Neurology and the Director of the Maryland Epilepsy Center at the University of Maryland School of Medicine; and Dr. Rich Marotolli, who is the Director of the Geriatrics and Extended Care Section at the VA Hospital in Connecticut, and Associate Professor of Medicine at the Yale

University School of Medicine.

I'd like to thank you all for being here today and for each of the witnesses, I'd like to note that although most of the questions that we are asking today will be directed at a specific witness, I would like for you to please indicate to me if you believe that you have additional information that is relevant to the questions, so that we can obtain as much useful information as possible. So, for each of the witnesses, please listen to and if you feel have important information to contribute on each question, please let me know.

I will start the questioning, and I'd like to start with Dr. Dobbs.

Dr. Dobbs, are we able currently to identify some of the critical physical, mental and emotional deficiencies that lead to an elevated risk of traffic accidents?

DR. DOBBS: If we look at the literature on medical conditions and driving, there are a number of medical conditions that raise red flags in terms of their effects on the sensory, motor and/or cognitive functioning. In terms of sensory, and these are comprised primarily of visual impairments, a review of the literature that I conducted for the National Highway Traffic Safety Administration indicated that there were nine visual conditions that resulted in an increased crash rate, and I can provide that list of conditions for you.

In terms of motor impairments, Timothy Salthouse has

indicated that motor response should be measured in two ways. First, there is the thinking phase, that is the cognitive processing, part of motor response. There also is the physical or motor phase, which is the actual carrying out of the process. The thinking phase or the cognitive slowing, if you will, is the most likely aspect of motor impairments that increase one's risk for crashes.

Importantly, when you talk about the motor aspect of functioning, it's important not to confuse motor functioning with musculoskeletal functioning. So, for example, Diller et al. in 1998 looked at the contribution of musculoskeletal conditions, such as arthritis, and found to have an association with the crash rate. Those with musculoskeletal conditions were found to have an increased crash rate compared, matched on age, gender, and county of residence.

The sensory and the motor components are important, but I would argue that the cognitive aspect is likely to be the most important. The nature of the driving task is such that conditions that compromise cognitive abilities are likely to have the greatest impact on one's ability to drive safely, and a review of the literature reveals that there are a number of medical conditions that result in cognitive impairment or cognitive deficits, and again there are -- I have a list of those conditions, and there are eight medical conditions -- eight categories of medical conditions and then, of course, medications.

The difficulty, in terms of looking at medical conditions and driving, is that often an individual has more than one medical condition. It may be relatively straightforward, to identify the effects of one medical condition on driving performance. However, when you take multiple medical conditions, and then factor in the medications used to treat those conditions, it makes the predictability about safe driving very difficult.

For that reason, I think that it's important to think about medical conditions in terms of the acute effects and the chronic effects. So, it's not the presence of the medical condition per se but rather the functional impairment that results from those conditions that is important, I think the classification of acute and chronic is instructive.

With acute effects, the event is sporadic and it is unpredictable. A chronic condition, is, by definition, more enduring. It's relatively predictable and it's stable. The distinction between acute effects and chronic effects is critical in terms of fitness-to-drive decisions. With acute effects, when the event occurs, for example, with an epileptic seizure, there is absolutely no question that the individual is incompetent to drive. The difficulty with acute effects, such as epileptic seizures, hypoglycemia associated with diabetes, is in the nature of their predictability. The implication is that decisions about fitness to drive cannot be based on direct measurement. In other

words, decisions cannot be made based on individual performance, because you cannot predict when -- it's difficult to predict when -- an event is going to occur.

In those cases, decisions about driving need to be policy-based decisions, and those policy-based decisions are often based on estimated risk to the individual and to society. Those policy-based decisions are usually the result of expert panel decisions or calculated relative risk, followed by clinical judgment regarding the individual risk, taking into consideration the severity of the condition, compliance with the medical regime, and compliance with medications. The difficulty, however, in terms of the clinical judgment, is the paucity of data with which to make those decisions.

Turning to the chronic effects of medical conditions. The importance of that distinction between acute and chronic effects is that with chronic effects, the effects on the individual's performance – how it impacts individual performance are measurable. Therefore, decisions about an individual's ability to drive can be based on individual performance rather than on estimates of risk. I think this is a very important consideration, and the role of science can be used in terms of making the decision about whether an individual is competent to drive.

DR. GARBER: Thank you.

You mentioned that there are specific conditions that

are associated with declines that may be associated with increased risk of accident.

Are those data from studies in simulators or are they from on-the-road studies? Are they epidemiological data? How do we know what the problems are that lead to folks having increased risk of traffic accidents?

DR. DOBBS: The review that I did for NHTSA was based on all of the available evidence. So, it included studies done using simulators, some with on-road performance, so forth and so on. So, it was a broad and comprehensive look at the literature and from that, I distilled the list in terms of those conditions that the research suggested increased crash risk.

DR. GARBER: It sounds like you're saying that the acute effects, the effects of an acute event or perhaps the likelihood of an acute event, is very difficult to measure.

Are there studies that actually look at what the likelihood of an individual is of having a seizure or of having a diabetic hypoglycemic episode or falling asleep with regard to sleep apnea or are there epidemiologic studies that tell us that people with these conditions may be at high risk for accident?

DR. DOBBS: I'll answer that question in terms of a study done by Diller, et al., and this was from the State of Utah in 1998. What Diller et al did was to crash and citation rates of restricted and unrestricted drivers with medical conditions to controls, and the restricted and unrestricted drivers with medical

conditions were matched to controls, based on age group, gender, and county of residence. Diller et al. found that for epilepsy, for example, that unrestricted drivers had a 2.42-fold increased crash risk compared to controls and the restricted drivers had a 1.74-fold increased crash risk. Individuals with sleep disorders, for example, also had an increased crash risk.

I believe that Diller's indicated 2.3. I noticed in the overhead this morning that there were data that suggested a seven-fold crash risk. I'm not sure where that came from.

So, for some conditions, I think that we have a fairly good idea of the quantifiable increase in crash risk and for others, we are less certain. That is, the data are not as compelling.

DR. GARBER: And with regard to that, I have one last question for you, which I'd also like to address to the other panelists.

Given that, given the relatively limited amount of data to tell us both from a chronic perspective and from an acute perspective what the risk might be, how do we assess the risk in an individual patient? In other words, an individual patient presents to presumably a physician or a motor vehicle administration. How do we assess the risk that that person presents if they are permitted to drive in an unrestricted manner?

Again, I'd like to perhaps start with Dr. Dobbs, if you can respond to that, and then go down the table and get a

response from each of the witnesses.

DR. DOBBS: I think the assessment of an individual's ability to drive is a really important issue, and one of the reasons that it is so important is because driving is so central to independence, mobility and freedom. I think any time that we revoke an individual's license, we want to be absolutely sure that we are making that decision based on science or -- yes, based on science.

The difficulty is that a lot of assessments directed towards assessing an individual's ability to drive have not been based on science, and in fact, they are often based on best guess or judgment. I think that we can use science to answer that question. An important issue is in terms of understanding first what makes an individual unsafe to drive. What that entails is understanding the meaning of driving errors and understanding whether a particular group of individuals differ in their ability to drive, differ in the types of errors that they show compared to the normal healthy population.

There has been research done in Canada, particularly with cognitively-impaired drivers, that does lay out that process. I think that if we can implement driving assessments based on science, then we will be making decisions about an individual's fitness to drive in a fair manner.

DR. GARBER: Thank you.

Dr. Krumholz?

DR. KRUMHOLZ: The question you asked relating to --

DR. GARBER: I'm not sure if your mike is on, sir. If the button is up, your mike is on.

DR. KRUMHOLZ: Is it on now?

DR. GARBER: Yes, it is.

DR. KRUMHOLZ: In regard to your question regarding statistics and what kinds of data there are, there's a good deal of data, as pointed out by Dr. Dobbs, but it's somewhat flawed and the flaw primarily is that what you're looking at is crash rates of drivers with various disabilities. That doesn't specifically address the question of how many of these crashes are due to that disability.

We know that most crashes in drivers are due to driver error and not due to necessarily any underlying medical condition. For the individual with seizures or epilepsy, this is particularly a problem because they have, I wouldn't call it an acute disorder, I'd call it an episodic disorder, and that means that you really can't test the individual in a driving test or in a driving performance test for that disability because 99 and 9/10ths percent of the time, even the most severe person, the person with most severe epilepsy, isn't impaired during -- in terms of their performance. It's only when they have a seizure that they're impaired.

So that, what you're looking at in these statistics are general crash rates which don't necessarily relate to the

disease-specific disability causing a crash and again that's a problem. There aren't really good statistics, as far as I know, of conditions, such as sleep apnea or seizures actually causing crashes. Generally what we do is we look at individuals with these conditions. We look at a large population of individuals, measure their risk of crashes and see whether that risk is acceptable.

The next question is what is an acceptable risk? We know that we accept certain risks in society is acceptable. We know that young individuals, young males under the age of 19 or 20, have a very high risk of crashing, and yet we don't necessarily restrict all of them from driving. So, we make certain judgments that certain risks are acceptable, and I think that's an important thing to consider.

For people with episodic disabilities, with epilepsy, we make, as physicians and as regulators, a judgment as to whether or not they are reasonable individuals to drive, based on certain issues of predictability of their chances of having a problem while driving and those issues are predictable. For the most part, a person who has seizures shouldn't drive. However, most people with epilepsy can have their seizures well controlled.

I disagree with your earlier statement saying that 80 percent of people with epilepsy have their seizures uncontrolled. Quite the opposite. It's probably closer to 66 percent of people with seizures or two-thirds of people with seizures can have their

seizures completely controlled. So that, a person with seizures can be a safe driver. The issue is really how can one predict who is likely to have a problem while driving, and there are factors that can predict that. Previous history of seizures, the history of a person having accidents already due to seizures.

There are clearly predictive factors and I think they are considered when an individual is licensed to drive. Prior to 1949, no individual with epilepsy was permitted to drive in the United States, and I think Wisconsin was the first state that allowed people with epilepsy to drive and that was based on the understanding that epilepsy was a condition that could be controlled and that has since turned out to be a reasonable judgment. Most people with epilepsy who drive do so safely and don't have problems. A person who has uncontrolled seizures should not be permitted to drive and they in most states are not permitted to drive. In the United States today, just about every state in the United States permits people with controlled seizures to drive.

The issue is how do you identify those people and what standards should you use to regulate those individuals? So, I think that there are some guidelines in terms of what's acceptable in terms of driving. Most people, for example, with some of these episodic disorders, such as epilepsy, can be very well controlled and are very reasonable drivers. I think the challenge for us is to determine what are the acceptable risks, what are the best

predictive factors to use and to implement this in a fair and just manner.

DR. GARBER: Thank you.

And Dr. Clarke, again the question, how do we evaluate a risk that an individual patient may present, if they're allowed to continue to drive?

DR. CLARKE: Yes. I think --

DR. GARBER: If you could turn your mike on, please? The button's up?

DR. CLARKE: There it is. Yes, thank you.

As much as the statistics from various groups and chronic medical disorders guide us as far as risk assessment, it really comes down to an individual basis, and the calling forth of those individuals around the person with the chronic disorder who must have the best knowledge of their current performance, and I've emphasized current performance, in assessment of near-future risk is, I think, an important part of any system that tries to identify those individuals who, under most conditions, may be safe to drive but in the upcoming future may be unsafe to drive.

That responsibility falls to individuals themselves who are the least likely to report, the families of those individuals who we've come to rely on particularly for our elderly drivers who have fluctuating cognitive impairments, and in term of the medical practitioners, not just physicians but physician assistants and all sorts of medical personnel who are familiar

with recent events.

In particular, I'm most familiar with the situation of diabetes-associated hypoglycemia, and we try to make an assessment on all our insulin-requiring and non-insulin-requiring individuals with diabetes that is updated frequently and see it as our responsibility to report to the driver license division individuals who have had recent severe episodes which would impair their ability to drive.

What we'd like to see on a much broader scale, both statewide and nationally, is a system in which health care providers and families are made aware of their responsibilities to inform regulatory agencies of these potential impairments.

DR. GARBER: Thank you.

Dr. Marotolli, again the same question. How do we clinically evaluate these folks when they show up?

DR. MAROTOLLI: I would say that to some extent, it depends on the individual condition and depends also on the question that's asked.

I think obviously it's sort of the presence of a disease, then its severity, the functional manifestations, any recent changes in treatment or in the nature of the disease itself, a history of event, so some potential evidence that this is affecting one's driving performance or capability, and then potentially also the issue of awareness or insight into those deficits, and one's matching exposure to capabilities and

limitations.

I think the difficulty from a clinical perspective is drawing, I think sort of assessing, the medical aspect of it is relatively easy for most conditions. I think then taking the step of them inferring driving risk is where the difficulty comes in, and I think that that may not be an appropriate determination for the clinician per se, except in the more obvious or egregious examples, and I think that's where the issue of licensing and setting standards comes up and obviously certain states and other jurisdictions have laid that out by having different requirements at different levels of severity or impairment.

DR. GARBER: Thank you.

We do have some additional questions, specific questions now for each of the panelists, and I believe that Dr. Sind-Prunier has some specific questions for Dr. Krumholz, followed by Ms. McDonald for Dr. Clarke, and I will finish up with some questions for Dr. Marotolli. I've already badgered Dr. Dobbs, I think.

So. Dr. Sind-Prunier?

DR. SIND-PRUNIER: Dr. Krumholz, most people have an idea of what epilepsy is, but could you elaborate for us on the different ways in which epilepsy manifests itself in different individuals?

DR. KRUMHOLZ: Well, epilepsy is defined as a disorder characterized by recurrent seizures, a disorder of the brain

characterized by recurrent seizures.

About 10 percent of the United States population is likely to experience one seizure at some time in their lives. About less than one percent or about .5 percent of the population will have more than one seizure or unprovoked seizure which we would classify as epilepsy. There are different types of epilepsy. Some types of epilepsy may just involve motor function or just movement. Most types of epilepsy involve impairment of consciousness where an individual will lose consciousness and that's what poses the greatest risk for driving or performance of that nature.

Again, however, I would emphasize that most people with epilepsy have their seizures well controlled and so that's where they become eligible to drive. A person who has uncontrolled seizures and perhaps as much as 20 percent or 25 percent of the population will have uncontrolled seizures, those individuals are in every state ineligible to drive or ineligible to drive. So that, the driving privilege granted to a person who has controlled seizures, that means that person may have had seizures in childhood or as a young adult, seizures stopped, and we generally use or most regulators use a criteria of seizures having stopped for a period of time, from three months to three years time, as a good predictor that seizures will not reoccur again. So that, there are different types of seizures. The ones that are most -- of greatest concern for driving are the ones that

impair consciousness, but most seizures will impair consciousness to some degree.

DR. SIND-PRUNIER: How -- I think it's fairly clear with more completely-involved seizures what happens, but how does epilepsy and/or its treatment affect a driver's sensory, motor and cognitive functioning?

DR. KRUMHOLZ: Well, if a person has a seizure and loses consciousness, it's pretty obvious they will have difficulty controlling a motor vehicle, and there are some statistics indicating that about half the people that experience a seizure while driving will be involved in some type of crash. Many of those crashes are single-vehicle crashes where another individual isn't necessarily affected, but the loss of consciousness certainly poses a risk for an individual while driving.

DR. SIND-PRUNIER: You had earlier alluded in one of your responses to Dr. Garber that there are some factors that could be used to distinguish between low- risk and high-risk drivers with epilepsy. One of them is that, you know, frequency or the period of time since they've had active seizures.

What are some of the other factors that can be used to differentiate between high- and low-risk drivers?

DR. KRUMHOLZ: That really hasn't been very well studied. Most of the studies on accident risk and drivers with epilepsy haven't stratified those risk factors. We did a limited cross-sectional study of about 60 individuals with epilepsy who

crashed and compared them to the other individuals with epilepsy who were driving who didn't crash, and we identified some risk factors, but again it was a small study.

The risk factor that seems to be the best predictor is the duration of time that an individual has been seizure-free and that's been sort of intuitively thought to be true, that if a person has been seizure-free for three months or six months or a year, their risks of being involved in an accident are considerably less than a person who has seizures every few days, for example, who has seizures every few weeks.

So, the duration a person has been seizure- free is a good predictor of whether or not they're likely to have another seizure. If a person is likely to have another seizure, then they're likely to have a seizure while driving, although most people that seize wouldn't necessarily have a seizure while driving. There's still a little more risk than if you were unlikely to have a seizure.

So, the risk of -- one of the predictive factors is how likely are you to have another seizure and that in a sense becomes the surrogate for determining whether or not somebody might be a safe driver. Other factors that we found that were predictive were factors, such as whether or not an individual had experienced a previous motor vehicle accident while driving due to a seizure, and that's not really, I think, looked at adequately in most of the regulations.

In fact, I believe that in many states, there are some problems in getting individuals reported who have had accidents due to various medical disabilities while driving. So that, -- or crashes and that's something that I think probably deserves attention. I believe that there are -- I don't think that the rules pertaining to that are as good as they could be. So that, we've found, for example, that individuals with epilepsy who are driving may have previously experienced crashes due to seizures, but they may have not been reported to motor vehicle administration medical advisory boards, and in fact, that, I think, is a serious problem that should be addressed and looked at because those individuals, at least based on some limited studies, seem to pose the greater risk for subsequent crashes and that's a pretty simple observation.

The other thing that may be a factor is people who are non-compliant with their medical treatment may pose a greater risk, but again that's a difficult thing to judge. The most reliable predictor is whether a person has been previously seizure-free and what duration of time they've been seizure-free. That would be the best predictor.

Beyond that, we can say, though, that somebody who's been seizure-free for many years, has a good driving record, does not have an underlying brain lesion that might predispose them to seizures, those are all very positive predictors and we think it's important to note that most people with episodic disorders, such

as epilepsy, fall into that very favorable category, have a very low-risk of accidents and indeed are very safe drivers.

In fact, one study that I always keep in mind is a study that was done in California that compared women with epilepsy who drove to men without epilepsy who drove and found that women with epilepsy were far safer drivers than men without epilepsy. So, if one were to believe those statistics, I would have to leave my driver's license with you folks and go home by train.

DR. SIND-PRUNIER: One final question, and that is, is epilepsy and seizures truly unpredictable or is there some criteria or factor that can be used to identify when a person is more likely than not to experience seizure, even if they've had a period of seizure-free activity?

DR. KRUMHOLZ: Again, that's largely individual. There are circumstances under which a person might know more -- be more aware of when they would be likely to experience a seizure. Some people experience seizures only in the early morning hours or after sleep deprivation. Other individuals experience seizures almost exclusively at night time and sleep, and again those types of individuals would pose little risk to driving if they could predict when they were going to experience them.

However, in other individuals, we really can't predict and it's a relative risk kind of thing, where I don't know that we can be a hundred percent sure that someone wouldn't experience an

event if they've had a previous event, but we can be relatively sure and again it gets back to what's an acceptable risk. Most of the people with epilepsy and drive do, I think, have an acceptable risk.

DR. SIND-PRUNIER: Thank you.

Dr. Garber, do you have questions for Dr. Krumholz?

DR. GARBER: No.

DR. SIND-PRUNIER: Ms. McDonald?

DR. GARBER: Okay. I believe Ms. McDonald has some questions for Dr. Clarke.

MS. McDONALD: Good morning, Dr. Clarke. Thank you for being here today.

My question for you is, how exactly do you test for the risk with an individual who has diabetes and might be in a hypoglycemic state? What type of skills are affected while they're driving?

DR. CLARKE: To try to answer the second part of that initially, the problem with the hypoglycemic episode which impairs driving is the failure to recognize -- of the individual to recognize the fact that he or she is hypoglycemic. So, some degree of what we label as hypoglycemia unawareness; that is to say, the lack of the premonitory symptoms that tend to occur either before or only at the onset of mild cognitive impairment typically tend to be those that are in response to the sympathetic discharge of the autonomic nervous system which lead to anxiety,

palpitations, sweating, nervousness, tremor, those items that anyone in this room who's never had an insulin injection would get in response to the initial stages of hypoglycemia.

Those then are the warning symptoms, I suppose, analogous to the aura that some people with seizure disorders get that tell them they need to take action to keep the brain glucose from dropping further and lead to cognitive impairment with its eventual loss of ability to recognize the surroundings, to make proper decisions, and eventually to have adequate motor functioning and eventually leading to unconsciousness or actually a seizure. So, that type of progression is the characteristic of untreated hypoglycemia. So, we try to identify individuals at first who have -- do not have the ability to appreciate when they are getting a low blood glucose.

Now, there are certain individuals that can be recognized as having that, and the single best predictor of who is going to have an episode of unrecognized hypoglycemia is a person who's recently had a bout of severe hypoglycemia. Now, severe hypoglycemia was defined about 10 years ago, during the course of a very important landmark study that looked at the -- called the Diabetes Control and Complications Trial, which was a look at the relative risk of developing or progressing the complications, the micro-vascular complications of diabetes related to the degree of glucose control, and the outcome of that study was that it makes all the difference, glucose control makes all the difference in

the appearance and progression of those complications.

However, during that study, individuals who achieved excellent glucose control as a result of intensive insulin therapy also had a tripling of the rate of severe hypoglycemia. Severe hypoglycemia was defined simply as a seizure, unconscious or requiring help from somebody else to raise the blood glucose. So, that's a definition of severe hypoglycemia we have today.

Again to state it, the prediction is that a person who's going to have a bout of severe hypoglycemia is somebody who has recently had a bout of severe hypoglycemia. Now, that landmark study engendered, of course, a widespread conclusion that indeed the effort to maintain excellent glucose control with intensive insulin therapy is well worthwhile in preventing renal disease and blindness, amputations and that sort of thing. So, there's been an intensive effort in that regard.

Also, there's been a tremendous increase in the number of studies that have looked at recognition of hypoglycemia, the events that take place during hypoglycemia and methods to try to prevent severe hypoglycemia, and several things have come to attention. The first is that there are -- most intuitively are conditions which would lead to greater difficulties and they are often co-morbidities. Surprisingly, sleep apnea is much more common in people with Type 2 diabetes than it is in the general population, and there are more people who have Type 2 diabetes who are taking insulin than all the people with Type 1 diabetes. So,

it's not just -- our concern about severe hypoglycemia is not just allocated to those with Type 1 or juvenile onset type of diabetes.

There are other co-morbidities. Examples would be various neuropathies, effects of the chronic diabetes on the effect of the autonomic nervous system which can blunt some of those responses that I've just spoken of. Other concerns of co-morbidities of heart disease, extremely common in people with diabetes, particularly of long standing, and the various medications that they use, including one in one class in particular that poses an especial problem and that is the group of beta-adrenergic blockers which medications are commonly used for hypertension, commonly used for proper remodeling of the heart muscle after heart attack, and in and of themselves interfere with the ability to recognize hypoglycemia by the individual who has it. Also, they interfere with the response of the liver to those hormones that mobilize glucose during a bout of severe hypoglycemia. So, we have an especial red flag for people with diabetes who have hypoglycemia potential and are on beta-adrenergic blockade, which by the way also can contribute to fatigue and a sense of sluggishness and lack of alertness.

Another situation, however, is that there have been some very interesting studies, both from Washington University in St. Louis and the University in Perugia in Italy, which have looked at the ability to recover the symptoms of hypoglycemia, even for an individual who has had bouts of severe hypoglycemia,

putting them at risk, and what that actually involves is basically staying out of hypoglycemia. So, there are two brain adaptations that occur to anyone with or without diabetes having given enough insulin to cause a bout of severe hypoglycemia and the first adaptation therein is a positive one in that the brain cells, the neurons, if you will, are more able to extract glucose from the, let's say, blood than is a person who's not had any hypoglycemia. So, the brain, if you will, can function at a lower glucose level and that's a positive adaptation, but as soon as that occurs, that also then turns down the sympathetic response; that is to say, the shaky nervous sensations that occur.

So, one episode of severe hypoglycemia will turn down the ability to recognize severe hypoglycemia, and to get that back, one has to avoid severe hypoglycemia for a long enough period of time. Now, that's a long around-about way of saying that it is possible to recognize who is at high risk of severe hypoglycemia and to restrict their driving privileges or attempt to and also to enlist several different forms of aid, both from the family, from the individual who has that, and in many instances, fortunately, we've been able to get individuals to, if you will, loosen up their glucose control to the point that they're not obsessed by having to have a normal blood glucose, so that they're not passing out under even safer conditions than on the highway.

MS. McDONALD: Thank you.

And in these individuals that you see these higher levels of risk, what role does their compliance play with the regimens that you do give them or your recommendations that you give them to not drive?

DR. CLARKE: Well, it's an excellent motivator, of course, to have a system such as we have where we can restrict our driving privileges temporarily and then, if an individual demonstrates through several means, usually which involve very frequent self-blood glucose monitoring, even up to hourly during -- before and during any driving, and under observation by family and health care professionals, then they can regain their driving privileges by the avoidance of severe hypoglycemia.

MS. McDONALD: Okay. Once you make these recommendations to these individuals and their families, do you take as a physician -- what steps do you take to notifying the Utah Driver License Division regarding your patient? Is this something that you're permitted to do or is this something as a physician you're required to do in Utah?

DR. CLARKE: No, it's not a requirement, but it is an issue where there is immunity from reporting. The same is true for the family members of such individuals, that there's no penalty which goes with reporting even suspicion of inability to drive.

MS. McDONALD: Thank you, Dr. Clarke.

That's all the questions I have, Dr. Garber.

DR. GARBER: Yes, and I'm sorry, Dr. Sind-Prunier, did you have any additional questions for Dr. Clarke?

DR. SIND-PRUNIER: No, not at this time.

DR. GARBER: Okay. I do have some questions for Dr. Marotolli.

Can you tell us specifically what kind of testing is currently available to determine the risk in an individual patient with dementia, with some sort of cognitive decline?

DR. MAROTOLLI: Well, there are a variety of possibilities. Most get at either the level of severity of cognitive impairment globally or the specific domains or aspects of cognitive function. So, one can test sort of how one is doing cognitively overall or test different aspects of that capability. So, you can look specifically at memory, you can look at attention, you can look at visual spatial ability, different aspects of thinking or cognitive ability that then go into a general assessment.

There are probably better data supporting the individual domains rather than global function as a whole. So, the more widely-used tests of cognitive function that are done briefly can be done easily in an office that are widely used, such as the mini-mental state exam, tend to have relatively low associations with actual driving performance or crash risk whereas individual domains tend to have a greater association or at least are more well studied in that regard and have more consistent

association and those are different aspects of attention, in particular visual spatial ability, and more recently people advocating for executive function as another aspect of cognitive function that may be there.

So, there are a variety of tests that are available. The familiarity of individual clinicians with those tests is highly variable. Of the tests that are available, probably the MMSE, the mini-mental state exam, is the one that's most widely used and which most people are familiar with, more people are familiar with than others. The more selected tests are less commonly available, widely and often require referral either to a specialty center or to a neuropsychologist. So, that gets at the aspect of cognitive function and the different elements of it and what aspects are affected which gets a bit at Dr. Dobbs's earlier points in terms of it's not so much the diagnosis alone that affects whether or not one's driving might be affected but it's the manifestations and the particular aspects that's especially true with cognitive function because not all types of -- you know, different factors may contribute to cognitive dysfunction, depending on which domains are affected. They may have more or less association with your ability to operate a vehicle safely.

The other aspect is the question of whether or not those tests of cognitive capability and/or the impairments in cognitive function affect driving performance per se and that also gets to one of your original questions in terms of what outcomes

do we use or what do we look at and where does that evidence come from? So, do we look at crashes? Do we look at all crashes? Do we look at fatal crashes? Do we look at injurious crashes? Do we look at fender benders? Do we look at on-road driving performance? Do we look at simulators?

I think the choice of outcome depends on the data that's available and also what question it is that we're trying to answer with that information. The take-home message, however, is that the difficulty in translating tests or office tests or pen and paper tests or computerized measures that are removed from the actual task of driving, I think that there needs to be an association with actual performance before one can make a decision about it. So, one can raise one's awareness about who might be at increased risk using some of these measures, but the ultimate decision really depends on someone's capability when they're behind the wheel and on the road, and the more closely that experience simulates the driving task, if you will, or approximates the driving task, then the greater the likelihood that it would have some validity in terms of doing that. So, the standard for testing is an on-road assessment of driving capabilities.

Obviously the 60 to 70 years of experience may make up for slowing in a variety of different areas and even with an underlying disease, such as dementia, people still retain capabilities because it is a well-learned task, one that is more

automatic. So, sort of the changes that are apparent on testing may not necessarily translate into changes in a real world setting or scenario. So, those two elements need to be factored in.

DR. GARBER: Thank you.

For some of the conditions that we've been discussing, reduction in risk appears somewhat obvious; that is to say, if you can reduce the incidence of hypoglycemic events or if you can reduce the incidence of seizure or the risk of those events occurring, obviously you reduce the risk that that individual will be involved in a traffic accident as a result of such an event.

What do we do, though, about reducing the risk in folks with measurable cognitive decline? How do we take demented patient or the patient with dementia and say what can you do to reduce your risk if we are going to allow you to continue to drive? If you do continue to drive, what measures can you, your family or others take to try and reduce your risk of being involved in a traffic accident? What kind of answers can we give to that question?

DR. MAROTOLLI: There are several. The first is the extent to which the individual driver has already made some of those changes. So, are they limiting their exposure? Are they avoiding certain high-risk situations, uncomfortable scenarios? Are they limiting themselves to familiar geographic areas or certain times of day when they might be at less risk or feel more comfortable?

The second and one thing that we clinically recommend whenever there's a responsible family member available is that that family member actually ride with the person on a periodic basis. So, whether or not we think that their driving function might be affected by their underlying cognitive difficulties, we'll recommend that the family member periodically ride with the affected individual and monitor that on a regular basis, particularly in a setting of something like dementia which is a progressive disease. Even though it's chronic, it will progress over time and therefore at some point in theory, they will progress to a point where it's a greater likelihood that their driving will be affected. That has an added benefit, as one of the other people mentioned before, the issue of the family being involved and often having to enforce decisions, particularly in cognitively-impaired individuals, also adds evidence to them that a change may be needed. So, they can actually see in either direction (1) that people are doing fine and they don't need the change or (2) that they do -- that things have changed and that their risk is getting greater and so they can see that overtime, that progression, and therefore they need -- the family needs to now intervene and act because ultimately the responsibility, at least for cognitively-impaired individuals, may fall to the family for enforcing some of those recommendations if the individual is not able or willing to do that.

DR. GARBER: Given, as you say, the cognitive decline

in dementia is going to be progressive, at what point, how do you as a clinician, how do you decide this patient should not drive any more? What criteria do you use to make that decision, and under what circumstances would you say absolutely not, I really don't want this individual driving any more?

DR. MAROTOLLI: I think that's a combination of the above. So, is there historical evidence of driving difficulties and the typical patterns in people who have cognitive difficulties? The initial thing that can be affected is navigational capabilities. So, people get lost in familiar areas or have difficulty with navigation that assumes that people didn't have pre-existing navigational difficulties before. So, it is indeed a change or deterioration.

Any historical evidence of difficulty in terms of crashes, nicks in the car, scratches that weren't there before, any other problems, any observational evidence of functional difficulties, someone riding with them or formal assessment of driving capabilities that shows those changes over time, and then the requisite sort of cognitive changes as well. So, are there any particular aspects, again focusing on specifically attention, visual spatial ability, executive function and noted deteriorations in those. So, the combination of those three historical evidence of driving difficulty, actual evidence of driving difficulty itself in terms of observation and then matching that with cognitive changes available in terms of testing

and measurement of cognitive function, and then that ultimately is what goes into the recommendation to the individual of the need to change as well, sort of building a case in terms of evidence that, indeed, these different aspects are now raising their risk and therefore level of concern has gone up.

DR. GARBER: Thank you.

I'm going to have one last question for the entire panel, but what I'd like to do is see if any of the other Technical Panelists have any questions for any of the witness panel before I ask that final question.

Ms. McDonald?

MS. McDONALD: I do. This is to Dr. Clarke.

At your Utah Diabetes Center, what resources and information are you able to provide to your patients when their driving has been restricted, you know, regarding their life changes and ways to regain their driving ability and so forth? Do you have specific programs or how do you give them some information to help them with this?

DR. CLARKE: Yes, it's really on an individual basis with their practitioner who may be an endocrinologist, may be a pediatric or adult endocrinologist, or a nurse-practitioner specially trained in diabetes. We also have counselors available who are mainly social workers who get involved in the social situation as well.

Oftentimes it is for some of our impaired drivers or

potentially-impaired drivers simply a matter of -- not so simply, a matter of arranging for alternative forms of transportation, and we're not blessed, as you are here in D.C., with excellent buses and Metros and even good taxicabs, but we do have public transportation in the urban areas at least that can serve those purposes and in many cases willing family members who will volunteer, as I suppose would be true in any practice.

We also have a very low threshold for recommending on our functional ability evaluation report, which is located in the binder under Number 10, that the practitioner can recommend that the driver have a complete driving skill test in an appropriate vehicle. Now, that doesn't get so much at epilepsy or hypoglycemia, but it certainly gets at some of our older drivers who also have diabetes and who insist that they are perfectly good drivers, and so we don't argue the point with them. We say show us and that seems to help a lot. The examiners are excellent and commend them.

MS. McDONALD: Thank you.

DR. GARBER: Dr. Sind-Prunier, do you have any follow-up questions?

DR. SIND-PRUNIER: No, I don't.

DR. GARBER: Okay. I do have one last question for the entire panel and to a certain extent, this goes to the fact, each of you comes from a background or even from a center which does this more or less professionally, this evaluation of driving

skills and a variety of other life situations with regard to the conditions that we're discussing today.

Unfortunately, most if not all or most if not -- many if not most of the people with these conditions are treated by a private practitioner or by a small group practice which may not have the benefit of the background of the distinguished witness panel here, and in particular, I'd like to use as an example the accident that we opened this hearing with, the Hagerstown accident. The individual who was involved in that accident had recently had a medication change and the reason for that medication change was apparently the expense of the medication which was actually effective in controlling her seizure disorder according to her neurologist.

Given that sort of issue and given the problems that we have simply with addressing the issue, to what extent can we expect or measure or evaluate on a more global scale the compliance and appropriateness, the appropriateness of the medical regimen and the compliance with that medical regimen for people with conditions that may affect their driving skills? Is there a way we can do that?

I'd like to start with Dr. Dobbs and just work our way down the panel.

DR. DOBBS: I think in terms of the identification of medical at-risk drivers, from a physician perspective, I think that education is terribly important, and it, I think, starts with

the increasing of the awareness of the issue and towards that end, as indicated earlier, there are a number of medical conditions that do increase a person's risk for crashes or increase a person's risk for unsafe driving.

I think making those conditions known to physicians would be a start.

The second important component in that process would be to have physicians maintain driving records, including a driving history, of their patients on their charts and that, I think, would be a tremendous first start in increasing the safety of medically at-risk drivers or decreasing their potential for crashes.

DR. GARBER: Dr. Krumholz?

DR. KRUMHOLZ: Well, I would start out by saying that I tend to emphasize that it's not the physician's decision as to whether or not a patient should drive with a medical disability, but it tends to be the state regulatory agencies that make the decision, based on the advice and counsel of the physicians. So that, I think that the first sort of level or safety net in terms of the issue that you describe is that I think the state regulators need to have reasonable and good standards that physicians can use in determining who they should report or who they shouldn't report and who is a safe driver and who isn't. So, in general, there are reportable conditions in a state. Those conditions are reported to a medical advisory board or a motor

vehicle administration and then the ultimate decision is that organization's, decision as to what is right and what isn't right, but that has to be based on good information and that's where I think the education of physicians, the education of patients, is very important.

Let me go back a step. It's also critical that that state agency implement those rules very, very effectively or as effectively as possible, and to me, that involves such things as having proper experts on their panels reviewing these cases. As you point out, these are difficult situations, diabetes, sleep apnea, seizure disorders. Just as the physician in a locality who is taking care of a patient may not be expert in all these issues because, as we all well know, medicine is getting very, very complicated today, the physicians on these medical advisory boards and these physicians on these state agencies may not always have the expertise to deal with these individual and complicated situations.

So, I think the first step to me is to see that the state agency is properly structured, has the proper expertise to address these complicated and difficult issues that you already point out. Then the next step to me is that they get the right information and that means that the physicians, the patients need to be education in terms of what their risks are, what are the important issues. I think you're absolutely right that a lot of the physicians making these judgments or giving this advice to

regulators really don't know all the subtleties and all the issues involved, and I think we have a tremendous opportunity to improve that.

DR. GARBER: Thank you.

Dr. Clarke?

DR. CLARKE: I fully agree with the previous two speakers, that the principal problem is that the busy practitioner in his or her practice has very little time to spend making helpful assistance in and/or decision-making concerning the individual and their driving risk and may, as pointed out, not have the expertise to make those decisions.

I feel that we need a much greater effort at education not just of practitioners who are profiling individuals according to their risk but the public, the general public as well, not that that hasn't been attempted already, but it may call for better state and even federal support to generate further materials and educational sessions for such individuals.

DR. GARBER: And Dr. Marotolli?

DR. MAROTOLLI: Thank you.

Actually, I thought you were going somewhere else with your question originally and then you kind of moved in a different direction. So, I'll take it there, if I can.

The whole issue of clinicians addressing the issue, I think, is one of concern as well. Obviously there's the emotional aspect or the effect that it has on the doctor-patient

relationship, the clinician-patient relationship that needs to be taken into account, and I think we need to be realistic in terms of what we can expect in that setting. Obviously it creates a more adversarial relationship rather than one of advocacy and that's one of the reasons that many clinicians are reluctant to get involved in this in the first place.

In terms of management, I think the management issue is where I think most of the conditions we're talking about are in the clinical management that we normally would do under most circumstances, where the issue is sort of the link between that management and then the implications of that for public health or for safety issues and that's somewhere where that's breached, but the whole issue of compliance or adherence to a medication regimen, the particular regimen in the specific example you cite of a change that was more sort of system-driven in terms of a cost issue that led to a change in medications that then in theory led to worse control of an underlying condition, those are sort of broader issues.

But the whole issue of trying to manage the underlying condition, I think, is similar, and the question is then taking the leap to making a recommendation about driving, of course, driving safety and that's where I think the whole education comes in. So, again clinicians knowing what those conditions are and when those changes might affect, so when starting a new medication or a change in treatment regimen, notifying the person or warning

them about the potential effects that that might have on driving and if it's possible limiting driving during those circumstances, knowing what the state requirements are for reporting or not reporting in a given jurisdiction, whether they're allowed, whether they're mandated, and letting people know what happens to those reports, where do they go, and there's a couple of studies done looking at that, showing that it's actually for most people a black box in terms of no one knows exactly what happens to those reports when they go in. It's sort of demystifying that process would be helpful.

So, those are all aspects of education that can go in, and then, as one of the speakers alluded to earlier, the responsibility is not just that of the clinician but also of everyone, the driver, family and society as a whole, in terms of figuring out what those different responsibilities are and letting people be aware of that, so they know what their individual responsibilities are as well.

DR. GARBER: Great. Thank you very much. I appreciate all the answers from all of the panelists and the assistance of the Technical Panelists here.

Dr. Marshall, I believe that that's all that we have for this panel.

DR. MARSHALL: Thank you, Dr. Garber.

CHAIRMAN GOGLIA: We have questions now from the panels, and I'll go to the Medical Group Panel first for this

group of witnesses.

Are there any questions?

DR. BREWER: Phil Brewer, the American College of Emergency Physicians, which represents the 19,000 ER docs which some of whom at this very moment are taking care of victims of crashes caused by medically-impaired drivers.

This question's for Dr. Marotolli. Dr. Dobbs stated in her remarks that decisions regarding license actions in drivers who have been reported as impaired should be based on science, and as Dr. Krumholz mentioned, state licensing agencies make decisions in impaired driver cases, based on recommendations of medical advisory boards, and I know that you are, Dr. Marotolli, a longstanding member of the Medical Advisory Board in Connecticut, and as such, you're a regular participant in deliberations and evaluations concerning medically-impaired driver reports, about half of which incidentally come from emergency physicians.

What information does your Board use in making its decisions? How are different items of information weighted, and what does the Board in Connecticut and perhaps by extension in other states do to keep its recommendations scientific?

DR. MAROTOLLI: A multilayered question.

I think there -- first off, there's a lot of variability in terms of medical advisory boards, in terms of their composition of their role and whether or not they exist. Some have voluntary medical advisory boards, as does Connecticut,

others have paid or full-time boards, so there's a wide range, and some have none. So, there's a wide range of possibilities in terms of what's available.

Similarly, my understanding of it is that each of those works -- each jurisdiction utilizes those medical advisory boards in potentially different ways. So, I'll address it from the Connecticut perspective since that's the one I'm most familiar with.

We have a volunteer medical advisory board. There is a Medical Qualifications Unit within the DMV that is responsible for licensing decisions. Connecticut has no retesting whatsoever. So, once one is licensed, unless you're brought to the attention of the DMV, you have your license for life, if you pay your money every four years, and reports are allowed in Connecticut, not mandated. They used to be mandated, no one reported, and they switched it to allowable and now some people are reporting, including emergency room physicians and geriatricians and a variety of other practitioners.

So, physicians can report. Other clinicians can report. Police and law enforcement and the public at large. The majority come from either clinicians or law enforcement. Those are taken quite seriously, and then there are two levels of reporting sort of buried within that. One is a patient has a condition that I'm concerned about that might affect their driving capabilities, please assess. The second is I'm very concerned

about this individual who continues to drive in spite of a severe condition and shouldn't in my opinion drive.

Personally, what I do in looking at that information is the degree of information that is provided. So, if someone can provide details about why they are concerned, the level of impairment, severity of the condition, historical evidence and the things I alluded to before, if that information is available in the report, then that obviously provides greater evidence in terms of making a determination.

For most individuals where there's any question, we still allow an on-road assessment of their capabilities to see if that is the case, unless that's already been done. So, again trying to gather information both in terms of the clinical condition, level of severity of that condition, historical evidence of driving difficulties, and then actual observation of that information and utilizing that and then referring that back and forth.

The separate issue is one of management and that again depends on the conditions themselves and that varies. There's obviously a range of backgrounds and specialties within the medical advisory board and those individuals utilize -- cases will be referred to individuals who have appropriate background to address the question at large.

Unfortunately and in fact, the whole issue of guidelines for individual conditions is based, where possible, on

evidence, although, as has been alluded to, evidence is lacking for a variety of those conditions and often the evidence doesn't answer the specific question you are trying to address in a given case, and so one then relies on clinical judgment or consensus panels where many of the guidelines come from and that is also difficult, but it's the best available information.

So, I think it's almost like grading, you know, a paper in the literature. You utilize a variety of things, based on the evidence that's there, and so if you have a randomized control trial, then that's sort of your first grade evidence as opposed to sort of someone's opinion about what goes on. So, I think there's grades of evidence. Where that evidence is available, then I think it's brought to bear on those decisions.

The Medical Advisory Board, as part of their meetings, will also have an educational portion where, you know, people will come in, outside speakers will come in to try and update information. If there are articles that come out in the literature, those will be distributed to members of the advisory board so that they are made aware of those, so they keep up, plus obviously the individuals who are on the board are volunteering to be there, so they have an interest and some background, and most of the people who have been on the board have been on the board for quite awhile and so maintain that level of interest as well, so they do their own education. So, it's a combination of those factors to keep them up to date.

The down side is that the level of science or the degree of scientific evidence can be limited for a number of those conditions.

DR. JOLLY: Til Jolly from the Association for the Advancement of Automotive Medicine. I'm also an emergency physician and member of ACEP, and I want to first echo something that Dr. Garber said and all of you agreed with and then ask a question based on that.

You're all four highly-qualified experts in this area, and I'd probably consider us something of experts, also, but for the average physician, this is a bit of a black box that most don't understand or can't understand or don't have time to understand, and I have to confess I don't understand all the intricacies of it either and that's something of a problem for the vast majority of patients out there.

You mentioned education and research and educating clinicians and educating the public. Do any of you in your states or nationally have any specific things that have worked to educate clinicians in various areas about either the conditions and how to evaluate those specific conditions, either the more chronic ones, like dementia, or the episodic ones, like seizures or hypoglycemia, and then educating clinicians about the rules in their various state or county about how to report and when to report and whether they're protected and whether they have to or not?

DR. KRUMHOLZ: Well, in Maryland, we have a very active affiliate of the Epilepsy Foundation which is an advocacy group for people with epilepsy, and many of the neurologists and many of the physicians in our state are actively involved with that group, and I know about five years ago, we worked with the Motor Vehicle Administration to produce a brochure that's distributed to patients and physicians. I use it in my office, so that when a patient -- when I see a patient with epilepsy, I routinely discuss driving rules or their driving situation, driving rules with them. I give them this brochure which details the Maryland State rules regarding driving and seizure disorders, and I actually often -- I usually advise them to contact their local Epilepsy Foundation affiliate to discuss this because they're again an advocacy group and they're less threatening and they can give them that type of information.

The local Epilepsy Foundation, through its Professional Advisory Board in Maryland, and the Maryland Motor Vehicle Administration have been working collaboratively also to help establish guidelines and work with their medical advisory boards in Maryland to develop a consensus for how best to deal with these patients. So, I think there are opportunities to do this, but when it gets down to the individual practitioner, the family practitioner, I think we could do a lot better, and certainly when it comes to the individual patient, the type of public information that could be providing public education, that

could be provided, really isn't available right now.

DR. DOBBS: Perhaps I can talk a little bit about what's happening in Alberta. In Canada, physicians in all but three of the provinces are required by law to report drivers who are medically unfit to drive, and physicians are protected by law for reporting medically-unfit drivers in all provinces, except one.

One of the things that we have been doing specifically in Alberta is developing a program for the identification of medically-at-risk drivers and that program involves screening for medically-at-risk drivers, assessment and then dealing with the consequences, in other words, driving cessation.

In terms of educating the physician, we have developed a number of resources. We have brochures for physicians that talk about red flag medical conditions that might put a person at risk. My husband, who is a psychologist, and myself, we also do a lot of CMEs for physicians on the identification of medically-at-risk drivers.

One of the things that we find in talking with physicians is that one of the most difficult aspects for a physician is telling the person that they can no longer drive, and towards that end, we have developed a video called "Breaking Bad News", and what that video does is it provides a template, if you will, that assists physicians in how they might do that in ways that are probably not as productive in telling someone that they

can no longer drive and then methods to make that communication a little bit more palatable for the physician and for the patient.

We've also developed a number of resources for the families because, as a number of the experts on our panel have talked about, is that the individual and the family are a very important component of the process. In a cognitive impairment, such as dementia, reliance on the individual to self-restrict or to take themselves off the road is unlikely to happen because of the lack of insight into the functional disability.

Research that we've done indicates that compared to normal healthy older drivers, individuals with a cognitive impairment, such as a dementia, rate themselves as more able to drive. So, lack of insight is an important component. So, you have to rely on the families. Towards that end, we have developed educational materials for families.

I'm currently the principal investigator on a two-year study funded by Alzheimer Canada where we have developed group interventions for the individual patient and for the caregiver, and the interventions are specifically aimed at making the stop driving decision easier for the families.

I think the final component is in terms of alternate transportation. One of the reasons that individuals -- I would argue that one of the major reasons that individuals are reluctant to give up their licenses is because the private automobile is the way that we most want to get from Point A to Point B, and when you

take away that ability to drive, then you deny the person the form of transportation they've come to rely on, and particularly with older people, which is an area where I do most of my research, they are reluctant to use public transportation. So, I think that we need to, as a society, start developing alternate means of transportation that will allow people to get from Point A to Point B, perhaps not with taxicabs or LRTs or buses, but using a private automobile.

DR. MAROTOLLI: I'll just interject one last part on the physician education. I think, in addition to individual sort of grand rounds and question and answer sessions, what the state DMV in Connecticut did a few years ago is also one of the attorneys in the DMV office wrote a brief synopsis of basically the law's requirements for clinicians and published it in the state medical journal, which I think is one effort, but I think sort of an effort to really sort of keep it simple is a two-page article that really sort of outlined sort of what the requirements were and described the process of what goes on, and I think that type of effort and getting that information out, but doing it on a repeated basis.

I think part of the problem is that these issues come up around the particular event, but I think there needs to be sort of a more consistent effort and broader publicity of it.

DR. WANG: This is Claire Wang, the American Medical Association.

I'd like to address this question to all of the panelists. Dr. Dobbs had spoken about the importance of assessing medically-impaired drivers individually because driving is so central to independence, and we want to avoid restricting drivers unnecessarily. We've already heard about how medical conditions can impair driving safety, and my question is, I'd like to turn this around a little bit and ask if there's anything we know in terms of scientific evidence or anecdotal evidence that lack of driving or driving cessation can impair the driver's health.

DR. DOBBS: It's an interesting question.

There are some data that have looked at lack of access to transportation and access to health care professionals and specifically if you look at the literature on driving transportation in rural areas and certainly individuals in rural areas who can no longer drive have less access to medical care than individuals who are able to drive in terms of the actual impact on whether their diseases are more severe, whether they present at a later stage. I'm not aware of those data.

DR. MAROTOLLI: There are a couple of studies listed looking at the sort of after-effects of driving cessation, particularly on activity levels, out-of-home activity levels and depressive symptoms, both of which showing, as one would suspect, that activity levels decrease and depressive symptoms go up post-driving cessation, even when you adjust for a variety of conditions that might affect the decision to drive and that's

always a difficult part in teasing apart because they're typically done in large epidemiologic studies.

But to the extent that you can control for those other factors, obviously they're intertwined. The decisions that lead up to the decision to stop driving typically involves health-related issues as well, many of which can also lead to decreased activity participation and depressive symptoms, but to the extent that you can adjust or control for those in those data sets that suggests that driving cessation above and beyond those health factors contributes to a negative effect on both of those. There is a series of studies looking at obviously the benefits of those in terms of overall morbidity/mortality and well-being. So, again, advocating for the emphasis and sort of filling in the gap of for individuals who can't drive having some means of getting to where they need to go, having some control over that as well.

DR. DOBBS: There are some studies primarily in urban areas that indicate that when individuals have their licenses revoked due to medical conditions, that their medical transportation needs and their, what I will call, necessary transportation needs, getting groceries, going to the bank, that type of thing, those transportation needs are picked up by families or friends.

Typically, what becomes neglected are the social, what I will call the social, transportation needs. So, they'll get to the doctor, they'll get to the drugstore to pick up their

prescriptions, they'll have their groceries, so forth and so on, but it's the visits with friends and family, it's the transportation to social activities that fall by the wayside, and I suspect that that's why the findings that in Rich's study where there was an increase in depressive symptoms. It's likely to be associated with this drop in social transportation.

DR. KRUMHOLZ: Among patients with seizure disorders, I'm not aware of any specific studies that have looked at this scientifically, but there is a lot of anecdotal evidence about this, and basically it's very clear that it's a very important quality of life issue for people with epilepsy.

In one, for example, questionnaire that was done addressing concerns of people with epilepsy, driving was listed as their most frequently-listed concern relating to their disability with epilepsy.

We do know that people with epilepsy are severely under-employed and unemployed, and I think that this lack of ability to drive and transportation issues undoubtedly contributed to that. There are problems in self-esteem and psychological function among people with epilepsy. Again, I don't know that anybody's looked at this specifically, but we know it's a major concern for people with epilepsy and there is also very high incidence of suicide among individuals with epilepsy, and I would -- and I think this may be

-- this type of limitation would undoubtedly contribute to it.

So, driving is a very important quality of life issue in studies for people with epilepsy.

DR. CLARKE: I can't really quote any additional studies that impact on the question of lack of driving and health, except that I can add some anecdotes of several individuals in my experience over the years who, for one reason or another, have had to give up driving and who've had Type 2 diabetes, and it has done them a world of good in the sense that they've taken up bicycling and walking as their main means of transportation which is exactly what they needed.

MS. STRESSEL: Donna Stressel from the Association of Driver Rehab Specialists.

As a driver evaluator, I work with many physicians who are concerned about the safety and well-being of their patients who are currently driving with concerns. One of the things that I run into is that when red flags go up, physicians are often torn between the liability they feel for warning their patients about these concerns and the breach of confidentiality, particularly in states where reporting is not mandatory and there is no way of providing them immunity if they do so report, and I'm wondering if you have any guidance for balancing that patient confidentiality with the need to identify at-risk drivers and actually go the step as necessary of reporting.

DR. KRUMHOLZ: Well, mandatory reporting is a big issue, and personally I'm very much against it. I think that

there are now in the United States six states with mandatory reporting of people with epilepsy and many states that have had it and then eliminated it because they felt it wasn't useful.

The American Academy of Neurology, the American Epilepsy Society and the Epilepsy Foundation held a consensus panel back in 1991 and it was reported back in 1994 addressing that issue as well as other issues, and they came very strongly down against mandatory reporting because it did interfere with the patient-physician relationship, in addition to which, there is, as far as I'm aware of, no good evidence that it really improves safety, particularly when it comes to issues, such as impaired drivers with epilepsy, and the reason we feel that way is that the tendency is that in states that have mandatory reporting, the patients under-report their seizures, they under-report their condition, and we feel they don't get optimal treatment of their condition.

There are some studies that suggest that patients who have had optimal treatment of their condition have seizures that are controlled and are actually safer drivers, but overall, we don't really see or I don't really see and many people don't see a real advantage to mandatory reporting by physicians. What I think is important is that patients and families be motivated to report themselves, and the other point I think that you make is an important one, is that physicians need immunity to report individuals when they feel it is appropriate, and I think that

isn't true in every state.

So, I think in general I would -- I'm very much opposed to mandatory reporting because I think it interferes with patient care and quality of patient care. I think that patients need to be encouraged to report their conditions, and I think physicians need to have immunity to report those individuals who pose substantial and imminent risk which they can identify.

DR. MAROTOLLI: I think it's a question of balancing risk of one versus the other and part of it's perception and part of it's reality, and I think a lot of the people don't know what the risk is and just perceive it as a sort of a global issue of liability.

My perception is that the risk of not reporting someone who is at risk and not warning that individual of the risk and/or reporting is a greater risk to your liability than actually the breach of confidentiality and the risk of that, but I think part of it is making clinicians aware of what the requirements are and the sort of possibilities are in their state in terms of that, and I do believe working towards the situation where there is some protection from that aspect of it in terms of their overall responsibility to the public health should be covered, but again people acting sort of in their conscience in terms of what they feel the greater risk is to society as well.

CHAIRMAN GOGLIA: Okay. We'll just continue around the tables in order.

State Group, do you have any questions?

MS. COHEN: Lori Cohen with the American Association of Motor Vehicle Administrators.

This is a question for the physicians. Sometimes you're asked to review a patient's medical fitness to drive. Are there times that you disagree with the Department of Motor Vehicles' decision as to whether to license them, and do you have any advice to the DMVs to make better decisions for individuals?

DR. MAROTOLLI: Nobody is jumping at this one.

Yes, I mean, to answer your question briefly. I mean, I think there are certain scenarios where you feel that someone is very -- or I felt very concerned about someone being at increased risk and then got referred and nothing happened or they maintained their license, and part of the issue is what happens, and part of the problem is that there isn't -- getting back to the issue of communication, it's not like a medical consult where you refer someone to a specialist and you get a letter back saying, you know, X, Y and Z was the reason for this referral. We did, you know, A, B and C, and this was the outcome of that and this is the recommendation. So, you have no idea until you either get an irate phone call from the patient or the spouse about having reported them and what happened.

I think part of the issue is conveying that information. Sort of as I was trying to address in the other question, part of it is that the information doesn't necessarily

get across to the DMV or the medical advisory board a lot of times just what the nature of that condition is and the severity of it and part of it's the information, trying to get enough information to make that determination, and also variability, depending on how things are done, so people may have just had a good day and done well on that particular day. The whole issue of whether people get tested in their own vehicle on a familiar route or in someone else's vehicle on an unfamiliar route may make a big difference in terms of how they do in performance.

So, those aspects may ultimately come into it. I mean, ultimately, it's the licensing agencies' decision about whether someone is licensed or not licensed, and one advantage at least in our jurisdiction where there is no sort of on-going monitoring or regular monitoring, at least it puts people in the system so they're aware of it, and one of the provisions is that someone, particularly someone who has a condition that's likely to deteriorate, can then be monitored on a regular basis once they're known to the system and so that adds at least a safeguard, so even if they had a particularly good day that day and passed, there would be a provision for potentially that person being retested at some later date. So, at least they're in and there will be some active monitoring. So, even though one might disagree with the initial recommendation that ultimately comes out, although in general I think they do a very good job, giving the constraints that they have in terms of time and money.

DR. KRUMHOLZ: think a big part of improving the system is making sure that the regulators have good information and that's not necessarily easy to get. The questionnaires that are sent to physicians and such, I think really need to be looked at carefully and they need to user-friendly. They need to be simple, and they need to provide the information that the regulators need to make judgments.

Often in reviewing some of these forms, they're quite old. They are sort of Byzantine and convoluted and it's not always clear that they're getting to the point that needs to be made, but I think that just communication between physicians and regulators would be helpful. I am rarely called by somebody who has submitted a form to me, I would welcome that. I think that that kind of personal interaction probably doesn't go on enough. If someone is a physician, if I'm not satisfied with the judgment that's been made or my patient isn't, then I think there is usually and I think there should be an appeals process in this regard, and finally, I think that there are opportunities that we don't make -- there are things that we don't make enough -- take enough advantage of and I think that we should look at some systems for monitoring drivers in the future. I think Canada's tried to do some of that.

In the United States, we have statistics based on autopsy data, for example, in motor vehicle accidents, but I think that we tried to look at that and we have looked at that to some

degree, but the causes of death in those accidents are very hard to get and it's not really clear as to what they are. I know that there have been funds expended to do this and the Federal Government has looked at this, but I think that it would be helpful for those of us that are interested in studying this to set that up in a way that would be easier to look at some of these questions as to what the actual risks of fatalities are for various conditions among licensed drivers.

I don't think it would be that difficult to do, but that process of getting good information, allowing good communication between people that give the information and people that make the decisions and then ultimately being able to monitor the outcomes of this is very important. For those of us that are involved in some research in this, we found it very hard to get that data. It's just not very readily available, although I think that there is a lot of -- there are a lot of resources being expended to get that kind of data, I don't think it's particularly user-friendly right now.

DR. CLARKE: Decisions tend to be more restrictive than permissive, at least in our state, and we have an appeals process. The board meets approximately every month and tries to take each individual case on its own merits, often resulting in communication between members of the medical advisory board and the personal practitioner to get the details straightened out, and I think we try to be fair and judicious in all cases, but I

imagine that doesn't always happen. But that's the way we've worked the process and it's resulted in clarification in many cases when the restrictions have been more severe than necessary.

We've also helped to try to educate the physicians who have, according to our opinions, have mis-profiled the individual and not understanding the process. So, it's an opportunity for physician education when that occurs.

CHAIRMAN GOGLIA: Any other questions from the State Group?

MR. ARCHER: Yes. I'm Jack Archer. I'm with the Committee on National -- National Committee on Uniform Traffic Laws.

As the name implies, we are concerned about model laws, and I have a basic question I'd like to ask the panel. Does the panel think that there should be a model law in this area? And the two issues that I particularly would be interested in, does the panel agree with one of the speakers that some kind of immunity to insulate the doctor from liability is essential? Is that something that should in some way, either by court case or statute, be -- exist everywhere?

Second of all, does everybody on the panel agree with the opinion expressed earlier that reporting, required reporting is unfortunate, and would there be a sentiment to the effect that if you were insulated from liability, then the potential to be sued if you didn't report would be in and of itself enough of an

incentive that you didn't -- you wouldn't need required reporting? Any thoughts on any of that?

DR. CLARKE: I'm going to say I agree with Dr. Krumholz, that mandatory reporting is a good barrier and encourages non-reporting. So, I don't think that's a good way to go.

I do think that it's hard for me to understand why there wouldn't be an immunity clause in each state, what the disadvantage of that is.

DR. MAROTOLLI: The immunity is just for breach of doctor-patient confidentiality, so that specific aspect of it, and the goal would be to encourage reporting to remove one barrier to why clinicians wouldn't report someone who they had some concerns about or potentially had concerns about. So, from that perspective, I think that's where it's being advocated.

The mandatory versus voluntary reporting issue, I think, is a thornier one and depends on one's perspective. On the one hand, you could argue that mandatory reporting alleviates that some of the difficulty in the doctor-patient relationship about that because people are mandated to do that. The down side is that it does sort of put an extra hand in there that really interferes with that relationship and doesn't give one the flexibility to really work with the patient and to make them come to a decision, and I think, as one of the speakers alluded to before or came up in discussion, most people who arrive at this

decision arrive at this decision sort of on their own without the state or licensing agency getting involved in the decision to stop driving, and this sort of removes one opportunity to really sort of work with the patient and the family to make that determination and it sort of gets in the way of that.

So, I think in certain scenarios, I think it certainly is advantageous to have that opportunity to be able to have that initial discussion and to give people a chance to make that decision rather than to have their license revoked from them in the process.

MR. ARCHER: Thank you.

Anyone else? Could I ask another question?

DR. KRUMHOLZ: can I just address that issue? When it pertains to epilepsy, we felt that it was useful to have a guideline or a model law because if you look at the 50 states, I can only speak to the issue of seizure disorders, but if you look at their guidelines and their rules, they're really all over the place. They go from no required seizure-free interval specified, leaving it up to the discretion of the physician, to a one-year or 18-month seizure-free interval being required, and a lot of the rules regarding who should report and such can get very confusing.

What also gets very confusing is actually how these rules are implemented. Some states have this legislation, some states have these rules as regulations, and some states have this as policies, and we tried to look at this, for example,

specifically as it pertains to epilepsy in the United States, looking at the 50 states, and it was very hard to even sort out what the rules were in an individual state, and so if it's hard for somebody who's interested in this, you can imagine how hard it is for a patient.

So, to me, what would be helpful is to make the system transparent or clear, so that people really understand what the rules are for all the medical disabilities and how to get into the system and how to deal with this.

The idea of model legislation, I think, is a good one. I don't know that you necessarily have to come up with a single set of rules, but if one had a guideline or a model, I think that would be very useful. In the area of seizure disorders and epilepsy, we've found several states, including Arizona and most recently Maryland, that have applied the consensus guidelines that were developed, not necessarily verbatim but at least used it as a guideline.

On the other hand, I would say that the United States has a unique system in that we have 50 different sets of rules, and when I talked to the people in the European Union, they couldn't believe that we had different rules in each state because they had come up with a single rule that pertained or tried to come up with a single rule pertaining to the whole European Union, and their big question to me was, well, if you live in New York and you're driving to New Jersey, which rules apply? Their

concept was that you needed -- you had to have uniform rule. I guess they didn't get the sense of a republic.

But in any case, the idea that you have all these different rules is in a way not appealing but in a way, it's a real opportunity because you can look at the way different states handle this and you can see what works and what doesn't work. In a sense, it's a laboratory for this sort of thing, and so as a practitioner, I'd like to have clear and simple rules that we could all follow. As a researcher, it's kind of interesting to be able to look at the different states and see what people do.

So, to answer your question, I think it would be good to have some uniform guidelines, and again as somebody who understands our Constitution, I understand why it states the need to implement them based on their own needs.

MR. ARCHER: Just one more quick question on the question of legislation. The conflict that exists obviously between independent freedom that the car means to a lot of people and the very cogent question asked back here about the impact on the person when you take the license away, I think that's really a critical thing. So, it seems to me, this is just a guess, but I'm wondering what the panel thinks, if you had legislation that would target the notion that you're not taking a license away, you're doing other things and other things might be the person in question can only drive during the day or the person cannot drive on the interstate, those kinds of limitations were specified and

then you could put a restriction on the license.

Would that be a way to structure a person's sort of day-to-day dealing with the world in a way that would make that person safer for everybody else and yet not take away the independence, the sense of independence that a person has with an automobile license?

DR. CLARKE: That's directly part of our process, that indeed those recommendations can be made by the physician who is profiling the individual and commonly are made by the advisory board to put one or another of restrictions of time, area, speed, on the license, based on the underlying condition and severity.

DR. DOBBS: In terms of restricted licenses, I think that we need to do more research into the applicability or the appropriateness of that. For example, in the dementia literature, it's been suggested that individuals be restricted to within five miles of home.

I would argue that if an individual is cognitively impaired to the extent that they're unsafe to drive, they're unsafe to drive five miles or 20 miles or a hundred miles within an area. So, again it's an area that I think begs for research in that the research can be done and we can start making decisions based on science as opposed to best guess.

DR. MAROTOLLI: There's actually no literature that I'm aware of on that specific question. I think just listening to people from different areas, we have a graduated license program

in Connecticut as well and the general impression of it is positive and obviously it gets one added flexibility in scenarios where there might be a particular difficulty or particular type of situation or issue where people have particular difficulty, otherwise you'd have to completely eliminate their license, and this gives them more flexibility in terms of doing that.

How well people comply with that, the whole issue of enforcement, whether it is effective in certain scenarios, whether it's more effective or less effective, I think, needs to be worked out, but as a general rule, I think it's very helpful and it does add to sort of the range of options available.

DR. KRUMHOLZ: I agree. I think it's good to have flexibility and more options. If you were to restrict or prevent all drivers with medical disabilities from driving, you'd think you'd be able to substantially reduce the risks tremendously, but there's evidence that shows that -- and this is mainly out of European literature, that the harsher the restrictions are on people who are driving with medical disabilities, the less likely they are to comply with those regulations.

So that, if you make draconian rules that are going to take driving privileges away from people that are going to be reasonably safe and one can predict that they're likely to be safe drivers, you will force many drivers to simply not divulge their disabilities and to be non-compliant with rules, and in fact, if you look at that from what it's likely to do, in point of view

what it's likely to do, if you had more people divulging their disability because the rules were less harsh restricting driving, I think you'd -- there'd be less risk to the public than if you had people not complying with the rules and not divulging their disability and driving against -- and driving with higher risk. I think you're actually likely to increase the risk to the public.

So, I think that it seems kind of counter- intuitive, but making rules less severe, less restrictive, but still reasonable, I think, has the potential to increase public safety for many people when you look at people driving with disabilities. So, again I'm in favor of trying to keep these rules flexible.

MR. ARCHER: Thank you.

CHAIRMAN GOGLIA: Okay. Advocacy Group I, any questions? Yes, go ahead.

MS. STRAIGHT: Audrey Straight, AARP.

I'd just like the panel to revisit, it's been touched on a little bit, but the resources that are available for patients so that they can take care of their own health, as it were. I wonder if any of you have any experience with what resources are available and whether you think that would be useful.

DR. MAROTOLLI: I'll give you my impression. My experience with it is it's not so much the individual driver or patient who is seeking it out but it's often the family members who do. The most common scenario in which I've encountered it is with dementia and Alzheimer's Disease and people seeking

information typically from either the Alzheimer's Association or other sources. The Hartford put together a pamphlet that actually goes over some of those issues specifically in the issue of dementia in terms of things to look out for for families.

A number of the individual -- I shouldn't say that entirely because there are a number of people who do seek that out typically through driver improvement courses, AAA, AARP-sponsored courses, in particular, where people go, whether the motivation is for the potential insurance discount or for the sense of keeping up and trying to maintain, but there's obviously a variety of educational aspects of that as well and information and things to look out for, things to pay attention to in terms of their own functional capabilities, changes that occur with aging and what to look for.

What's lacking in many areas is information on alternative transportation and where to find that information, how to get it. That is a harder piece of information to get a hold of.

MS. STRAIGHT: When you discuss this, could you also talk about how you feel physicians would be about providing information directly to their patients, like in their offices, promoting, you know, basically consumer education about taking care of themselves?

DR. DOBBS: In terms of your first question, Audrey, my experience has been that there are a lot of good resources out

there for individuals and for families. The difficulty is in terms of accessing those resources. For example, the New York Area on Aging Agency has developed a booklet, "When You Are Concerned", and it's an absolutely wonderful resource. I'm just not sure how many people are aware of it.

Again in Alberta, I can talk about what I'm most familiar with, we currently are putting together all of the information on medical conditions and driving resources for patients and for families, and Edmonton is certainly a lot smaller than Washington or many of the cities in America, and it's a tremendous amount of work, but what we've found is that there are a lot of resources, but we also have found that many of the patients, many of the families do not know about the resources and they don't know how to access them.

So, I think what's needed is some organization, if you will, of the system, and I like the idea of your second question, in that physicians are often the gatekeepers. If a person has a medical condition that's likely to affect their driving, where are they going to go? They're going to start off with the physician. The physician will be the one that will have diagnosed it. So, it makes sense to have those resources available to physicians.

On the other hand, I know that physicians are very busy and time is critical. So, whatever we do, we have to make -- we have to ensure that it's going to be something that will be streamlined, that will be easy for physicians to give to patients,

so forth and so on. So, I think that there are opportunities here.

DR. KRUMHOLZ: The other area that I would just comment on, and I agree with what Dr. Dobbs has said already, is that in the application process for a license, I think that that's another opportunity to educate patients or let them know about the issues involved, and I think, at least in my understanding of the way the regulatory agencies have dealt with this, it hasn't always been that clear and evident to patients what they should do. I think that's sort of another time when you can help patients with the self-management of these kinds of conditions. So that, the application process, the renewal process for a license, I think, needs to be very clear in terms of what the concerns are and how they will be dealt with and whether one needs to go to a physician or whether there's a state resource that one can address, but I think that's very important, and I think again the issue of physicians and then various kinds of advocacy groups, health advocacy groups, can be very useful.

As I mentioned previously, the Epilepsy Foundation, through its local affiliates and such, is a good resource that I refer many of my patients to, and I think it's sort of a non-threatening good resource for them to use and those kinds of resources can be developed. State agencies can also provide information.

I think the key is to be supportive and helpful to

people with these problems, so that they can maintain or attain their full potential while public safety is still preserved.

MR. COHEN: My name is Perry Cohen. I'm with the Parkinson's Disease Foundation.

I wanted to comment on the issue of lack of access to transportation, that if depressive symptoms are increased, that I served on an advisory panel for the National Institute of Mental Health on the Strategic Plan for Mood Disorders, the Aging and Co-Morbidity Subgroup, that found that there's a greater mortality from cancer, heart disease and a whole range of other diseases when there's a depression involved as well.

But I wanted to ask the question. You've mentioned a number of sources of data on the various conditions. I wonder if there's any data on Parkinson's Disease and with respect to driving safety and some of the other issues that have been discussed. That's for anybody.

DR. MAROTOLLI: A couple of small studies but nothing large-scale that I'm aware of nor anything specific on the types of impairment or severity in terms of when risk is substantially increased. So, I would say as a condition progresses and deteriorates, there's an increased risk, but sort of where along that spectrum --

MR. COHEN: And what were those studies?

DR. MAROTOLLI: Excuse me?

MR. COHEN: What were the studies?

DR. MAROTOLLI: There were several small studies specifically looking at crash risk amongst Parkinsonian patients.

MR. COHEN: Okay.

DR. MAROTOLLI: There's not a lot that I'm aware of.

MR. COHEN: Do you have those?

DR. MAROTOLLI: I can get them.

MR. COHEN: Okay. That would be great. I just wondered what they found.

DR. MAROTOLLI: That there's an increased risk with greater severity, but it's not -- there's no specified cut point or level of -- type of impairment or level of impairment that is associated with it.

MR. COHEN: Patients are very different in symptoms.

DR. MAROTOLLI: Exactly, and very different in symptoms and different stages, and I think it's probably analogous to the dementias as a whole in terms of -- at least there's much more of literature on that, but certainly in some of the recent evidence suggests that certainly in the earlier stages, these earlier years of diagnosis, that there's not a substantially increased risk but that it goes up with progression, but again sort of where along that line that risk is increased is harder to draw a set cut point.

MR. COHEN: Okay.

DR. DOBBS: I think that your question is a good question and it underscores a point that I was trying to make

earlier, in that in individuals with chronic diseases, decisions about driving cannot be based simply on the label of having the disease but rather decisions about fitness to drive should be based on individual performance, and Parkinson's Disease being one of those chronic conditions, an individual's level of performance in terms of their fitness to drive can be measurable, and it can be measured on the basis of an on-road performance and that would make the decision about driving fair to the individual and it would also be fair to society.

MR. COHEN: And this would -- performance would come when they renew their license or when?

DR. DOBBS: Well, that's a good question, and I think that that's where we need first science, but we also need the role of the physician in terms of red flag triggers. So, when a physician questions whether an individual is fit to drive, then they can refer for an on-road evaluation, much as they would refer to a CAT scan or an MRI or other diagnostic tests to help them come to a decision.

MR. COHEN: Okay.

DR. DOBBS: Are you asking for specific cut points or --

MR. COHEN: No, no. I was just wondering how many physicians would do that.

DR. DOBBS: Referring for an on-road evaluation?

MR. COHEN: Yes.

DR. DOBBS: Well, I can only talk about the Alberta experience, but in Alberta, we have over -- I don't know exactly the number, but use on-road evaluations on a routine basis for decisions about fitness to drive.

MR. COHEN: And the physicians all do referrals? Do you educate all your physicians?

DR. DOBBS: A significant percentage of the physicians refer for an on-road evaluation if they have questions about whether their patient is fit to drive, yes.

MR. COHEN: Okay. Good. Thank you.

MR. FLAHERTY: Gerald Flaherty, Alzheimer's Association.

I actually have two questions, one for Dr. Marotolli and one for Dr. Dobbs. If I could ask Dr. Marotolli first? Given the general shortage of comprehensive driver assessment opportunities of appropriate private testing centers, I'm not talking about state departments of motor vehicles, it's not always practical, convenient or even affordable for people with Alzheimer's or their families to avail themselves of these comprehensive driver assessments, including on-road testing.

So, my question is this. Is there some practical test of visual spatial ability, which you mentioned as a significant risk factor in crash rate assessment, that may be better able to assess crash risk in Alzheimer's Disease without the attendant on-road testing?

DR. MAROTOLLI: Do you want the short or long answer? No is the short answer.

There are a variety of things that have been looked at. The intersecting pentagons on the MMSE which has been inconsistently associated with difficulties. People have looked at traffic sign tests which are more of a proxy for cognitive function than for sort of general screening but again not consistent. There's been no single measure of any individual domain that's clearly within the spectrum of dementias that is shown to have substantially increased risk and also there's a fair amount of variability within different levels. So, the best gauge, alluding to Parkinson's Disease, is sort of the severity of the condition, however one measures severity, but even within that, there are people with either no obvious cognitive impairment or very minor difficulties who would fail an on-road evaluation. The proportion goes up as one advances in severity of a dementia, but it's not absolute and so the proportion's higher of people who failed but there are people who pass even at higher levels of impairment.

MR. FLAHERTY: So that, the possibility of tests, like the useful of field of vision and others for the future, would be --

DR. MAROTOLLI: I think there are tests that have been more widely tested than others, useful of field of view clearly being one of those, visual attention measure. The difficulties of

that is there's a similar lack of access issue with that in terms of it's a computer-based measure that requires some training to both administer and to take. So, it's not widely available. It is as if not better studied than most tests that are out there. But I think it's difficult to make a leap, except in the extreme cases, to this is an absolute contraindication to driving, and I think that there are still people who have a variety of different impairments who are still safe and capable of driving. It's hard to assess that without actually having some observation of their driving skills.

MR. FLAHERTY: The implication, of course, is we're looking for something that's affordable and practical and unbiased by age and medical diagnosis.

DR. MAROTOLLI: Exactly.

MR. FLAHERTY: Mr. Chairman, could I ask a second question of Dr. Dobbs?

CHAIRMAN GOGLIA: Yes.

MR. FLAHERTY: Dr. Dobbs, is there a clear point in the progression of Alzheimer's Disease where drivers are generally off the road and not driving at all, and in your experience or in the literature generally?

DR. DOBBS: If you look at the literature on dementia and driving, the literature suggests that a substantial number of individuals with a dementia, such as Alzheimer's Disease, continue to drive. Those, depending on what studies that you look at,

those figures can range from anywhere from 30 to 70 percent.

There are also studies that indicate that many individuals will continue to drive for up to four years following initial diagnosis.

MR. FLAHERTY: Thank you.

DR. DOBBS: If I could answer your first question, if I could add to Rich's answer? In terms of specific tests that are predictive of an individual's ability to drive safely, I agree with Rich. If you look at the neuropsych data that typically employ tests of attention, tests of memory, and you look at the relationship either to crashes or to on-road performance, those tests have not been very predictive in that the co-relations are low or modest at best.

There has been research published by Dr. Allen Dobbs that looks at a battery of tests and the battery, the cognitive battery is such that the approach is very different. Rather than using one single cognitive domain to try to predict driving abilities, it's a battery of tests where the battery is complex and is predictive of driving ability but not predictive of one's specific ability, and I think that's important because when you look at the driving task, the driving task is cognitively complex.

So, it's likely to be unreasonable to suspect that you can pick out one cognitive ability, such as attention or memory, and use that as a predictor. That cognitive battery of tests developed has been shown to be predictive with a 95 percent

accuracy of on-road performance. So, there is some research out there that speaks to your question.

MR. FLAHERTY: Is that potentially a practical applicable battery of tests? Affordable and accessible?

DR. DOBBS: It is. In fact, it's being used in Canada and it's a test that's used in all of the major provinces in Canada at present, and it's the in-office screen. The battery is about a 40-minute test, and it varies in price between $200 and $350 Canadian.

MR. FLAHERTY: Thank you.

DR. MAROTOLLI: This is a point and counterpoint, but can I address your second question since Dr. Dobbs addressed your first one as well?

There was a consensus conference a few years ago gathering the experts at that time on dementia and driving to try and come up with a consensus. The conclusion was they couldn't, other than with some extremes. So, they had labeled sort of an MMSE score of 10 or less as being indicative of relatively few people driving. So, there's a 30 point scale, so 10 is indicative of severe impairment. Eleven to 17, they suggested a more detailed evaluation and 18 and higher dependent, but there was a lot of disagreement over those cut points in general.

The lowest person I've ever seen had an MMSE of two. Dr. Odenheimer, who was on that group, had someone with an MMSE of four. So, there's a lot of variability within that. There's no

absolutes. I think, in general, one can say that as severity progresses, the likelihood that people are still driving is lower, and in fact, if you look at the literature on dementia and driving cessation, most of which are done either in geriatric assessment centers or dementia evaluation centers, the vast majority of individuals have stopped by the time they get there. There's still about a quarter of them are still driving, but 75 percent have stopped prior to the point where they got there for that evaluation. So, even though there's some discrepancy there, the majority of people have stopped by that point in time.

MR. FLAHERTY: Thank you.

DR. DOBBS: I think that -- if I can just add? I think the point that both Rich and I are trying to make is that, for example with the mini-mental state exam, that there are no set cutoffs that can be used in order to predict one's ability to drive safely. So, an MMSE of 18 may be predictive in one individual but not predictive in another. So, the use of the MMSE as a predictor for on-road performance has not been a good predictor, not found to be a good predictor.

MS. ENGLEHARDT: Christin Englehardt, American Sleep Apnea Association.

I just wanted to make a comment in response to Dr. Dobbs' earlier comment about crashes caused by people with sleep apnea. The slide showed that they are seven times more likely to fall asleep at the wheel and that's actually based on a few

different published studies, but there are other studies that show that the risk is really two to three times more likely and one study showed that there's no increased risk in women with sleep apnea but there was with men. So, the reported risk varies, but it's never greater than seven.

However, it's important to note that those studies looked at untreated sleep apnea patients and there is another study that's by Charlie George, published in Thorax, that showed that treatment with CPAP normalized the risk for a fall-asleep crash, and so I think this relates to what the panel was saying earlier. You have to look at the science and you have to look at the -- assess the individual, too, and I'm curious if you have any other comment on that in light of those statistics.

Incidentally, one other point I wanted to make is if you look at fall-asleep crashes in general, they're much more likely to be caused by sleep deprivation, not sleep disorders.

DR. DOBBS: I would agree with you. I think that when you look at the research, that most of the evidence that is available suffers from methodological limitations. For example, small sample size, lack of uniform diagnostic criteria, the degree of driving exposure, retrospective versus prospective, so forth and so on, and the sleep apnea literature is no different than the other literature.

In terms of whether the individual is being treated or not, that certainly is an indication, and I have a little bit of

knowledge of that literature and the CPAP, continuous positive airway pressure, treatment certainly does improve the crash rates of -- improves the functioning of individuals with the condition.

The issue is in terms of compliance, and some of the literature that I've looked at suggests that only -- the compliance rate is around 46 percent, 50 percent. So, that would be something again that you would have to take into consideration in terms of making decisions as to whether the individual is being treated and then if they are compliant with that treatment.

MS. ENGLEHARDT: That is true, compliance is a big issue, but Charlie George's study actually looked at people who used it about half the time and still normalized their risk, but compliance is a big issue. I agree, yes.

DR. DOBBS: Absolutely.

DR. MAROTOLLI: It's a condition that also is growing in awareness, both in terms of recognition and diagnosis, and I think that as that comes along, I think that the use of effective interventions, but I think as sort of diagnostic criteria that has become more readily available and increasing recognition, I think there's a greater likelihood of intervention to do it.

I'm a little surprised, if I can comment on that, that the prevalence numbers for sleep apnea were greater than for diabetes on the slides. I think it was 18 million with sleep apnea, 17 with diabetes.

MS. ENGLEHARDT: There's a little controversy over the

exact number. NIH gives a figure of 12 million but that's based on 1990 Census data. It is closer to 18 million if you look at current numbers, but it also depends on how you actually define sleep apnea, what your apnea index cutoff is, and if you look at the symptoms of sleepiness and so on, but people also don't know really how sleepy they are. Self-reports of sleepiness are not accurate.

MR. OSTERMAN: In the category of statistics, if you, the parties or any of the witnesses think that what we had up on the screen was incorrect, please give us the right numbers. So, that would be helpful for us to get it accurately.

MR. COHEN: Perry Cohen, Parkinson's Foundation.

I just wanted to add on the issue of treatment, there is -- I guess it's true with epilepsy as well. At least with Parkinson's, there's a fluctuation in treatment and the effectiveness of the treatment throughout the day. So that, there's that concern, and I think there's a little bit of preventive or self-management that needs to be done in terms of when you drive and when you don't drive, based on the effectiveness of the treatment.

MR. OSTERMAN: I would agree. It's certainly a condition with a lot of variability in terms of fluctuation during the course of the day and management and it's an area where there's a lot of treatments, also, becoming available, so looking at that as an issue, but you're right, sort of education, sort of

self-monitoring would be helpful.

MR. COHEN: Thank you.

MS. STRAIGHT: Audrey Straight, AARP.

Dr. Dobbs, what triggers a person taking the battery of tests in Canada?

DR. DOBBS: It can be triggered from a number of sources. The primary one is through physician referral, but individuals can also be referred through the Driver Fitness and Monitoring Board, which is the driver control board, if you will. The individual can come in and have the assessment based on concerns from their family or they can also refer themselves.

DR. CLARKE: I would just make a comment concerning the sleep apnea question and the numbers. I don't think anybody knows the answer to the numbers as to how many millions, but they share so much in common, that we've come to recognize, in conjunction with our Sleep Apnea Center at the university, that we share a great number of patients in common, not just with diabetes but a huge number of pre-diabetic individuals in the Sleep Apnea Clinic who don't get recognized that they either have diabetes or are at high risk. So, there's a commonality for sure. They both have severe insulin resistance.

CHAIRMAN GOGLIA: Okay. Advocacy Group II?

MR. JASNY: Good morning. I'm Henry Jasny with Advocates for Highway and Auto Safety.

Dr. Dobbs, you had mentioned earlier that fitness to

drive should be based on policy decisions, based on scientific evidence, and in some situations, like Dr. Krumholz mentioned, that uncontrolled epileptics may be in situations where they shouldn't be licensed or license should be revoked.

Are there bright lines that can be drawn in some situations, some medical conditions where licensing should be determined based on a rule without individual testing or, as we have heard from Dr. Marotolli, you don't really know until you do individualized on-the-road testing?

DR. DOBBS: My response would be in terms of the categorization of the condition in terms of whether the effect was acute or chronic, the functional impairment. For conditions that have acute effects, such as epilepsy, where the condition is sporadic and it's unpredictable, decisions, licensing decisions about fitness to drive have to be policy-based decisions because, as Dr. Krumholz pointed out, the individual, you could test them, take them for an on-road test for eight continuous weeks or 52 or whatever, and they would be fine because it's the presence of the event that will be the determiner.

For chronic conditions that are stable, they're more enduring, where the effects are more durable, if you will, then those are the types of conditions where individual testing would be appropriate. So, decisions, driving decisions based on individual performance, and it's likely the case that those -- the individual performance would be relatively stable across time.

If you have an individual with a dementia, for example, if you tested them February 8th or March 6th, then the condition is likely not to change to the degree that it would make -- that it would change your decision.

MR. JASNY: And when you're talking about on-road tests in your experience, are you talking about the typical garden variety DMV drive around and park test under optimal conditions or something more rigorous?

DR. DOBBS: I think that there is an opportunity to test individuals with on-road evaluations that are designed for medically-at-risk drivers and those would certainly be different than the garden variety test that you talk about at driving DVLEs or DMVs.

In terms of the cognitive component of an illness or testing for cognitive impairment, one of the things that we know, for example, in a condition such as dementia, Alzheimer's Disease, that the basic over-learned skills are often the last to go. So, if you look at the typical road test, that's what the typical road test tests for. Those road tests were developed for the novice driver and so they test these basic skills. So, it's not surprising, therefore, that an individual with a dementia can take one of those road tests and pass it.

Interestingly, we hear this from physicians and from families quite a bit, where they recognize that the individual is unsafe to drive and are trying to do anything they can in order to

not have the person drive any longer. The person goes for the typical road test and they pass it, and the family and the physicians are suspicious that the person is unsafe to drive, but they can still pass that garden variety road test, if you will. But the challenge is to develop a road test that will bring out the deficits that are likely to make an individual unsafe and you can use science to do that.

MR. JASNY: Thank you.

Finally for the whole panel. Are normal levels of testosterone in young males a clinically diagnosable disability that we can talk about?

(Laughter.)

MR. JASNY: That was rhetorical.

DR. MAROTOLLI: That's what I thought.

MR. SNYDER: Thank you very much. My name is Dave Snyder with the American Insurance Association.

I wanted to ask the panel which state or country in your view has the best, most effective program in identifying and getting hazardous drivers off the road; that is, drivers that create an unacceptable risk as a result of their medical conditions.

Then secondly, is there any research that correlates particular types of traffic law violations with an increased risk, in other words, to help you or the motor vehicle departments or whomever recognize that there's something about the way the person

has driven in the past that is really relevant to assessing their risk? Presumably, and there's been some discussion, I know a number of you, I think Dr. Dobbs and Dr. Krumholz and others may have mentioned that it would be really helpful to know if a person's been involved in prior accidents.

Is there any research that correlates other publicly-available behaviors, including violation of traffic laws, particular types of traffic laws, speeding, running red lights or stop signs, other kinds of traffic infractions that are important in your view in helping assess the increased risks?

So, I guess the first question is a generic one. What system of laws and activities in your view most effectively deals with the issue medically and from an enforcement standpoint? Then secondly, is there other types -- what is the type of information on publicly available behavior that would assist you and then assist in the identification of unacceptably hazardous drivers?

Thanks.

DR. MAROTOLLI: The first question, I think, depends on how one looks at it. There are several studies. I'll try and get as many particulars as I can. There was a study comparing Sweden and Finland a few years ago. Sweden has a relatively -- it doesn't have any specific relicensing requirements. Finland has a fairly strict relicensing issue requiring medical reports periodically after the age of 45. There was no difference in subsequent crash risk amongst the two groups with age. There was

a higher risk of pedestrian and bicyclist fatalities in Finland, however. That has often been inferred that that means that some of those people who are not able to drive are sort of ambulating and therefore increased risk. I don't know that there's any direct evidence for that.

There's a similar study been done in Australia looking at Victoria in comparison to other states. Victoria does not have any retesting whereas the other states do and again did not show any difference between the two or no particular advantage to the states that required retesting.

There are two studies looking at vision retesting in the United States, comparing states with vision retesting requirements versus those without or one which compares contiguous states, a state that did, with contiguous states that didn't, both of which showed a slight but statistically significant decrease in crashes and fatalities amongst the states that had retesting for vision and visual acuity.

So, I think the jury is out in terms of at least for screening of some of these conditions and the effectiveness that it has in terms of reducing subsequent fatalities.

In terms of which states or countries have particularly good systems, again I think it depends on what you're looking for. I personally like the Maine system which is a very simple -- from a physician's perspective is a very simple and straightforward approach with, I believe, a max of four categories

for any individual condition. The clinician's just responsible for checking off the level of severity of the condition based on the particular symptoms and degree of management. The licensing decision then is in the hands of the DMV or the licensing agency, and there's also a direct responsibility of the patient in terms of doing that. So, just for its simplicity and logic, I like that particular system, but I'm not aware of the extent to which that has been evaluated in terms of its effectiveness, although I know that there were a couple of studies that have looked at that.

Then in terms of particular types of violations, I've not seen, at least in the population we're talking about, where there are specific types of individual violations, although as a whole, there have been a number of studies that have found prior driving record either in terms of crashes or moving violations as being a potential risk factor for subsequent events, but I've not seen anything that specifically enumerates which type of violation is more indicative of that than others.

DR. KRUMHOLZ: And I would agree. I think the previous driving record is one thing that I think has been correlated to a degree, and I think that my experience is that primarily relates to crashes, but it may be other aspects of the driving record.

Again, I would just emphasize one thing that I don't think we've talked about much today, and that's the influence of alcohol in terms of driving-related crashes, and again to keep

this in perspective, the risk of a seizure causing a fatal accident is probably one in 10,000 to perhaps one in a thousand while one out of three to one out of every two accidents is probably related to alcoholism. So, I think that we need to keep these issues under perspective when we talk about the various risks.

Also, when it comes to insurance, though, I would make a point to you and that's that we find insurance is a big barrier to compliance with regulations by individuals with disabilities in that if a person were to divulge that they had a disability, that could result in a tremendous increase in their insurance rates, and I think that creates a serious barrier to some people divulging their disabilities, and I think in many situations, it's an unnecessary barrier.

CHAIRMAN GOGLIA: Thank you.

Any other questions from the Advocacy Group?

MR. JASNY: Yes. Henry Jasny, the Advocates for Highway and Auto Safety.

If history is a predictor in these cases, most states currently only retain three years of driving history. Would you prefer to have a longer record available, four, five, seven years?

DR. MAROTOLLI: Not necessarily. I think in the cases where we're addressing here, it's more sort of recent changes or acceleration in those. So, it's a relatively shorter period of time in theory, although again I don't know the extent to which

that's been looked at in terms of distinguishing sort of a change in condition or a change in driving manifestations related to that condition as opposed to a longer pattern of behavior, although theoretically if you have someone who had consistently had difficulties that might contribute as well, but most of the studies I've seen go back no more than five years in terms of looking at that.

DR. DOBBS: I think that crashes are only one way of looking at an individual's risk for fitness to drive. The difficulty in using only crashes is that they're rare events. There's multiple causes, and if you look at the recording of crashes, you can look at either self-report crashes, which suffer from under-reporting, and you can look at state-reported crashes, which also likely suffer from under-reporting.

So, certainly from a licensing perspective, the driver fitness and monitoring, I know in our province, that that is a red flag, that if they pull someone's license -- record and see that there is an increase in the number of citations, an increase in the number of crashes, then that's a red flag that there's something going on, but it's not the only red flag, and again it speaks to individual performance, the role of the physician in identifying other red flags that may be associated with making the person unsafe to drive.

In terms of the standard medical evaluation per se, as Rich talked about, the study by Johansen where in Finland and

Sweden, Finland has full medicals, Sweden doesn't have any medicals, the crash rates are the same. Johansen, who did the study, he also looked at physicians' ability to detect cognitively-impaired older drivers and he used a matched case control and he found that the standard medical examination was ineffective in distinguishing older drivers with crashes, from moving violations, from controls.

So, again, I think that we have to look at the standard medical examination that is in place for trying to identify medically-at-risk drivers.

DR. CLARKE: Crash histories also have a notorious exposure flaw, especially notorious in older drivers with their limited driving hours and driving distances and yet surprisingly high crash rates.

We reviewed a large study from California looking at highway safety a few years ago, and one characteristic that seemed to stand out for the elderly drivers was that called gap acceptance as manifest by side-on collisions, usually on the opposite from the driver's side, as an identifier of individuals at risk of taking turns in front of somebody.

DR. KRUMHOLZ: I do think that there may be some problem with legal authorities being able to document these medically-related crashes, though. My understanding is that the police and legal authorities are not required to report medically-related crashes in every instance, unless there's a certain --

unless there's some physical injury or certain degree of property injury, and I think that that is something that should be looked at because that seems to be, at least in my experience, a reasonably good predictor of subsequent crash risk due to that medical problem.

Again, when you look at crash rates and violations and things, they may be surrogates for subsequent problems, but I think one of the best measures of chances of crashing due to a medical disability may indeed be whether somebody's done that before.

CHAIRMAN GOGLIA: Okay. Thank you.

Go to the Federal Group.

DR. COMPTON: Richard Compton from the National Highway Traffic Safety Administration.

I'm going to sort of give you guys a breather here. We've heard you discuss some of the research that's been done and a lot of the research that needs to be done. There's a lot of information gaps one would like to have in order to do this better. You've discussed some of the procedural issues.

I'd like to sort of turn this around and say if this was an ideal world and you could design your ideal systems for dealing with people with medical conditions and their treatments, how would you design such a system? What would be the characteristics of it? Just any of you.

DR. KRUMHOLZ: Well, I'll go first because we have it

written down. We have a model law that was proposed by a consensus panel and we think it's pretty good. It was developed in 1991 specifically for epilepsy, but it's not a bad model overall for other conditions as well in terms of how to approach some of these issues, but it does speak specifically to epilepsy. It probably needs some revision, and I think it was last looked at in the early '90s, but I think it's a reasonable guideline. It could be improved, but there's a lot of information in there and I would refer you to it.

DR. DOBBS: If I had, I guess, the dollars and I wanted to have -- I think a model for identification of medically-at-risk drivers should have three components. It should have identification, assessment and then follow-up, and within that model, I think that it's critical that you have all of the stakeholders at the table and all of the stakeholders participating and the stakeholders in terms of the individual, the family, the motor vehicle administrators, licensing people, physicians, the medical community, and it could be health practitioners, social workers, so forth and so on.

So, I think that you need to develop a comprehensive model with those three components, develop educational resources and have the players communicating.

DR. MAROTOLLI: And you need a lot of people. So, you need a very large sample size to look at the outcomes of interest you want. So, the more you move towards the end of either fatal

or injurious crashes, the larger the sample size you need and the more you want to look either at individual or uncommon conditions or combinations of conditions or treatments, then the scale goes up in terms of sample size and that's the main limitation of most of the studies out there. They can address one aspect of the question but not several of them typically because there's not enough people that either have the condition or the outcome of interest and that's the limiting factor. There's no existing databases that allow us to really sort of link those two together readily anyway to give us sufficient clinical information at the same time that you have the outcome information that you're looking for and also then along with sort of the perspective of follow-up information for those individuals.

DR. CLARKE: I would just echo some of the items that have been brought up today in terms of idealizing our state-by-state systems.

I think the area of education for practitioners and the public at large in terms of those issues related to chronic medical conditions and driving safety has considerable room for improvement. I would like to see a well-validated simulator, possibly developed by Evan Sutherland next door to me, and that indeed does allow us to administer to those individuals in a safe condition, threatening driving conditions in which they have to demonstrate their cognitive abilities, and I would further say that any states who don't have immunity to reporting ought to

strongly consider that.

DR. KRUMHOLZ: Just one other point I would add, that I think outcomes are important here and that it may be possible to set up a national system where you have drivers with various disabilities that you can track their risks in the future. I think that's really not -- I think that's doable, and it's probably wise because we're making a lot of these judgments based on flawed studies, and I think that there are probably better ways to study this with a better record keeping system, and I know we do keep a lot of records, but I can only tell you, having looked at those, they're very hard to use now.

CHAIRMAN GOGLIA: Any other questions?

DR. DELLINGER: Ann Dellinger, Centers for Disease Control and Prevention.

I guess I want to go exactly the opposite of where Richard just went. I want you to tell me one practical thing that you want to tell me that I can walk away from here today and go do in this area.

I mean, we're starting with the premise that we want to maximize safety and health and quality of life for everyone and within this population of people with medical conditions, is there a research question that's pivotal that hasn't been answered yet, a change in policy or a policy that you'd like instituted, some kind of program that needs evaluation, one thing that you think would take us farther? And that's to anyone who's willing to

answer.

CHAIRMAN GOGLIA: Richard, you've been carrying the burden and you're not moving.

DR. MAROTOLLI: Setting a societal threshold for risk. What is an acceptable risk? How do we define that, and where do we sort of draw the line along the spectrum, and what are the costs of doing that? So, obviously by setting a threshold, then you're going to include some people who shouldn't be included, you're going to exclude others who should be, and depending on where you draw that line, you're going to err on one side or the other, and what are we comfortable with doing, and is that a condition-dependent decision or is it sort of a global decision?

But I think that that's one debate that I think we need to have in terms of that and perhaps we voted with our feet by not setting a threshold for a majority of these conditions and maybe that is the default answer, but I think that that's something to discuss before we think about setting a threshold. I think we need to sort of consider those various aspects.

CHAIRMAN GOGLIA: Okay. Next question?

(No response.)

CHAIRMAN GOGLIA: All right. We're going to come up here to the Board of Inquiry.

Vern?

DR. ELLINGSTAD: Just a quick one to any or all of the panelists. You've been talking about determinations of individual

risk that by and large require a fair amount of interaction with individuals and clearly involve getting these people to a physician or to someone else that can make these determinations.

The question I have is what proportion of the medically-at-risk segment of the driving population has access to that kind of assessment? I mean, with respect to people who physicians are seeing voluntarily and having a basis to make a determination of whether they're safe to drive or people who are somehow otherwise referred to them by being arrested or whatever, but apart from that, is there a large proportion of the driving population who might be at risk who opt not to bring themselves to the place where they can be assessed?

DR. DOBBS: I don't know of any data that speak to your question, but I suspect that there are fewer people that are identified. In other words, to reverse that, we're only identifying a fraction of those that need to be identified.

DR. ELLINGSTAD: And you're not aware of any epidemiological studies that suggest the incidence of any of these kinds of conditions in the population that might be going untreated or unexposed to the kind of scrutiny that would do something about licensing or whatever?

DR. DOBBS: The only data that I am aware of that would speak to that are the data from the dementia literature, and there's indications that only 25 percent of individuals with a dementia are diagnosed by a family practitioner. So, what that

suggests is we're missing or physicians are missing 75 percent of those individuals.

DR. ELLINGSTAD: Any other of you that have a comment?

DR. MAROTOLLI: I have a similar general impression. I mean, part of the problem is we don't know what the denominators are. We have a numerator and we don't know what the overall number is. So, therefore, that's just within a given disease, you can probably get an estimate of how many people that are going around either undiagnosed or suboptimally treated or not treated. The safety implications of that, taking it to the next step, I think, is pretty much an unknown issue, sort of how many of those individuals are truly at increased risk or not. So, I think it's very hard to come up with that, but I think that that is another sort of societal question, if you will, but in terms of access to care and treatment and, you know, as a general issue, I think if it's not already a large issue, I think it's going to become more large in the coming years.

DR. ELLINGSTAD: Okay. A quick follow-on to that. Another source obviously of information about this kind of a thing that everyone ostensibly that drives is required to have some association with a motor vehicle administration of some sort or another, and are the mechanisms through that kind of a system sufficient to pull, you know, people in to do some screening to identify these kinds of conditions?

DR. KRUMHOLZ: I think they can be improved,

particularly as it relates to epilepsy, and again they vary from state to state. Some states have rules that require you to divulge your seizure disorder when you apply for a license, and then they may not make it clear that if you were to have a seizure, that you should stop driving and divulge that you have a seizure disorder.

So, I think the communication between the motor vehicle administrations, the patients and physicians can certainly be improved upon and again so that individuals really know what's required of them and that's not always clear, that that information isn't readily available, even to physicians, in states as to what constitutes a time when they should be identifying individuals or when individuals should identify themselves. That can be greatly improved.

DR. ELLINGSTAD: Thank you.

CHAIRMAN GOGLIA: Mr. Osterman?

MR. OSTERMAN: I have one. We've heard a lot about the different diseases and medical problems and how they affect driving, but is the driving task itself a trigger for the onset of any of these conditions? The seizures, for example, Dr. Krumholz?

DR. KRUMHOLZ: No. Seizures are generally pretty unpredictable. In fact, if anything, the driving task would probably be somewhat protective in a seizure condition. There have been studies that showed that people that are attending and alert would tend to have less seizures and some studies which have

shown that people driving in urban environments are somewhat less likely to seizures than driving in rural kinds of environments and that people have suggested that maybe that's an attention thing, but there is nothing about the task of driving that would provoke an individual to experience a seizure.

MR. OSTERMAN: Okay.

DR. CLARKE: In the area of diabetes, I can tell you that during the construction coming up to the Olympics in Salt Lake City and subsequently during the Olympics, there were many people who showed up in our clinic with very high blood sugars and as a result were probably at less risk of having an accident.

MR. OSTERMAN: And one other associated question with that. In the fatigue area for truck driving, we've seen some mechanical aids for drivers that measure eye droop and things like that that will give a driver an alert to an impending problem.

Are there any such kinds of studies or devices out there for drivers who are epileptics or diabetics?

DR. KRUMHOLZ: There's been some consideration given to that. I'm not aware of any that are really practical. I guess it's a bad term, but what do they call them, dead man's switch on trains, where somebody has something happen and they turn the train off. It's intriguing. It's certainly something that is worth looking into, but I'm not aware of anything that can do that, at least that's practical at this time.

CHAIRMAN GOGLIA: Rafael?

DR. MARSHALL: I have a quick comment. This has been a really informative session, and there have been a lot of brochures and reports and such that have been mentioned here by both parties and by witnesses, and I think this information would be very helpful to the Safety Board and to the general public to have. So, I would urge all the witnesses and parties that have mentioned reports and brochures to submit that to our Docket and you could speak to our Technical Panel or me about submitting that information.

I also have a short question. We've talked about epilepsy, diabetes, sleep apnea, and dementia as medical conditions that may cause impairment to drivers.

Are there any others that may also cause significant impairment that should also be mentioned?

DR. KRUMHOLZ: We haven't mentioned alcoholism. Is there a particular reason for that? I'm asking you is there a reason we haven't talked about alcohol?

DR. MARSHALL: Alcoholism?

DR. KRUMHOLZ: Yes. Again, I would just emphasize that medical disabilities are a significant problem, but they're really dwarfed by the problem of alcoholism and alcohol abuse. So, I think that's certainly something that deserves consideration in these types of discussions.

DR. MAROTOLLI: A couple of other possibilities, stroke, other causes of loss of consciousness, besides seizures

and arrhythmias.

DR. CLARKE: Our Functional Ability Evaluation Medical Report asks individuals in any of 13 categories, which include cardiovascular disease, advanced pulmonary disease, neurologic disorders of several types, epilepsy, cognitive skills, psychiatric conditions, alcohol and other drug disorders, musculoskeletal and chronic debility, alert and sleep disorders, and even hearing and balance.

DR. KRUMHOLZ: One point I would make and I think it's important that when these types of rules and legislation or regulations are looked at that they be comprehensive and involve all medical disabilities, but one thing that we've noticed and that's unfortunate is that the person with a medical disability shouldn't be painted with the same brush as a person with alcoholism. They're different problems and they're really -- it can cause some difficulties.

For example, I've seen questionnaires sent to my patients with seizure disorders that go into great detail about when they've had their last drink and how long they've been drinking and really very embarrassing kinds of questions for them to answer and really unnecessary for most people with medical disabilities.

So, I think although there needs to be a comprehensive approach to medical problems and disabilities related to driving, I think there's a risk of tainting the person who has a

disability, such as Alzheimer's or Parkinson's and/or epilepsy, and thinking of them as a person who has alcoholism, and they're very different problems and deserve to be considered in different ways.

DR. DOBBS: I have a list of medical conditions that serve as red flags that driving ability may be compromised, and the list is organized in terms of systems, visual, cardiovascular, cerebral vascular, diseases of the nervous system, respiratory diseases, metabolic diseases, renal disease, musculoskeletal disabilities, dementia, psychiatric disease, and then the final category is medications that are used to treat those conditions, and I'd be happy to submit that.

CHAIRMAN GOGLIA: Thank you.

Ms. Weinstein has a question.

MS. WEINSTEIN: Well, Dr. Krumholz wanted a question on alcohol. So, there's been a lot of discussion about concern about reporting of medical conditions because of the concern about the doctor-patient relationship and I'm curious whether the panel feels the same way about the condition of alcoholism, given the impact it has on motor vehicle crashes.

DR. KRUMHOLZ: I'm not familiar with that literature. I know that many states do have mandatory reporting of individuals who have had accidents related to alcohol, but I'm not aware of any states that require you to report somebody who's gotten drunk. I don't know.

CHAIRMAN GOGLIA: Okay. Back to the Technical Panel. Any questions that you need to clarify?

DR. GARBER: I did have one very brief question. Dr. Krumholz mentioned and Dr. Clarke supported this idea that there should not be mandatory reporting by physicians of medical conditions because of its potential interference with the doctor-patient relationship.

However, we've also heard from the parties that half of the reports that are made are made by ER physicians. It makes us -- it leads to the question of do we -- should there be mandatory reporting under circumstances where we can in fact determine that a person has been involved in a crash due to their medical condition which, as Dr. Krumholz has pointed out, may well be a predictor of future involvement in crash due to their medical condition? Should we have mandatory reporting by first responders, by police, perhaps even by ER physicians under those specific circumstances?

DR. KRUMHOLZ: I have trouble with that, the patient-physician relationship side, from the point of view of the legal law enforcement officers. To me, that's something that I would think there would be reporting of a medical condition that may have impaired the person's driving and that seems appropriate and reasonable. I have difficulty when it gets to the physician side because again it's not just a medical confidentiality issue, it's also a matter of whether you can optimally and ideally treat the

person.

Once you start requiring emergency room physicians to report, I don't see where you can then draw the line. So that, I think I would be opposed to that idea because I think again it's likely to go -- it could go to more extreme reporting or to more comprehensive reporting by all physicians and, Number 1, I think that interferes with the patient-physician relationship. I think that interferes with treatment and, finally and perhaps most importantly, I don't know that there's any evidence to show that it's ever improved public safety.

DR. CLARKE: I think the physician corps should see it as their responsibility, and I would hope and certainly encourage that all physicians take the responsibility in reporting to appropriate authorities of any person who is of immediate and imminent danger to the public safety.

DR. GARBER: Thank you.

That's all we have from the Technical Panel.

CHAIRMAN GOGLIA: Okay. I have a revolt brewing.

DR. KRUMHOLZ: If I can just make one comment, though, when it comes to this issue of mandatory reporting. What I do think is important, it's important to emphasize that we should make it as mandatory as possible for patients to report themselves and to me, that's where the emphasis should be, and that there are certain incentives in terms of insurance in terms of liability and things of that nature that can be emphasized so that if a person

has a seizure disorder, that's to me where the emphasis should be placed on. It should be placed on their reporting. I'm sorry.

CHAIRMAN GOGLIA: Okay. Thank you.

I have a revolt brewing because I've not taken a facilities break and there's a number of people that I've noticed wiggling in their chairs. So, given the hour, I think what we'll do is break for lunch since we're before the rush upstairs for those that are going to eat upstairs, and we can get in and out in a timely way. That's why the lunch break was originally scheduled for 1:00 to get behind the rush. So, we'll just go before the rush this time, and we can reconvene back at -- well, I have a vote for 12:45. I was going to say 12:30, but I'll defer. I'll defer to 12:45. That way, I can deflect the criticism if we stay late.

So, thank you all. We'll see everybody back at 12:45.

(Whereupon, at 11:29 a.m., the hearing was recessed, to reconvene at 12:45 p.m.)

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

12:46 p.m.

CHAIRMAN GOGLIA: Okay. We're set to reconvene with the next set of witnesses, and I want everybody to know I will be watching for anybody who dozes after lunch.

DR. MARSHALL: Good afternoon.

Chris Voeglie will now introduce the Technical Panel and the witnesses.

Mr. Voeglie?

Reporting Medical Conditions

MR. VOEGLIE: Thank you, Dr. Marshall.

Good afternoon. My name is Chris Voeglie, and I'm an investigator with the Office of Highway Safety, and I will chair this Technical Panel regarding the Reporting of Medical Conditions.

I'm joined this afternoon by Mr. Dennis Collins to my right, who is also an investigator with the Office of Highway Safety, along with Dr. Mitch Garber, the Safety Board's Medical Officer.

The purpose of this panel is to examine the roles of various parties involved in the collection and routing of information regarding drivers with medical conditions, whether to licensing authorities or to medical review boards. In this panel, we will explore the roles of first responders, law enforcement personnel and private physicians.

The witnesses for this panel will be Sgt. Robert Ticer, who is a 12-year veteran of the Arizona Department of Public Safety; Mr. Richard Wiederhold, who is the District Chief of the Brevard County, Florida, Department of Public Safety; and Dr. Laurel Broadhurst, who is currently a private physician and has served as a medical advisor to the North Carolina Department of Medical Evaluation Programs.

First, I'd like to thank the witnesses for being with

us today, and at this time, I'd like to begin the Technical Panel's inquiry with Sgt. Robert Ticer.

Sergeant, we've heard earlier in the previous session a lot about how the information is gathered, the lack of the data, and how the valid data is actually hard to get, especially those that pertain to folks who had experienced some sort of medical condition and were involved in an accident.

Are you aware of any reporting criteria for law enforcement personnel regarding drivers with medical conditions which may affect their ability to operate a motor vehicle?

SGT. TICER: Yes. The reporting criteria that we use in law enforcement as first responders, people that are first at collision scenes, crash scenes, and also during routine traffic enforcement, as police officers on the street, when we notice types of impairment out there, we need to determine whether or not it's drug or alcohol impairment. If that's the case, we go into a criminal investigation at that point.

If it is a situation where medical impairment is noted, the person's having trouble operating their motor vehicle due to a medical condition, such as something that happens in our investigation that we note during a traffic crash or a traffic stop, we use the standard reporting procedure to the state Motor Vehicle Department via report form to the state on a referral to refer that person to the Motor Vehicle Department for re-examination and/or medical review.

MR. VOEGLIE: Okay. Also in the State of Arizona, they have a police accident reporting form. Is there any data entry or block on that form that would indicate the cause of the accident to be medical-related or describe the type of medical incapacitation?

SGT. TICER: There's multiple portions of that form and it's a state form that's used for all police agencies in Arizona, not just the Highway Patrol Division. It's the same form for all agencies, and it does have blocks on there that can be checked for ill or medical problems that could be related to the cause of the collision as well as the general blocks that you fill in for failure to yield, speeding, whatever the other cases are. So, the officer will fill those out appropriately, whatever they note at the scene, send it to the Motor Vehicle Department, and at that point, what they do with it, I'm not sure.

MR. VOEGLIE: Okay. Is the medical -- the reasoning for the medical condition, is that in the narrative or is codified in the form?

SGT. TICER: It would be in both, but it's in a codified portion of the form, simply checking a box that has a spot for that.

MR. VOEGLIE: Okay. And how would a law enforcement officer typically know how and to whom to report the driver with a medical condition?

SGT. TICER: Police officers specifically in Arizona,

when they go through their basic training, they are given this training at a police academy during the recruit training with simple instructions on the type of form, how to fill it out, when to fill it out, and how to report it to the Motor Vehicle Department. That's where they get their training from and that's what it consists of as far as reporting medical conditions to the Motor Vehicle Department through that avenue.

MR. VOEGLIE: Okay. Then it would be my understanding that there's only a single method of reporting these types of conditions, simply through the referral process?

SGT. TICER: There's other methods out there, but that's the easiest and most streamlined. When an officer issues a traffic citation for a violation, such as reckless driving, failure to yield, other violations, that traffic citation is going to be tracked through the court system and also through the Motor Vehicle Department. Whether or not the Motor Vehicle Department would cue on that for any type of medical conditions, I don't think they would, unless it was accompanied by the referral. So, oftentimes the referral will go in along with the citation so they have both of them.

MR. VOEGLIE: Okay. During the course of a traffic accident investigation, officers are trained to make observations of drivers in order to make determinations whether those drivers are under the influence of an intoxicating liquor or narcotic.

Are the officers also being trained on how to

recognize or identify folks that may not necessarily be having an alcohol-related symptom? Maybe it's a diabetic that is experiencing or demonstrating the same types of characteristics as someone under the influence.

SGT. TICER: There's many programs out there, what you're speaking about. Initially, police officers received first responder training, first aid training in the academy. Very basic diabetic comas, insulin shocks are addressed in that training as well as other medical conditions. So, the basic training starts at the academy. Some agencies, mine for example, in Arizona where we work a lot of rural areas, have taken it a step further and trained officers in some of the rural areas as emergency medical technicians. We also have paramedics and this goes across the nation. There's other agencies that do that as well. So, certain officers get a little bit more training, a little bit more specific on how to identify certain medical conditions, other type of situations out there as it relates to impaired driving.

The National Highway Traffic Safety Administration and the International Association of Chiefs of Police have a program called the Drug Evaluation and Classification System where police officers are trained in the recognition of drugs that impair a person's ability to drive a motor vehicle. That training is extensive training that goes beyond the initial driving under the influence training that an officer may receive, and in a portion of that training, the officers receive information on how to

identify certain types of medical conditions that can impair a person's ability to drive, too. So, there's some select officers in the country, approximately 5,000, that hold that certification, known as the Drug Recognition Expert, that received extensive training in impairment.

MR. VOEGLIE: Okay. And one final question. In 12 years on the Highway Patrol Department, have you ever had an opportunity to investigate an accident in which was caused by a driver experiencing some type of medical condition, and if so, how many have you had, and did you report it, how did you report it, and have you been able to follow it to its outcome?

SGT. TICER: I'll address it specifically on the accidents. I've had the opportunity to be lead investigator on several. A couple of them resulted in fatalities, and the folks that had the medical impairment were the ones that were killed. So, as far as my investigation, it didn't go further than that.

I had a personal experience where I was actually on a traffic stop and it happened to be right in front of the Motor Vehicle Department where I worked at, and as I was talking to the driver at the driver's side window, I heard my patrol car get hit, and as I turned around, I noticed a car had just clipped the rear of my patrol car and the car continued right past where I was standing at and stopped at the stop sign. I thought that was unusual. So, I walked over to the driver and to see what was going on, and it was an elderly lady, and I said, "Ma'am, did you

realize you just crashed into my patrol car?" There was no response at all from her. Throughout this investigation, there was no injuries in this collision, we found that this lady was suffering from some type of dementia. She didn't know where she was at, what was going on. So, we had to take our steps to ensure she got home safely which we did, take care of her vehicle for her, and since it so happened to be right in front of the Motor Vehicle Department, we asked the investigators from the Motor Vehicle Department to step down the steps and come down and they instigated a referral process right there on the spot. The outcome of that was she received a suspended license out of the incident because there was no way that she could safely drive anymore. So, it's a personal experience. I noted that one had a successful outcome for the safety of the motoring public.

I've also had situations myself and officers who I've supervised who have found drivers driving the wrong way on our interstate systems. In those cases, we found several of them where the person was suffering from some type of dementia, didn't know where they were going, where they were, what side of the road they were supposed to be on. Again, we took steps to ensure that they safely returned home, but we instigated a referral system through the Motor Vehicle Department for re-examination, along with a traffic citation, and as far as the outcome of those cases, I don't have specific information on that. I didn't receive that.

MR. VOEGLIE: Okay. I have no further questions.

I would just like to ask if Mr. Collins has any questions.

MR. COLLINS: No, I don't.

MR. VOEGLIE: Dr. Garber?

DR. GARBER: Just one brief question.

Had that incident not happened to your vehicle out in front of the Motor Vehicle Administration, would that have been in your opinion reported?

SGT. TICER: That one was very obvious. It didn't take any type of EMT training, first responder training, drug recognition training. It was very obvious that the lady wasn't aware of where she was or what was going on. So, in that case, that would have been so obvious, it would have been reported the same way. We just wouldn't have had the opportunity to have the investigators walk down the steps towards us. We would have had to send in the referral to the Motor Vehicle Department.

DR. GARBER: Thank you.

That's all I have.

MR. VOEGLIE: Okay. At this time, I'd like to turn the floor over to Mr. Dennis Collins.

MR. COLLINS: Thank you.

I'd like to direct my questions to Mr. Wiederhold.

Mr. Wiederhold, my first question. If an EMT responding to an auto accident suspects or is told by law enforcement or someone else at the scene that a driver suffers

from a medical condition that may have contributed to the accident, what legal and ethical considerations govern what the EMT does with that information, and what are the barriers, such as a reluctance to testify or sympathy for the patient, that might exist?

MR. WIEDERHOLD: EMTs in most states have a responsibility by law to report the medical treatment that they provide to patients. The report is kept as a confidential record and as an example of one of the legislations, I've brought a copy of Florida Statute 401 which I've provided you, and I've got one relevant page which is Page 21, and Florida Statute 401.3 reads that "each licensee must maintain accurate records of emergency calls and forms that contain such information as required by the department".

Later on, under Subtopic 4, it says, "Records of emergency calls which contain patient examination or treatment information are confidential and exempt from the provisions of Statute 11907", which in Florida is a Public Records Act.

Further down under F, it says, "In civil or criminal court, unless otherwise prohibited by law, upon issuance of a subpoena, the records can be reported to law enforcement authorities." So, there are restrictions, legal and ethical restrictions, on the EMT and to whom they report.

I serve as a site visitor for accreditation for the American Medical Association for Paramedic Training Centers, and

as such, I've had the opportunity to visit several states and examine their laws. Nevada, Missouri, Mississippi, Alabama, Georgia, I believe even North Carolina once, and most of them have parallel legislation. In most states, the legislation is enacted and the legislators, rather than getting down to the nitty-gritty of how and what to do, will reference a rulemaking authority in that legislation.

In Florida, when you pass legislation, the rule that's related is placed in Florida Administrative Code, and emergency medical services has a section in Florida Administrative Code related to record keeping and I also brought reference to that, and this is 64-E is the title of the Code and I would refer you to Page 20 and 21 where it refers to record keeping. The record specifically states that the EMS provider will keep an accurate and complete patient care record on Page 20, and then on Page 21, it includes the data elements that are reported in that record, and there is no provision for relating a trauma call to a specific impairment by the patient.

The EMT or paramedic can subsequently put that in the narrative portion of his report, but that goes to the medical record keeping agency of the state and is not public information and it's not shared by law enforcement and that's pretty much a standard across the nation.

The concept of doctor-patient confidentiality is extended to the paramedic treating the patient because the

paramedic and the EMT who respond to medical emergencies are considered a borrowed servant of the physician under whose license they operate. So, they have the same patient confidentiality concerns that the physicians have stated earlier. Those are ethical considerations and violation of those considerations can wind the paramedic up in civil court for tort violation.

MR. COLLINS: I would like to tell everyone that the materials that he referred to will be placed in the public docket following the hearing. I just wanted to make a note of that.

My second question for you would be, if EMS providers were required to report drivers with medical conditions, what sort of training would be required, and is there a mechanism in place to get that training to the providers, and also, based on your personal experience, what sorts of things do you see when responding to calls in the field that would indicate a possible medical cause for an accident?

MR. WIEDERHOLD: I believe that training is fairly much in place. Most paramedic and EMT curricula require an on-going recertification process and most states model their processes on the United States Department of Transportation EMT or EMT/paramedic curriculum, to include this training as additional training.

The most direct and possibly the simplest method to do that would be to address the Department of Transportation curriculum and have it included there. That way, every two years

when the paramedic or EMT recertifies, they would be exposed to that training material.

Part of your question was referencing indications that there is a medical condition and we see a lot of those. The paramedics and fire-fighters, EMTs, that respond to accidents are trained to look for mechanisms of injury. Some of the things that we see that indicate that there's a medical condition would be a lack of braking prior to an accident which would suggest that someone is not aware of what's going on. We have vehicles that run into houses or other buildings and they put their car in forward instead of reverse and did not brake. We have unexplained single car accidents where there's no obvious collision or mechanism of the accident. Sometimes we would assume that the patient fell asleep.

When we respond to accidents and we treat the patient, if we find that they're having a medical condition, if they've got medic alert tags or they advise us that they're a diabetic or we have symptoms of a cardiac event, then we change our mode from trauma treatment to medical treatment. The medical components can be picked up during the routine physical examination, irregular pulse, dysrhythmias, chest pain that's unexplained by the mechanisms of injury, and sometimes the mechanisms of injury can mimic a heart attack. A loss of consciousness that's inconsistent with the mechanisms of injury. If we've got a fender bender and somebody's completely out cold, those are indications that

something else is going on.

I'm sorry. There was another component to your question.

MR. COLLINS: Actually, I think you covered everything.

What sort of training would be required? How would it reach the providers, and what sorts of things you see in the field that would indicate a medical condition? So, I think you hit all three.

MR. WIEDERHOLD: Unfortunately, that's very frequent for us.

MR. COLLINS: And I have one additional question.

On the earlier panel, Dr. Marotolli stated that in Connecticut, they do get some reports from law enforcement and some reports from emergency room doctors. Could you, based on your experience, discuss briefly where EMS providers may fit in the system, given that it would be legal and ethical for them to do so? Where do you think that they can make an impact and get us towards the goal of perhaps getting the drivers that are posing a risk to the attention of review boards or other authorities?

MR. WIEDERHOLD: If EMTs and paramedics were to report this, it would probably be most effective to have both mechanisms in place. We work very closely with law enforcement. When we respond to accidents, on occasions, we arrive before law enforcement and we'll treat the patient and the more serious their

injury, the more quickly we try to transport them. In some cases, we transport them before law enforcement has arrived, in which case we would need to report to the emergency room physician.

In other cases, law enforcement arrives quickly or may even be there before we are and we can report to them on the scene. In fact, many paramedics seem to be somewhat intolerant of alcohol. We have a standing joke in the business that if you respond to an automobile accident after midnight and you don't see a drunk driver, keep looking because you've missed somebody. We're not terribly reluctant to suggest to law enforcement that there is an odor of alcohol or perhaps that he should check the patient or the vehicle. We find alcohol containers in the vehicle, this sort of thing. That is probably not an appropriate action but it is a common action.

The paramedics tend to have empathy for medical conditions, other than alcoholism, and tend not to report those as much. They don't view those as something that needs to be reported because they don't view that as something that action gets taken on. We're not aware of people who have licenses suspended because they're an epileptic or because they have a chronic heart condition or they're a brittle diabetic or some of the other medical conditions that probably should take them off the road.

We have concerns about that and we come back to the station and we share them amongst ourselves, but there is no

reporting mechanism in place, but if there were, I would suggest that it be both. Physicians will have a reluctance to report as well.

MR. COLLINS: Thank you.

That concludes my questioning. Mr. Voeglie and Dr. Garber?

MR. VOEGLIE: No.

DR. GARBER: I do have just a couple of brief follow-up questions.

You say that you see it. You're in Brevard County Public Safety Department in Florida. My parents live in Brevard County. So, I can certainly understand that you may be stopping a lot of folks who have medical conditions down there.

With all of those situations that you talk about where you've seen people who have either been in crashes that have medically-related conditions or caused directly by those medically-related conditions, are you aware of even a single case where an EMT has reported directly to the MVA, the Motor Vehicle Administration, that individual?

MR. WIEDERHOLD: No.

DR. GARBER: Concerns about that individual?

MR. WIEDERHOLD: Not one.

DR. GARBER: And a further follow-up question. As EMTs, you also do things that get you into contact with people who might otherwise not be seen. We heard from our first panel that

in many cases, physicians don't get the kind of follow-up that they'd like to from their patients and in fact in many cases, that's when the EMT gets called, is when a person has skipped a follow-up or appropriate treatment.

Do you feel that the EMTs get information under those circumstances about people who may be driving who should not be, even when they are not in their cars or involved in accident?

MR. WIEDERHOLD: Yes, sir. That's not at all uncommon. As long as the patient is alert and is no danger to himself or herself, they have the right to refuse treatment. As an example, we had a commercial truck driver driving an 18-wheel tractor-trailer who was feeling poorly and stopped his vehicle and took a taxi to the hospital. This was last week. He had a hemoglobin of one and a hematocrit of one which is extremely unhealthy. He had a bleeding ulcer. He had an internal bleed somewhere. When he found out there wasn't going to be a quick fix of the problem, he walked out against medical advice, returned to his tractor-trailer and took it back up on I-95.

This is the type of thing that we see. We see drivers who have gotten out of their vehicles because they're intoxicated and once they're intoxicated, unless they qualify for -- unless they're so intoxicated that they're a hazard to themselves, in which case we can call law enforcement and have them placed in protective custody under the Meyer Act, there really isn't anything we can do if they refuse treatment. We see many ill

people for one reason or another, whether it's alcoholism or diabetes or whatever reason, that will refuse treatment.

If we think that they're in significant danger, we'll stay on the scene and try to place them in protective custody under either the Meyer Act or the Baker Act, but there is very little that we can do if they refuse and they can refuse and walk away.

DR. GARBER: And finally, you mentioned that there seems to be a lot of discussion at the station about some of these cases. I imagine probably a lot of anecdotal reports back and forth among one another.

Is it your impression that the EMTs, at least in your jurisdiction, would welcome or oppose a reporting incentive or law or requirement for these types of conditions?

MR. WIEDERHOLD: I would have to tell you that there would be some ambivalence. I think that they would welcome the opportunity to get unsafe drivers off the road. We have a 32-station fire department and we run about 60,000 calls a year. So, an additional report to these people will be viewed as a tedium, and they're going to be reluctant to fill out those reports, except in cases that they would consider egregious, in which case they would be thrilled to do it. So, there would be some ambivalence. There's the additional workload. There's the risk factor of reporting something. There's the ethical dimension and there's the compassion that they feel towards many of their

patients who are ill.

I know that many times, the paramedics can seem cold and callous, and especially to drunks, they have a bit of intolerance there because we see so many of them, but they do have a lot of compassion for their patients in many cases and they would be reluctant to report that. It would be something that -- I think, in the long run, I think it would be accepted but it would be difficult.

MR. VOEGLIE: I have one follow-up to that.

You spoke earlier and said the EMTs and paramedics are considered borrowed servants of the medical profession or of the treating physician at the ER.

MR. WIEDERHOLD: Yes, sir.

MR. VOEGLIE: And there was some talk about that the same privileges are extended to the first responders to the patient as would be the physician.

MR. WIEDERHOLD: I'm not sure that it does extend to the first responder. To me, a first responder is like a law enforcement officer who is not medically trained. When we respond, we don't consider ourselves first responders.

MR. VOEGLIE: Okay. On scene and you're treating a victim of a car crash and law enforcement comes on scene and you have information that this driver, as in some of our presentations, experienced a seizure and caused the death of several people. Law enforcement has an obligation to investigate

and determine the cause of that crash. What would your obligations be on scene to help law enforcement in relating to them that this driver had suffered a medical condition under those ethical guidelines you've set forth?

MR. WIEDERHOLD: Many ethical choices are up to the individual involved. Legally, we are prohibited from sharing that information. We have had -- I personally have had two occasions when the state police officer, in Florida we call it the Highway Patrol, insisted on having a copy of our incident report and one of my subordinates refused to turn it over, and I went to the scene and on two occasions have been threatened with arrest by law enforcement because they did not understand the provisions of the statute that I just read you that specifically make this an exempt record that has to be obtained by subpoena.

A verbal report is the same as the written report in terms of what this law considers. We are prohibited from telling that law enforcement officer that this patient had a seizure. Will we do it? That's an ethical decision that some paramedics will make on a call-by-call basis. It's something I would like to do, if I felt like this patient was a danger and was presenting a hazard to the community, but can I do it legally? No, I cannot.

MR. VOEGLIE: Okay. Thank you.

Sgt. Ticer, do you see this same set of circumstances in Arizona versus what we've heard today in Florida?

SGT. TICER: Richard outlined it very well. Police

officers and EMTs especially in rural communities, I'm sure in the inner cities as well, have generally a good working relationship, and a lot goes on at the scenes, as he mentioned, about the ethical decisions of that individual EMT or paramedic, and in my experiences, if something occurs, such as a seizure or something like that, medical condition, those first -- not first responders, the EMTs or paramedics are going to let the officer know what happened. They're going to say officer or sergeant, this person had a seizure or there may be a medical condition, you might want to be aware of that. But as far as giving us a record in writing or going any further, that's generally what occurs right there and it lets the officer start their investigation and tracking it and maybe keeping that under their hat hopefully so if it happens again and they get information the next year or the next collision. So, it does happen quite often.

MR. VOEGLIE: Okay. Thank you.

Unless the panel has any other questions, I'll turn the floor over to Dr. Garber.

DR. GARBER: Thank you.

My questions will be for Dr. Broadhurst.

Dr. Broadhurst, how does an average physician working in a small clinic or a solo practice, how does that individual know how, to whom and when to report a medical condition that may put them at high risk for involvement in a traffic accident?

DR. BROADHURST: I'm going to have to step back and

pretend that I had nothing to do with the Driver Medical Review Program at DMV and talk about my role now as a practicing clinician.

There isn't a lot of information out there, and we don't know, we're not trained very much. We're not required to read anything that would tell people, tell doctors practicing in North Carolina that this is something that they are allowed to do. There are other physicians that come from other states that know about mandatory reporting. I know that just among the nine physicians that I work with in a family practice clinic, we often talk among ourselves that, you know, we were glad that we weren't driving on the day that patient left the clinic.

We're always worried about liability. I mean, in private practice these days, especially in primary care, liability is a huge issue, and I think sometimes we're just as concerned about being sued for reporting as we are if we don't report, and I think there's still a lot of lack of knowledge out there by practicing physicians about whether they can even report.

If I can put back my hat as when I first took over the program as a medical advisor with DMV, I remember the North Carolina Medical Board actually wondering if they would be able to sue physicians who did report. I mean, actually the North Carolina Medical Board, you know, was looking into taking some actions against physicians who had reported such drivers to DMV prior to North Carolina passing the medical immunity from

liability legislation in 1997.

So, the answer is there isn't a lot of information out there. At my clinic, I think the physicians know only because I've given a little CME talk about it in one of our provider meetings.

DR. GARBER: So, would it be your impression then that the majority of physicians in practice in North Carolina do or do not know that they can or how to report such conditions?

DR. BROADHURST: I would still say the majority do not know. I know that when we get your state license in North Carolina, you're given a huge book about three inches thick of all the legal ins and outs of practicing in North Carolina, and I don't know how many of us have been really good about reading it, but a lot of it is outdated. Some of it does not even include that 1997 legislation that does provide immunity for reporting, and I think in the unfortunate climate of private practice these days, it is so frenetic and so busy, it would be one of the last priorities, I think, unless you felt, you know, definitely sure that this person was constantly on the front of your mind that this is something that needed to be done.

DR. GARBER: You've mentioned now two different things. You mentioned concern about legal action and also a very crowded schedule with patients and other duties. Are there other barriers to reporting these people to the Department of Motor Vehicles? I suppose, I guess, a lack of knowledge would also be a

third one that you've mentioned, but are there others that -- other reasons that a doctor would not report an individual?

DR. BROADHURST: Again, the same thing about, you know, confidentiality and that patient-physician relationship, I think. I know that we, as you're describing, too, feel very close to your patients and there's a sense of -- a feeling of guilt if you were to, you know, "turn them in".

I know that we would like to think that we could be immune from that obligation, but unfortunately you have to keep the society public safety always in the foremost, you know, of your mind, too, when you're seeing these people, but yeah, the pace is, you know, unbelievable in private practice these days. To fill out one more form, to make a phone call, to fax something to North Carolina DMV, you know, with the number of patients we see that may have possible conditions would be, I think, almost prohibitive.

DR. GARBER: And that's assuming that you knew what the fax number was in the first place.

DR. BROADHURST: That's right.

DR. GARBER: On the other side of it, are there incentives to report patients? Are there any reasons that you can think of that a physician, a practicing physician, even in a busy practice, would want to report a patient?

DR. BROADHURST: Only the possibility of liability, I think, if you don't report. I mean, there have been cases, you

know, documented, I think there was one in '96 of an accident that occurred with an epileptic driver and a physician who did not specifically warn a patient that day not to drive or, you know, to be careful that they didn't drive for six months while they were changing medication. He was brought, you know, under a lawsuit. So, I think that would be the biggest incentive, if you're always, you know, worrying about those sort of issues.

We see a lot of geriatric patients at our clinic, and I have to admit most of my patients actually have somebody already driving them in. So, I haven't seen that many patients myself that I think ought to be reported.

DR. GARBER: Dr. Clarke mentioned this morning that it may be useful to use the threat of reporting in order to gain compliance with medical regimens. Is it your impression that that may be used in clinical practice?

DR. BROADHURST: Yeah. Actually, it is, and again back with my other job, I have actually called physicians on the phone to ask them, you know, more information about these medical report forms that we have received as reviewing physicians, and the physician would actually frankly ask me to make sure that they had a, you know, three-month or six-month follow-up required by DMV to keep their license intact or they wouldn't come back in to get their diabetes rechecked or their seizure medication refilled. So, I actually have sort of gone along with that in terms of making a decision on the frequency of which patients should have

to come in for follow-up for these medical reports the DMV requires in order for them to continue to keep their licenses.

DR. GARBER: And this next question is sort of a hotseat question. You're obviously very educated in these areas. You have formal background in occupational medicine and you've worked with the board there in North Carolina.

On the other hand, you're also a very busy private practice physician. How many patients have you reported to the DMV in the last, say, year or so?

DR. BROADHURST: I was waiting for that question. You know, I see about 25 patients a day, maybe a hundred patients total a week, and I should know what I need to do. I know the fax number by heart, and I've actually only reported three, and I've also done it through the back door.

In North Carolina, you can all the Highway Patrol or the local police and we have a form that they can fill out, if a concerned citizen calls regarding a certain patient. I just started back into private practice and I'm trying to build my practice. I'm doing what I think a lot of other physicians do. You're afraid you're going to lose patients if you get the reputation of being somebody who reports to DMV. So, I use the legal if somewhat round-about way of actually having the Highway Patrol make the report for me.

My name is on those reports as someone who, you know, called to recommend this patient be re-examined by the DMV, but I

did not directly, you know, have to do that on the form in front of the patient.

DR. GARBER: We've heard, both in the previous panel and a little bit in this panel again, that some folks are looking differently at people with substance abuse disorders or alcoholism, alcoholism or other substance abuse disorders, than they do at, say, diabetes or epilepsy or even dementia.

As a physician, do you find it more useful -- and particularly with regard to motor vehicle operation, do you find it more useful to think of alcoholism in terms of, say, a volitional behavior or do you find it more useful to think of it in terms of a disease with required treatment and follow-up, much as other diseases?

DR. BROADHURST: Again, I'm biased in terms of my training. I'm trained as a physician, not a law enforcement person or, you know, somebody with adjudication or legal background, and if you look in our orange book of guidelines that we've been using since '95 to guide the physicians in North Carolina in making decisions, alcoholism and drug abuse is considered a medical condition to be followed like other medical conditions.

So, we, for instance, might refer someone with a vision disorder to just have a vision test. We might refer someone with a musculoskeletal disorder to have a driver rehab evaluation specialist evaluate them. We might ask for a person

with a substance abuse disorder to have a substance abuse evaluation versus particularly a medical report form filled out, but, yes, we, most of us who, you know, take care of patients and also review these forms, consider it a medical illness to be followed similarly.

Now, in a way that you follow someone with a seizure disorder for a certain seizure-free interval, our guidelines state that after five years of sobriety, confirmed by several, you know, yearly substance abuse evaluations, the patient can be removed from further review, just as you might remove someone who had epilepsy and has had no seizures in five years and is no longer taking epilepsy anti-epileptic medication. So, they would be also no longer in the program.

DR. GARBER: From that perspective, if I can follow up, I know this is not your specific area of expertise, but is it your impression then that that is appropriate, that there are data to support that after a certain number of years of sobriety, that the relapse is significantly less or is that just something to sort of get them off the books so that they're not having to follow them up on an annual basis anymore?

DR. BROADHURST: Unfortunately, I think a little of both. I was aware of some literature several years ago that stated if a person had been sober for two years, you know, between two and five years was kind of a gray zone, if they were sober less than two years, it was more likely that they'd, you know,

relapse, and there was some medical data out there not looking at driving at all but medical data stating that after five years of sobriety, most people -- well, I shouldn't say most, but people were more likely if they were going to be sober, it would take that long. But, yeah, I'm not a substance abuse or an addiction medicine specialist by any means.

DR. GARBER: And I have one last final question. There may be some others from the other Technical Panelists.

But what do you personally think the physician's role ought to be in the ideal world in reporting medical conditions to motor vehicle administrations or to anyone else who might be able to assist in that?

DR. BROADHURST: You know, I think we ought to be, I guess, equal players but maybe obligated a little bit more so than the average citizen himself, you know. In the North Carolina program, we get reports from Highway Patrol. We get reports from drivers' license examiners. We get reports from the drivers themselves when they go to renew their driving licenses. We get reports from physicians. Several ways that people come into the program, if you will.

I think, unfortunately, sometimes the driver's license examiners haven't had the amount of medical training to recognize when someone states a certain medication that they're on, that this is something that ought to be maybe referred to the program. We try to educate the driver's license examiners so that they

know those medications that ought to be red flagged.

When someone gets their driver's license in North Carolina, they're asked a series of questions. Do you have a seizure disorder? Do you have diabetes, etc.? They're supposed to be honest and report themselves, but I think as we've heard earlier, most drivers don't necessarily report situations that may occur between the driver's license renewal interval. So, that sort of falls into the laps of physicians then because these patients will often come to the attention of physicians between the five years that they come to renew their license which is the license renewal period in North Carolina. In fact, for some people, it's eight years, depending on, you know, what year your birth date was.

So, I think physicians should, you know, not be mandated to report but should have, you know, immunity from liability to report and to educate their patients that this is really something they ought to be aware of. What we try to stress in North Carolina is

-- we have about, I think, at last count almost five million licensed drivers in North Carolina. I think that's right. We have 200,000 in our program. But if you look at the number of people in North Carolina that would have epilepsy, that would have diabetes, that have substance abuse disorders, it would totally overwhelm our system to have all of those patients in the medical review program.

So, what we try to stress to the physicians when we give these talks to physician groups is try to talk to your patient about this issue, try to urge them to report themselves if there's issues of compliance, but again try to educate the patient to self-restrict himself, if he feels or she feels that the medical condition they have would be impairing.

DR. GARBER: Thank you.

Those are all the questions I have for Dr. Broadhurst.

Are there any questions from the rest of the Technical Panel?

MR. COLLINS: I have one not for Dr. Broadhurst but for Mr. Wiederhold, based on something Dr. Broadhurst said.

Given the discussion of the immunity from liability laws that physicians in some states do enjoy, are you aware of any discussions or any movements to cover EMTs and paramedics under the same laws since they're acting as an extension of the medical director for a location or an emergency room physician, as you said, as a borrowed servant, I believe was your term?

MR. WIEDERHOLD: No, I am not. In fact, we're having significant issues in Florida right now with trauma systems being in jeopardy because of the cost of malpractice insurance for physicians. Our Level 1 regional trauma center in Central Florida is threatening to close its doors and it's quite an issue in Florida.

MR. COLLINS: Thank you.

I'm done.

MR. VOEGLIE: Okay. I'd like to thank the witnesses for providing us the information, and Dr. Marshall, this would conclude the Technical Panel's questions for Reporting of Medical Conditions, and I'd like to turn the floor over to the Board.

CHAIRMAN GOGLIA: Thank you.

We'll go to questions from the tables, and we'll start with the State Group this time.

(No response.)

CHAIRMAN GOGLIA: No questions.

Advocacy Group I?

MR. COHEN: Hello. I'm Perry Cohen from the Parkinson's Disease Foundation.

I'm going to ask Dr. Broadhurst. Do you think a specialist would treat patients any differently than a family practitioner?

DR. BROADHURST: Of course. I mean, most of my patients with Parkinson's Disease are seeing a neurologist in addition to myself, and if I were again wearing my other hat, when I review these cases, if a primary care physician would identify one of his patients as having Parkinson's Disease as a possible disabling condition for the patient's ability to drive, I would probably require a neurologist or his neurologist to actually fill out the form or at least the neurology section of our form. I would probably also require, first and foremost, a driver rehab

specialist, an occupational therapist trained in driver, you know, training and rehabilitation to conduct a driver evaluation and put that information, in addition to the medical report form obtained by the primary care physician, in addition to the driving records that I would evaluate, in addition to any accident reports, in addition to any Highway Patrol reports, all of this would be together in the case before I would make a recommendation to DMV.

Now, this is as a reviewing medical advisor to DMV. As a primary care physician, I would always have a neurologist involved in any care or any opinions about Parkinson's Disease.

MR. COHEN: At what point would you refer your patients to a neurologist?

DR. BROADHURST: In terms of if they came to me for the very first time with symptoms?

MR. COHEN: Yes.

DR. BROADHURST: Any time that I was even suspicious that someone might be having a Parkinson Disease or Parkinson features, to get more information. I mean, the primary care, we have to take care of the whole gamut, you know, from children to elderly, from, you know, GYN to, you know, vision. I mean, you name it. So, very frequently, I would refer. I mean, that's what the primary care physician does a lot of these days, is kind of coordinate all the specialists that need to be consulted for the care of a possible neurologic disorder.

MR. COHEN: Okay. Thank you.

MS. STRAIGHT: The other -- the flip side of that hotseat question. Now that you're in private practice, do you counsel your patients where you think there are implications of their medical conditions for driving, and if you do, what do you find their reactions to be?

DR. BROADHURST: Yes, I do counsel them. I feel, you know, again because of what I know about the state's program, I do a lot more counseling. I just haven't had to really report that many because I feel like most of the ones I counsel have been very amenable to going along with my recommendations, you know. Maybe you can have somebody else do most of the driving for you, maybe you ought to, you know, call Mountain Mobility to pick you up next time, things like that.

We worked real closely with AARP, too, in coming up with the Physician Immunity Bill and talking about the 55 Alive and different programs. So, a lot of times, I will refer them to AARP, some of my older patients, and say, you know, there's some information out there and some courses you can take and, you know, different things.

I know people, especially with, you know, older patients with Type 2 diabetes that are starting to have peripheral neuropathy or retinopathy or nephropathy issues, you know, that's a red flag to me that they may need some additional maybe driver retraining or just to consider the issue. A lot of them don't even think about it. They come do their blood sugar reports and,

you know, they're all excited or proud of themselves, but they don't even go beyond that to consider the implications of driving.

MR. COHEN: This is Perry Cohen from the Parkinson's Disease Foundation again.

You're obviously well versed in these issues. How would you rate your colleagues and other primary care physicians in terms of whether they would refer to a specialist and what they would do with respect to reporting?

DR. BROADHURST: I mean, in terms of referring to a specialist for treatment, I think we all, you know, we all do that, but in terms of reporting, I mean, in all honesty, all the physicians

-- most of the people I see and I talk to continually have never heard of the medical review system in North Carolina. They don't have any idea that they can report or should report, and honestly, most people don't even think of that when they're taking care of a patient, whether they have driven in, whether they should drive out that day.

I mean, like I said previously, I think we'll make a passing comment to each other, you know, that we've seen the same patients that we each, you know, take turns seeing, we're glad we're not driving out on the road this afternoon when they're on their way home, and it's sad that's the extent of what we do sometimes, but that's all we have time to do. That's all, you know, we think about doing. So, a lot of people, a lot of

physicians out there don't know this exists.

Now, that's not so true for specialists. I think people that -- you know, neurologists, I think, are very aware of these lapse of consciousness disorders, you know, for epilepsy and other neurological conditions. I think they're more in tune to these things. The cardiologists. I have copies of the forms that some of the cardiology groups in North Carolina actually have their patients sign when they implant an AICD, a defibrillator or a pacemaker, that they are actually requiring the patients themselves to report to DMV. So, I think a cardiologist or a neurologist would have a different view of this than a primary care person would.

MR. COHEN: Okay. Thank you.

MR. FLAHERTY: Gerald Flaherty from the Alzheimer's Association.

For Sgt. Ticer. The Alzheimer's Association in Massachusetts, along with the University of Massachusetts, Gerontology Institute, some years ago did a study of police officers, physicians and the general older public on attitude about driving, one of the conclusions of which was that police officers simply do not ticket people who look like their mothers and fathers. That conclusion was supported by an informal survey done by a local police department in Massachusetts that concluded that as people age and there was an apparent control here for other reasons that older people might not get citations, numbers

of hours on the road and so on, but that indicated that as the population aged and they looked at several age increments in the population of their town, there were fewer and fewer and fewer explainable lapses in -- there were fewer and fewer citations of older drivers that didn't have clear explanations.

Given that, one of the things that we did with the Registry of Motor Vehicles in Massachusetts and some local police departments was to look at some of the reporting mechanisms, the immediate threat citation, for example. We looked specifically at that, and the DMV's feeling -- Medical Affairs Branch in the DMV. Their feeling was that this was not user-friendly for police officers and we all felt that it was not really fair either for people with diseases like Alzheimer's and there needed to be a kinder, gentler way of reporting these cases.

Consequently, the reporting now of older drivers who are committing infractions, driving infractions, goes to a different form directly to the Medical Affairs Branch of the Registry of Motor Vehicles and not, as it had done, to the Suspensions Division where these hearings could go one way or another, not based on particularly useful data.

The question is this. Do you feel that this way of creating a user-friendly for police reporting form would be helpful in other departments in reporting across the country and reporting to medical affairs unit within a DMV directly where there's a much greater possibility, as in Massachusetts, of

somebody, for example, with Alzheimer's actually getting a diagnosis and treatment as a result of that referral to DMV Medical Affairs by a police officer?

SGT. TICER: I'm very familiar with what you're talking about there, the specific police department and that officer in Massachusetts, and I'm a big fan of what he's done out there with what you've described.

What you initially explained is not uncommon whatsoever from the East Coast to the West Coast about police officers not wanting to cite somebody who may look like their father or their grandfather or their mother or grandmother, and my personal experience is and plenty of other police officers across the country, the general way of doing business when you stop somebody like that for a violation has been be a little bit more careful and, you know, try and watch the stop sign or keep your speed a little bit more steady and that's what we've been doing.

However, what that officer in Massachusetts found out and now that we started thinking about that as we're doing the injustice by that because that person that may have a problem out there, an Alzheimer's problem or another dementia or another condition that's causing that person to be stopped, may be getting stopped and verbally warned, nothing being written down. The next week, another officer stops that person and this person hasn't been tracked through the Motor Vehicle Department.

So, I think it's a great idea what that officer is

doing, is getting those people directed to the medical folks to see what the problem is before it hits the license suspension and correct me if I'm wrong, the information I received back from that officer is by sending them to a medical referral, he has found that more often than not, the person that had a problem with their driving has been able to have that problem corrected through their physician or their eye doctor and gotten them safely driving again without having to take their driver's license away.

So, I agree with what you're saying. I think it's a great process.

MR. FLAHERTY: That officer, John Bailey of the Waltham Police Department, was involved in discussions with the DMV, Registry of Motor Vehicles, about reconstituting the immediate threat form, so it would go directly to Medical Affairs and not to the Suspensions Bureau.

So, my question again is, is that an applicable approach across the country? Is this a way not only of correcting, as you pointed out rightly, of correcting some medical problems that can be corrected so people can continue to drive safely, but of getting people who may not be able to drive safely and who need medical attention, who are not diagnosed -- we heard this morning that the majority of people with Alzheimer's Disease, for example, are not even diagnosed by their primary cares.

Is this -- perhaps if this were a uniform approach across the country, would this be helpful in getting older people

not only to drive more safely but perhaps to be treated and diagnosed and treated for diseases they otherwise might not come to anyone's attention until well along in the disease process with Alzheimer's Disease, for example?

SGT. TICER: I think it's a great approach. As far as if it would work with each state's motor vehicle departments or each agency, I'm not sure. I've thought a lot about that. Specifically the Waltham Police Department, as Officer Bailey tracked and did that informal study, he looked at about 16,000 traffic citations and warnings, if I remember, coming into his agency personally. So, it's somewhat of a smaller agency compared to a major metropolitan agency, and found that a very small percentage, if I remember right, it was about 30 of those 16,000 citations that came across were issued to people over 65 years old. So, again it went back to that theory of people not being cited by the police when they're in the older age.

So, I think it can be done at a smaller police department level if you have an officer that can do that tracking and get that information to the Motor Vehicle Departments, but as far as the big one, I'm not sure. That's something I think would be better addressed with the state Motor Vehicle Department, whether they can handle that, but from my perspective, I think it's a great approach because it gets those people initially seen by the medical review board to see if they can drive safely and if not get them referred to a situation where they can get driving

safely or if they need to move on to the revocation process. So, I think it's a great idea. If it would work on a big scale, I'm not sure.

MR. FLAHERTY: Thank you.

DR. STROHL: Kingman Strohl, American Sleep Apnea Association.

The problem with sleep apnea is an interesting one in that it's a condition that can cause extreme sleepiness because of sleep fragmentation. It's also one that can be readily treated. The presenting symptoms being sleepiness and often our patients report fall-asleep car crashes as being -- or at least near-misses that have occurred several times before they recognized that they even had this disorder.

So, I have sort of a series of related questions that came out of American Thoracic Society consensus conferences as well as some data out of North Carolina on fall-asleep car crashes. So, it's the sleepiness rather than the sleep apnea that produces a car crash. So, the issue, first, is for the officer.

For the suspected fall-asleep car crash, how is that reported or is there criteria for an officer to be suspicious about that, and how does that get reported on? Because at least in the State of Ohio where I'm at, it has to be checked under "other" and then has to be written out and so it's hard to track.

SGT. TICER: Well, as I talked about earlier on our state traffic accident report form which is the same report form

for all agencies in Arizona, it does have a block for sleepy, for tired. You can check that box. So, it's tracked that way.

As far as how the officer gets to that point, it can happen several ways during the investigation. One, if the person admits they fell asleep or (2) if the dynamics of the crash indicate that the person fell asleep, and a common crash on a rural stretch of highway in this country is a person will fall asleep, they'll drift off the side of the road, travel for a 100-200 feet and then over-correct, come back on the highway, over-correct again and roll.

What we do at those investigations is we look to see if there was any type of evasive marks, any braking or anything that indicated something occurred prior to them drifting off the side of the road, and based on the experience of investigating those collisions or those crashes, it can easily be determined that the person either was inattentive or fell asleep. So, we can report it that way.

As far as sleep apnea, I would like to just mention that that's something that the police need some training in to understand that type of situation.

DR. STROHL: Would that sort of crash go through the dual reporting through both citation and referral?

SGT. TICER: It would go through the citation. The person with -- at least with my agency, if somebody had a wreck like that, they would be issued a traffic citation, but it

wouldn't be for sleepy, it would be for failure to control vehicle or inattentive statute, such as that. We don't have a statute specifically for falling asleep. So, it wouldn't be able to be tracked in that manner.

On the accident report form, the Motor Vehicle Department could get that data of sleepy or fell asleep. As far as a referral to the Motor Vehicle Department, if the officer felt that there was a medical condition, such as sleep apnea, then they would fill that out and send that in.

I'm glad you brought that to my attention because that's something I'm going to need to bring up with the people I work with because until I sat in here today, I had really never thought about sleep apnea as something that we need to be aware of out there on the highway. So, it goes to the training part of this today.

MR. OSTERMAN: Sgt. Ticer, are you aware of any circumstances in which that direct link has been made in your experiences from a sleepy driver to a medical referral?

SGT. TICER: No. That's not a new concept but it's a new concept to me today. I just had never thought of it that way.

DR. BROADHURST: Could I comment to that?

We have HP-640, Highway Patrol Form 640, that we have different criteria on that the highway patrolmen can mark and some of them are the ones you'd think were obvious, black-out, poor physical condition, poor vision, mental institution patient,

institutional for alcoholism, epilepsy, poor driving habits, and then there's an "other".

We have had seminars with the Highway Patrol. In fact, I guess the graduating class had to go through an hour at least of education from the DMV when I was tenure in that program, and we would educate them on what other could include and one of those others was sleep apnea. So, if the highway patrolman would send this in, in addition to the accident report, this would immediately get flagged and go through the system pretty quickly, but the North Carolina DMV, the Medical Review System, also looks over -- they're supposed to look over all the accident reports, and especially single vehicle crashes, anything that obviously has that block checked on the accident report that said sleepy or anything that looks suspicious, you know, 2 in the morning or something like that. They flag those, also. So, they independently do the accident report forms, even if one of these Highway Patrol forms hasn't been filled out, in addition to the accident report.

Thank you.

DR. STROHL: The patients that have had motor vehicle accidents or near-misses and even have been stopped have often felt as though that was a point in which they could have been aware that they were acting irresponsibly.

The biggest sector in the population that drives sleepy is the young teenage driver between 16 and 26 and that's

not a sleep apnea group. So, it's really the functional sleepiness.

Now, Dr. Broadhurst, in terms of assessing a patient on a routine basis, would you assess for either motor vehicle accidents in the past year or in particular functional sleepiness, of which either a near-miss or a fall-asleep car crash might be of a higher level of interest? Do you think that the physician should routinely look for that or are there certain circumstances that people might look for that occurring?

DR. BROADHURST: I know that about 10 years ago in the program, when a physician would fill out the medical report form, he would get, in addition to the medical report form, actually the driver record as well. So, that might give him some red flags if there wee, you know, several accidents in the middle of the night because on the driver record, you get a list of accidents, violations. You'd see if that person had DWIs.

Unfortunately, I think just due to the numbers, the driving record is a public record, but I think due to the numbers, they don't give those out anymore with the medical report forms. It's just administratively too hard. So, the practicing physician, the primary care provider might not know any of that information. We hear that constantly, mostly with the pharmaceutical representatives, to use surveys, if they want us to use the drugs for stress urinary incontinence, with questionnaires to help patients decide whether they have stress urinary

incontinence.

I remember a particular, I think it was a treatment for narcolepsy, came out with a questionnaire that he wanted us to give all of our patients to start trying to pick up more of these people, people with narcolepsy and other sleep disorders, and I wish honestly we had time to do that and other preventive medicine screenings. When he first brings the form in my office, I'm all hot about it and I give every patient I see on my preventive medicine check, you know, all these forms to fill out, but after awhile, I run out of the forms, I forget about it, I'm so busy worrying about diabetes and dyslipidemia and hypertension, that no, I don't do as much screening as we should. I mean, most primary care physicians, I don't think, do.

DR. STROHL: And just a point that came up in the last session as well about the categorical reporting of patients having sleep apnea, at least in the opinion of the American Thoracic Society, should be discouraged because those people that are at greater risk are those that are either unrecognized or untreated, that effective therapy reduces the risk of having fall-asleep car crashes to that of the general population, and at least in one survey, individuals with mild sleep apnea, that is, having more than just snoring and mild sleepiness, had driving records that were better than the rest of the State of Virginia, suggesting that the rest of the State of Virginia might be more sleep deprived than that group.

But I think that it's a broader issue here, and I think the idea of trying to look at the functional domains that make a person a lousy driver rather than a diagnosis is another area I'd like to make sure we're open to.

DR. BROADHURST: You know, I know a few years ago, actually about 10 years ago, we did a survey of whether our program was working. In other words, did it reduce crash risk in North Carolina if you were in the Medical Review Program? They looked at all sorts of disorders and one of them was sleep apnea, and they found out that the people that were in the program, in other words being reviewed on a regular basis over a 10-year period, had -- the driving records were improved, in other words, less violations, less crashes. It was statistically significant.

But I do agree with you that people that have recognized disorders that are -- whether you force them to see a physician, to fill out this medical report form or force them to make sure they get their CPAP titrations, the ones that are in the program and are being seen by a physician regularly will be safer than the ones out there that aren't or that have again a sleep condition that hasn't been diagnosed or, you know, another category.

MS. WARD: I'm Julie Ward with the Epilepsy Foundation.

I just wanted to ask Sgt. Ticer a follow-up question. When you were describing the sleep-deprived accident, you know, a

typical pattern, I mean, that could also have been a person with a seizure or other similar lack of consciousness.

I'm assuming that your form probably asks about seizures. So, what criteria would you use at the site to determine whether it actually was a seizure that caused the problem and not sleepiness or, you know, some other factor?

SGT. TICER: Our investigation at the scene, we followed it all the way through the hospital because generally those type of collisions or crashes that occur due to somebody falling asleep or having a medical problem result in a roll-over crash where whether the person's really hurt or not, they go to the hospital. So, the officer will investigate it, look at the evidence at the scene, like I said, to see if the person just drifted off the road or see if there was something that indicates the vehicle was jerked or anything or trying to evade an animal, and if we start seeing through our investigation the person probably fell asleep, you start taking that one step further and go to the hospital and you start interviewing the patient, the driver, to see what happened, get their statement.

Also, police officers are pretty ingenious. They'll listen to the paramedics or the EMTs as they're talking to see if they know anything, see what's going on there, and they'll stand around the emergency room and try and listen to the nurses and doctors, too. Everything they can so that they can make a good solid determination as to what occurred in the collision, and if

they don't find anything specific that indicates there was a seizure or anything other than falling asleep, that's the only box that'll be checked. So, it's really just going to happen through the ensuing investigation, and if they find that out, they'll report it that way, as you described, on the form.

MR. FLAHERTY: Gerald Flaherty, Alzheimer's Association, for Sgt. Ticer, and then I will leave you alone, I promise.

What do you see as the main barriers to organizations, such as the Alzheimer's Association and others represented at this table, to doing trainings in the police academies, both for recruits and in-service, since there do appear to be different levels of reception of the different police academies in different states?

The second part to that question is, do you think there's some way to systematize a curricula on the issues we're discussing today for police uniformly and perhaps across the country through some mechanism, a CD or some other easy training tool, that wouldn't be labor-intensive or time-intensive?

SGT. TICER: Ms. Erbengi from the Alzheimer's Association here, a registered nurse, I just watched her teach a program just like you're talking about a couple days ago at the Rockville Police Department through a two-hour training block that she has developed for law enforcement on how to identify some of the symptoms involved with somebody who has Alzheimer's Disease or

other dementias, and how do you interact with those people, and what do you do when you encounter those people driving?

So, I sat through her training the other day. It was a two-hour block of instruction specifically for police officers in a roll call-type training atmosphere, and it was outstanding. Police officers, and I'm speaking for the people I work with, they love to learn, and if they have the training and they have that knowledge, then they can implement it out there, but if they don't know anything about Alzheimer's Association or anything about what we're talking about in this room today, they're going to have a hard time doing their job.

So, I know by speaking with Ms. Erbengi, she's doing this training at the Prince George's County Police Academy right now and Montgomery County Police Department has had this type of training for the recruits, and she's bringing it in to the seasoned veterans in the squad room, too, with the use of videos and also instructions.

So, to answer your second part, if something could go out on a video, obviously two hours would be a long time to keep somebody's attention, but a video with some instruction on how to identify some of these type of diseases and symptoms, put it out to law enforcement agencies to use in a roll call training atmosphere, I think it'd be very beneficial, and then I think the officers could do a better job out there and interact and stop a person from driving when they shouldn't be driving instead of

writing them a warning or a ticket and letting them continue down the road.

So, I think it's a program that's just coming out now and if it continues, it'll be a great thing.

MR. FLAHERTY: Thank you.

CHAIRMAN GOGLIA: Advocacy Group II?

MS. ROSS: Nancy Ross with Mothers Against Drunk Driving.

This question is for Sgt. Ticer and also Mr. Wiederhold.

You have both touched on single car crashes and also, Sgt. Ticer, you mentioned some of the investigations that you've been on. The person with the medical condition was killed on site. Can you talk a little bit about what you're seeing in terms of injuries to other individuals not having the medical condition?

SGT. TICER: The three cases that I spoke about earlier, one was a single crash where that driver had a medical condition and had a heart attack and had a history of that. So, there was nobody else involved but him. The other one was a gentleman who was at fault and was killed and the person that collided with him wasn't hurt, but I found out later some medical conditions that kind of led me to believe to why he had that crash.

So, I'm not sure if that -- can you -- I'm not sure if I'm answering your question or not there.

MS. ROSS: That's fine. I just wanted to know if there were cases that you had seen where other people were injured.

SGT. TICER: Right. The cases I have seen, fortunately other people haven't been hurt. The one with my patrol car, nobody was hurt. The wrong-way incidences I've had, there's been cases where those have happened with head-on collisions where people have been hurt or killed, and in other ones where the patrolman's been able to intervene, but it happens both ways. Some hurt, some not.

MR. WIEDERHOLD: In my agency, we see a lot of injuries resulting from that. If we see a single car accident, our index of suspicion for a medical condition contributing to the accident goes up, but unfortunately, we're in a fairly urban area and it's rare that a car's on the road by itself in Florida. So, we do see a lot of accidents resulting with injuries to others, and probably one of the reasons why paramedics are less sympathetic for intoxicated drivers is because they seem to be the ones who survive the crash whereas the people that they strike or passengers in the cars are the ones who are more likely morbidly or mortally injured, and that's probably one of the reasons why they're less sympathetic.

We're not really allowed to report that, but for the most part, law enforcement is there with us and they know about it. The only other exemptions to our reporting, to go to a

question earlier, we are allowed to report gunshot wounds and child abuse and those are the only exceptions to our constraints on reporting to law enforcement.

MS. ROSS: Thank you.

SGT. TICER: used to work with Mary Wiley, by the way.

MR. JASNY: Henry Jasny with Advocates for Highway and Auto Safety.

Dr. Broadhurst mentioned that she's had occasion to report a couple of incidents to the state police, I guess, or local police and her name appears on that report. I don't know if it was held confidential or not.

Would it help if there was a system for any citizen to report in confidence or even anonymously, if such a thing is possible, given the state of technology today, to have anonymous reports by citizens that could be either made to the state police or to the DMV and then referred to medical boards for investigation?

SGT. TICER: Is that question for me, sir?

MR. JASNY: For anyone on the panel.

SGT. TICER: Okay. That's kind of different from state-to-state right now on the reporting, whether or not it can be done anonymously or if a doctor, police or citizen, whoever needs to make that report, but I think it can work, but we need to be aware of that there's lots of folks out there that have beefs or are disgruntled with other people, and if we get too much into

anonymous reports, we could run into some trouble with one neighbor being upset with another neighbor and filling something out. But if it comes into the Motor Vehicle Department with some good concrete information as some examples of this vehicle that's parked at 13 Elm Street has damage to its fenders every other night and I see the person out there, he looks like he has some medical conditions, then the Motor Vehicle Department, I think, can do a little investigation on that.

I think we just need to be careful on the anonymous part, but it's something to look at.

DR. BROADHURST: I know that's something that's a big issue for family members, especially, and there definitely are ones that are totally bogus. Somebody has a grudge, wants, you know, Uncle Henry's car and, you know, whatever, wants it now, you know, before he dies, but a lot of times, family members will want to, you know, -- they'll call my office even and ask me, you know, could you do something about this? Could you tell my mom or my dad not to drive any more or could you see that DMV does it, and, you know, I don't like being put in that spot, but I also understand their reluctance to have the driver, you know, that they're reporting, if you will, know what's going on. There's a lot of hurt involved in families if sons or daughters report them. So, that's a sticky issue.

MR. SNYDER: Dave Snyder, American Insurance Association.

Before I start, let me say that I don't generally handle medical malpractice issues. So, I'll get that out of the way first. Perhaps we can talk about that offline.

The area that I work in tends to focus on highway safety issues, and I have about 25 years as an EMT experience and do that now. So, everything that I've heard this panel say so far really very much rings true.

Let me see if I can review quickly, I think, kind of the bottom lines of what you're saying, and I think all of this is in connection with our earlier panel. Did you all have a chance to hear the people who spoke, where assuming that you agree with the basic presumption that people shouldn't be sort of slotted in general categories and that we should focus on individual circumstances to the extent we can, the panel clearly, I think, indicated that prior involvement in accidents and violations is a really major red flag, and as I heard others from the other Advocacy table indicate that that can be very helpful in terms of getting people moved into a more rapid treatment sort of a situation.

Now, there was a little bit of discussion earlier on about the extent of the issue, and if you sort of define medical conditions as including those that could bring on seizures, apnea, sleep apnea, stroke, heart conditions, things of that nature, I wonder if, Robert or Richard or Laurel, if you could give us some indication of the size of the issue.

We started this session with several crash examples, and I think we're grappling with that. I think, Richard, in particular, we were getting the sense that it's a significant potential issue, especially if you look at single vehicle crashes, potentially the causation for many of them being in this area, but let me ask each of the witnesses, to the extent that you can, give us some sense about kind of how you'd characterize the issue, and then I want to get on to this sort of early notification kind of a thing.

SGT. TICER: Background history is a good thing, but in my line of work, we're generally dealing with the situation that occurs right there. So, that could come into play if we have access to getting the record on traffic history at a crash scene or a traffic stop to see if a person has a history of the same thing occurring, as far as putting that into our referral, but it also goes to the individual situations, such as if we note a collision that happened as a result of a seizure, I think the background will come out later, but as far as getting it to the Motor Vehicle Department on a referral, I think the initial situation works for law enforcement.

MR. SNYDER: What I wanted to ask you was, could you characterize the extent of the problem that we're dealing with here? Assuming that you define medical conditions to include the kinds of things we've been talking about, and we'll include alcoholism for purposes of just a rough idea at this point and

then exclude that, but just sort of your sense about how significant is this issue that we're dealing with here?

SGT. TICER: I think it's very significant. I think it occurs out there daily, more often than the police think, but I think it again goes back to the training issues that have been brought up for law enforcement. Law enforcement, if they can get this training, understand a little bit more about this, then it can be brought out and brought to the attention of the appropriate authorities, but right now, it just seems like law enforcement isn't recognizing a lot of the problems out there, and it's simply just a training issue, but I think it is significant, and I think it occurs out there and we see it every day, but we just haven't been thinking along those lines.

Like I said, I've learned something new in here today just about the sleep apnea question that was posed and it'll make me think when I go back to share with my peers, we need to look into this a little bit more when we have the routine accident out there. We may need to do a little bit more investigating to see if there's some underlying issues. So, very significant.

DR. BROADHURST: Okay. I've read some statistics. I think, you know, that 50 percent of motor vehicle crashes have some medical component to them, whether it's the driver themselves or the other car involved, say if it's an older driver or someone with some physical impairments that can't get out of the way of the person who's actually at fault in the accident.

You know, we look at the accident reports and look both at the person who is charged at fault and the one who actually was just involved in the accident. If someone's always getting bumped or whatever, you have to kind of wonder if that person has some problems, too, even if they don't actually get cited for the accident.

I think it is huge. I mean, I think it's enormous. You can come up -- and I know I've seen numbers from the CDC on how many billions of dollars are spent, you know, on medical conditions affecting motor vehicle crashes and the cause of death, you know, Number 1 cause of death and what age group in motor vehicle crashes. You see the crash curves and the teenagers and then it goes up at age 65. So, I think it's a real big issue.

One thing that I -- I don't know when I'll have the chance to say it, so I'll say it to you, is to get more information out to physicians might be to require them to, you know, complete one hour of CME, you know, every three years and some issues with driver medical evaluations. You know, even a lot of people that do the CDL evaluations, the DOT exams, aren't real good about knowing all the ins and outs of those conditions, but that's been brought up other times.

You know, I know certain states will make docs complete, you know, an hour of training in some ethical issue or some legal issue, but maybe this would be one way to make the docs aware, you know. One hour every three years is nothing, you know.

You're supposed to get 150 hours every three years. So, that would be a minimal thing, again with a CD or a video that you could just make them watch and answer some questions and mail it into the medical review, you know, boards or the medical licensing board in that state or something.

MR. WIEDERHOLD: My agency might be a little more sensitive to this than Sgt. Ticer's because we routinely examine for medical conditions, and if we have a trauma patient and we start an IV on them, we routinely draw blood for a sugar analysis and other needs. So, we identify a lot of medical conditions that we see in accidents, and if you exclude the minor fender benders that we have when somebody runs a red light and bumps into somebody else's fender or somebody slams on the brakes and somebody else rear ends them, excluding those accidents and looking only at accidents that cause significant injury or death, anecdotally, my personal experience has been that alcohol or medical conditions contributed to somewhere around 70 to 75 percent of those accidents that we see.

We see a lot of accidents on I-95 and we have a couple of other major thoroughfares that Fire Rescue has nicknamed U.S. 520 Blood Alley because the accidents there are almost always fatal because it's a high-speed two-lane highway, and we find that those accidents involve a high number of people who have fallen asleep or have had a seizure or who are intoxicated, and it's been our experience that unfortunately it's very, very common and maybe

even under-estimated by the statistics that we see here.

MR. SNYDER: Okay. Thank you.

Now, just a quick follow-on question. As I understood your earlier testimony, and correct me if I'm wrong, that in order to enable more and earlier reporting, that one of the things that's needed is the legal authority to do so and then the immunity when you follow the law and you actually do that and then an easy way to do it; that is, if you're up at 3 a.m. and you're writing a report from a car crash, you don't want to have to spend an additional 15 or 20 minutes, you know, sort of doing a diagnosis of some kind and the training and follow-up and background to ease the system.

Are those the sort of chief components to assist each of you to participate, to meet your needs as well as to do the kind of reporting which you might like to do if you could?

MR. WIEDERHOLD: Those are the ones that I see, and in terms of reporting, if it could be a component of the existing report, and one of the data elements that we already capture that we send to our state office, it would be pretty much painless to the paramedics.

The other component would be to overcome their compassion towards some of these patients by education and trying to enable them to see the big picture that we're looking at today. They don't want to be the heavies. They see themselves, my paramedics and my fire-fighters see themselves, especially post-

9/11, as being respected by the community and having something of an attitude of heroism, and they value that, and they don't want to be the heavy. They don't want -- like Dr. Broadhurst, they don't want to be the one who has the reputation of taking away this person's driver's license. They need the larger perspective.

MR. SNYDER: And then one other question.

Again recognizing that this whole involvement, you know, through prior accidents or violations is important, is there a way that physicians are getting information about the motor vehicle accidents or violations of their patients? In other words, through your work at the DMV, is there any way to get that information back, and then changing hats, if you would for a minute as a physician, would you even want that information? Would it help you, you know, perform this sort of larger sort of public safety role that I know physicians take very seriously?

DR. BROADHURST: Yes, I think it would. Again, it's just an administrative nightmare to try to see how you could get that information, but definitely it would and that's again where I see this education thing of physicians is coming in real big. You know, we don't want every patient with diabetes or sleep apnea reported to DMV in North Carolina. What we want are the ones that aren't going to be compliant with doctor recommendations and need the DMV to force them to get medical treatment. Really that's the numbers we want to see.

So, if you could get physicians more aware of these

issues, even to think this, in terms of when they see these people with these certain disorders which are, you know, gosh, we see them every day in primary care, you know, even if we're not the person treating the seizures, I think that'd be really important, and I agree with your summary before. I mean, you've sort of answered the question that CDC posed a little while ago. What would you be at your ideal, you know, program in terms of, you know, helping at least get the information to DMV? What DMV does with it when they get it, you know, that's another component, but how to get the information to them? You covered a lot of the big dicey issues and barriers that we need work on.

MR. SNYDER: Thank you very much.

CHAIRMAN GOGLIA: Next table, Federal Group? No questions?

DR. COMPTON: I'll ask one. What I've heard here is that the EMS --

CHAIRMAN GOGLIA: Bring that mike closer to you, please. The court reporter's having trouble with that.

DR. COMPTON: I'll summarize what I'm hearing from the three parties, is that two of the parties are really not doing much in terms of reporting people with medical conditions. The EMS, you're saying, in Florida literally is precluded by law and the physicians are reluctant to participate. Law enforcement reports when the information, I guess, comes to their attention,

but I gather -- Sgt. Ticer, would you say most law enforcement are properly trained to look for and report these medical conditions?

SGT. TICER: I would say not, unless you consider an hour or so at the police academy when you first come on the job on how to fill out the report form and send it to the Motor Vehicle Department. That's really what the training consists of as we look at it right now.

DR. COMPTON: Okay. Do you feel like most officers give much thought or attention to this whole issue? Do you get the feeling that they do much reporting?

SGT. TICER: I think officers do report when they see medical conditions that are obvious. I don't think generally officers dig and get a little bit more information out of investigations to see if there's some underlying medical issues which I think they could if they had a little bit more training on it, then they could do that, but if it's there and it's obvious, it's going to be reported.

DR. COMPTON: Thank you.

CHAIRMAN GOGLIA: Medical Group, any questions?

DR. JOLLY: Til Jolly from the Association for the Advancement of Automotive Medicine, which I'll say is AAAM for now because it's too long. I'm an emergency physician that practices here locally.

A couple of alcohol-related questions. I think we all -- I think most people agree that alcohol is sort of the Number 1

medical issue, as long as we define it as a medical issue, in sort of crash causes. The first question, I guess, for Sgt. Ticer. My personal experience in a number of instances is alcohol's a big deal for emergency department injuries. I've had a number of experiences that I've lost count of where it's fairly clear that there was an alcohol-impaired driver. We all knew he was the driver and everybody could tell he was alcohol impaired, and it got blown off, for lack of a better term, by law enforcement, either because they felt it was -- there was some emotional reason why they didn't want to do it or they felt there was more administrative work than was justified because they were concerned that the judicial system would do nothing about it.

I don't know if you have any comments on that as a broad issue for law enforcement.

SGT. TICER: I have a lot of comments on that one. I could talk all day long about impaired driving. At least from the agency I work with, the Arizona Highway Patrol, I would hope something like that would never occur with my outfit and if it did, it would be addressed.

We take DUI, driving under the influence, very seriously. That concerns me that you would say that happens, but I don't think that's the norm. I think we concentrate very heavily on DUI enforcement in this country. Right now, specifically the National Highway Traffic Safety Administration is implementing more emphasis in the year 2003 on impaired driving,

both alcohol and drug driving.

So, I think it's really getting out there that this is a serious issue and we're going to address it. It's unfortunate that there's cases like that that may occur, but I don't think that's the norm.

DR. JOLLY: I didn't mean to imply it's the norm, but it does happen on occasion, and I think there's a perception that at least in the judicial system where these people end up once they've been driving drunk end up in is light on them in some cases, and I think that's inconsistent state-to-state.

One other alcohol-related point that maybe one of you can answer. I'm not sure. There are some financial issues related to alcohol abuse and treatment. Alcoholism as a disease is treated differently from other diseases from a financial standpoint, and there are trauma centers and emergency departments in the country, it may surprise some people to know, that don't routinely test for alcohol levels in injured patients, and in some places, that is because they believe that insurance won't pay for the treatment of that patient if it's discovered that alcohol is a contributing factor. That's a point being made now by the American College of Surgeons and Emergency Physicians, their representative is beside me.

I don't know if anybody has experience with that or can comment on that.

DR. BROADHURST: I don't have experience with that,

but I know that we've tried to hit up, you know, ER docs a lot of times, if they don't want to deal with the legality of the blood alcohol level but just to at least fill out a report form. We used to, you know, just throw those at physicians in ERs every chance we got to say, look, just report the patient, we'll take it from there, it won't have anything to do with your treatment of him or anything else, except we'll get them in the program. We'll have another doc like me look at the record to make sure he hasn't had a whole bunch of DWIs that you may not know about there in the ER.

SGT. TICER: What we do in Arizona on those situations, I'm uncertain of the laws in some of the other states, but in Arizona, if somebody's involved in a traffic crash and the officer has probable cause to believe that the person has been drinking alcohol or is under the influence, if that person goes to the hospital and the doctor draws the blood for medical purposes and we have the probable cause to believe there's alcohol and that we have a right to that sample, so we get a portion of that.

We've also went to another extreme out there in Arizona. If that started happening and they weren't drawing blood and we had probable cause, we would go ahead and get a search warrant and get the blood.

MR. WIEDERHOLD: In Florida, the law enforcement officer can request emergency medical services to draw blood for the purpose of blood alcohol testing. However, unless the patient

is in custody, the patient has the right to refuse that. Once the patient's in custody, then law enforcement becomes a guardian and it can be taken whether the patient agrees to it or not. But it's a Catch-22 that law enforcement doesn't understand a lot of times.

DR. BREWER: I have a couple of questions. One for Sgt. Ticer.

CHAIRMAN GOGLIA: Is your microphone on?

DR. BREWER: I believe so. Is it? Can you hear me?

For Officer Ticer, it's a two-part question. The first part is, what percentage of crash investigations in which the investigating officer believes that the driver or one of the drivers is under the influence of alcohol results in an arrest for DUI?

I know that the answer is not a hundred percent, at least it's not in my jurisdiction, which is New Haven and the New Haven area in Connecticut, but let's assume that the answer is a hundred percent, that if you think the person is intoxicated, you're going to arrest him.

In those cases in which you do proceed with an arrest for DUI, would you be in favor of a law or regulation or an executive order that required the arresting officer, in addition to that arrest, to submit a medical report to the medical advisory board or to the DMV requesting a medical evaluation of that same person?

Now, I'll tell you why I'm asking that question, and

that is, that the -- and I think we should make a distinction here because it's kind of confusing sometimes. I don't think the difference between mandatory versus voluntary reporting is nearly as important as the distinction between criminal reporting and administrative medical reporting, and I think we should be clear if we're talking about reporting to the licensing agency, that that's what we're talking about, and if we're talking about calling the police to effect a criminal investigation, we should be clear on that.

The reason I'm asking that question is that if in my state, for instance, someone is arrested for DWI, depending upon whether they're from Fairfield County or not, which is the county where all the rich people live, it may take months to years before that case finally comes up, and during that entire time, the person continues driving, and if the object of everything that we're doing is to get unsafe drivers off the road, then the way to go is the medical administrative reporting because in every single case, within 72 hours of the DMV receiving that report, they send a letter out to that individual and that individual has 30 days to comply with the order to submit to a medical evaluation and in every single case, those things are decided within 60 days. Sometimes they don't reply in 30 days and they get a grace period in some circumstances, but at the very, very longest, it takes 60 days and usually less than 30 days, whereas the DUI process can take years.

Also in my state, if I -- let's say I get arrested five times, by the time my case finally comes up, if I'm convicted, it counts as one DUI, even though there were five separate arrests, five separate incidents.

So, would you be in favor, in order to make it more likely that that person is going to quit driving or at least get into treatment, would you be in favor and would it be too onerous as a police officer in your -- the overall burden of your duties to also submit a medical report? Do you think police officers in general would object to that or go along with that?

SGT. TICER: I don't think police officers in general would object to that at all because simply the referral, most states and my state, it's just one other form, one little form. It's actually -- maybe they made it easier for us in Arizona. It's not even a full-size form. It's rather small. So, that's not so bad.

It takes about five minutes to fill that form out, and in addition to all the DUI paperwork we have which we all know is a lot, that extra five minutes wouldn't be a big deal and if it achieves the goal of keeping the roadways safer and maybe getting that person off the road quicker as the criminal part takes its way to get through the court system, I think that'd be a great idea. So, I think law enforcement would be in favor of that.

Going to your first question on what percent of drivers would be arrested for DUI if they were involved in a crash

and they were DUI, nothing's a hundred percent, but I would really like to think that it's darn near a hundred percent that they're arrested, unless other events stop that officer, they get tied up on another call, something else happens, maybe they're attending to some other injured people, they're out there by themselves and they don't have the opportunity to follow up. So, there's going to be -- sometimes it's going to slip through the cracks, but I think for the most part, based on our DUI investigations, that person's going to be arrested, and then there's going to be some times when an officer may not notice the impairment. That happens, too. Police officers are human out there, but as long as they know about it and they have the opportunity to make that arrest, I think it's going to occur. So, I think it's a pretty high percentage.

DR. BREWER: Okay. Thank you.

The second question is for Dr. Broadhurst and perhaps anybody else who might have the answer.

In terms of physicians reporting administratively to licensing agencies, does anybody know how many reports are submitted annually by physicians in the country?

I know in Connecticut in a study that I've done, there were about -- a little bit over 300 reports in one year and that's for all the physicians in the entire state. Does anybody have any idea what the total number is?

DR. BROADHURST: You're talking about independent? In

other words, this is the way the person comes into the system. It's just a physician writing a letter saying this person needs to be evaluated, independent of what the driver may say to the driver's licensing agency?

DR. BREWER: Correct. Right. How many -- the DMV offices, the medical qualifications units or their equivalent around the country, how many letters or reports they receive from physicians annually stating this person is medically unfit in my opinion and should have a medical evaluation.

DR. BROADHURST: Yeah. You know, I would guess, you know, we do to 200,000 drivers in North Carolina and, oh, boy, I think you're about right, like maybe 2 or 300 independent letters.

The interesting thing is a lot of times, the docs who you might guess, you know, writes in about the driver ends up not being the doc that does the medical evaluation. You know, that letter comes in and we end up turning around and sending a form out usually for more information. Sometimes it's clear cut and dry, you know, there's enough information in the letter to say yeah, the guy shouldn't drive, but a lot of times, we'll turn around and send a report form out which is filled out by somebody totally different who's never seen the guy before, has no idea what really is going on, and then, of course, you have to make that judgment when you, you know, evaluate the case.

So, I think, yeah, unfortunately, it's a very low number. Again, because of the lack of education, I think the

physicians can do that, but I do agree with you, too. We have a great system for medically getting these people with DUIs off the road. We see them all the time with accident reports, with an alcohol block checked or even the words "DUI" or "DWI" on the accident report. You look at the medical -- you look at the driving record and they haven't been charged or convicted, but we can say, you know, slam dunk, you know, take his license away until we can get this SAE evaluation and, you know, get them off the road.

DR. BREWER: Thank you.

CHAIRMAN GOGLIA: Okay. To the Board of Inquiry. Elaine?

MS. WEINSTEIN: Yes, I have a couple questions.

Sgt. Ticer, we've talked a lot about police officers looking for fatigue and whether or not it might be related to a medical condition rather than lack of sleepiness.

Do the police officers ever go the extra step to see whether or not it's related to the medications that someone might be taking, and if so, how is that recorded?

SGT. TICER: Yes. As I mentioned earlier, the program, the DEC Program, Drug Evaluation Classification Program, through NHTSA and IACP, has trained over 5,000 police officers across this country as drug recognition experts, and what that training consists of is specialized DUI officers learning how to recognize drug impairment and the drug impairment is broke down

into seven different impairing categories. Some of those categories have prescription drugs in it.

So, the officer working out there on traffic that's trained as a DRE makes the determinations if they're under the influence of a drug, prescription or not, and if they are, they're arrested and processed for driving under the influence of a drug.

The DRE Program works as well with officers who aren't DREs who make an arrest for impairment out there, and then when they take them to the station and have a breath test done and the blood alcohol content or the breath alcohol content is not consistent with the level of impairment, they will call out a drug recognition expert who can do an evaluation and see if the prescriptive medication is causing the impairment, and if it is, then they're charged with a DUI.

MS. WEINSTEIN: You're saying someone would be arrested for taking a prescription medication?

SGT. TICER: They would be arrested for DUI if that prescriptive medication was causing impairment that affected their driving and their safe operation of a vehicle.

MS. WEINSTEIN: Okay. I want to clarify this because I was looking on the Parkinson's Disease website earlier today and noticed that there was a medication that the first indication was drowsiness and so if someone with Parkinson's Disease was taking this particular medication, which is Mirapex, if I'm pronouncing it correctly, they could be arrested?

SGT. TICER: It just depends on their dose. If it was at the dose and it was working fine keeping them not drowsy as one of the warnings says drowsy, if they were impaired and there was some drowsiness where the person was having inability to drive safely, then yes, they could be charged with the DUI.

MS. WEINSTEIN: Okay. And this would be reported where on the police accident report?

SGT. TICER: This would be reported the same as on the back of the form that has the ill or the sleepy or the drugs. It has that as well as alcohol.

MS. WEINSTEIN: Okay. Chairman Goglia, I think that I raised the question for Mr. Cohen. I'd like to give him the floor and then ask another question.

MR. COHEN: Thank you.

This is Perry Cohen with the Parkinson's Disease Foundation.

Yeah. I could speak to that specific issue. There is a drug called Mirapex and there's another one called Rapinarol which has been associated with sleep attack. So, I think it could be a hazard, but I never heard of that being a felony or whatever that you'd be arrested for.

Now, there are also other medications that counteract that. For example, I take Mirapex and I also take Ritalin which prevents sleep attack. So, I don't know. I don't know how you'd ever know if anybody was taking Mirapex.

SGT. TICER: We wouldn't really be concerned if anybody was taking Mirapex or any other type of prescriptive medication, as long as it was prescribed to them, they weren't taking it illegally, and it wasn't impairing their ability to drive. But we run into situations out on the roadway where people would take their prescription, take more than what they're supposed to or maybe they've been over-prescribed and it causes impairment out there, and if their ability to drive is impaired by a drug or drugs, then they're arrested just like they would be for alcohol or any type of other impairing drug category.

MR. COHEN: If they didn't sleep enough the night before or something.

SGT. TICER: Well, then they would -- they wouldn't be arrested for being sleepy, but they could be charged with other type of driving operations, such as reckless driving or unsafe driving, but we don't arrest people out there for taking medications, only if those medications that they're taking are impairing their ability to drive, then it would be considered a driving under the influence statute in Arizona.

MR. COHEN: Okay.

MS. WEINSTEIN: Okay. My last question is for Dr. Broadhurst.

You mentioned that most physicians don't know about the medical review system in their state or at least in North Carolina. Do you have any suggestions about how to get that

information out to people? Would that be part of your CME course?

DR. BROADHURST: Absolutely, and actually let me just, you know, blow our horn a little bit here. I do think most physicians in North Carolina do know about it. I think we have a really good program and we did a lot to educate physicians. We published almost 10,000 copies of the Physician's Guide to Driver Medical Evaluation. I know there's 15,000 licensed physicians in North Carolina a few years ago.

But anyway, we sent them out to all the primary care, neurologists, cardiologists, people that would see patients that possibly would be reported, but again we did that several years ago. We haven't been doing that on an on-going basis. So, you know, new physicians coming into the state haven't been made aware that the program exists, but again, I think the easiest way to do it, and I know that, you know, the thing that drives the train is getting those CME requirements many times for any physician, you know, specialist or non-specialist, and having one hour does not seem prohibitive, making them, you know, answer some simple open book questions, you know, proving that they read or watched the CD or, you know, watched the video or read the little, you know, article, I think that would be a good thing to make them aware of, you know, what's going on.

Most docs that come into the state from other states don't know if it's mandatory to report, if, you know, they're immune from liability. You know, they just don't know. It's not

something you talk about. There's so much to keep up with ethically and legally in medicine these days. So, I think that'd be a great way to target physician education with a required hour of CME.

CHAIRMAN GOGLIA: Okay. Dr. Ellingstad?

DR. ELLINGSTAD: No questions.

CHAIRMAN GOGLIA: Mr. Osterman?

MR. OSTERMAN: I have one.

Sgt. Ticer, you had mentioned these categories on the back of the police accident report. Is this something that is unique to Arizona or is this commonplace nationwide?

SGT. TICER: Well, I would have to say a little bit of both. It's an Arizona form. I sat in a panel on drowsy driving issues recently. We had this discussion on what are on the forms from state-to-state. Some have a block that has sleepy, some have a block that just says other. We're fortunate in Arizona, ours has a little bit more specific than some of the other states. So, it's different from state to state, but our form is an Arizona form.

MR. OSTERMAN: Does your state DMV or DOT, whomever, collate that information and send it back to you in the field for use?

SGT. TICER: No. We fill out the form. We send it to the Motor Vehicle Department and that's the last time we hear from them.

MR. OSTERMAN: Do you have any idea what they do with it?

SGT. TICER: No, sir, I don't.

MR. OSTERMAN: Okay.

DR. BROADHURST: I'll tell you what we do with them in North Carolina. I mean, we do use them, like I said before. We use the HP-640s. They get put in the whole case. That's used to generate the medical report process. We look at the accident reports. The DMV reviews them independently of whether a highway report form was filed out with it or not, but I have heard every time I've spoken with the Highway Patrol in-service schools that they wish they could get feedback. They wish that, you know, I would send a personal letter, you know, I'm Dr. Broadhurst, I reviewed your case and this guy's now off the road or this guy's being, you know, reviewed every three months by his physician, and unfortunately, you know, we can't always administratively give the information back to them. But I think that maybe would help, you know, making people be more willing to fill out those forms.

MR. OSTERMAN: Thank you.

CHAIRMAN GOGLIA: Dr. Marshall?

DR. MARSHALL: Yes. This first question is to Dr. Broadhurst.

You mentioned that there were three -- you had to report three patients, and assuming that they had their licenses revoked, what are their alternative forms of transportation

available to them? Is public transportation in your area actually enough or are there other sources of transportation for these people?

DR. BROADHURST: Yeah. That's a big issue where I live up in Asheville, North Carolina, and it's a very rural area, very mountainous. You know, public transportation within the City of Asheville exists, but it's very limited and beyond the Buncombe County limits, there's virtually none. There's something called Mountain Mobility, but, you know, my patients have to call a week ahead of time and, you know, they get their appointments from me based on whether Mountain Mobility can bring them, you know. Most of the time, you know, you only have one family car between, you know, four-five family members. I mean, it's a real issue up there, and then the only three that I reported because they would not -- did not seem that they were listening when I asked them to self-restrict their driving.

I mean, the others were very amenable to me talking about not driving at night any more or finding alternative, you know, means of transportation, but that's why it's a state-by-state issue, and even in an area between states, it's an issue, you know, where I practice versus somebody who practices in Mecklenburg County or the Charlotte area or in the Raleigh-Durham area which has obviously got much better transportation options.

DR. MARSHALL: Could you describe Mountain Mobility a little bit?

DR. BROADHURST: Oh, I'm sorry. Mountain Mobility is a -- I guess it's a government-funded program that's a van that will go around and pick people up for necessary appointments. They have to call ahead of time. You have to be, I think, a Medicare or Medicaid recipient to qualify to be able to use that means of transportation. But again, it's very limited. There's a waiting list for people to get rides. You can't always get them when you want them. You may be stuck at my clinic all day waiting for your ride back to your home after you come in for your appointment with me because of the limited numbers of vans available.

DR. MARSHALL: Okay. Thank you.

One other question for Mr. Wiederhold.

I was just wondering what you do with the EMS forms that I'm sure you must fill out. Is there a way to maybe aggregate some of the data from these forms in order to determine maybe even fairly accurately what sort of medical conditions you see most in the accidents that you go to or the EMSs are called to?

MR. WIEDERHOLD: Yes, sir. We generate our forms electronically and the data is submitted to our State Office of Emergency Medical Services and it's at their disposal.

DR. MARSHALL: Okay. Thank you.

CHAIRMAN GOGLIA: That's it. Any clarification questions from the Technical Panel?

MR. COLLINS: I have one for Mr. Wiederhold.

Once that information is submitted to the State Office of EMS, I would assume that it's stripped of personal information? It's in an aggregate form, would that be correct?

MR. WIEDERHOLD: I believe that they do do the statistical analysis on it that way.

MR. COLLINS: And would the statistical analysis data be subject to public information requests, unlike the EMS run sheet itself?

MR. WIEDERHOLD: Yes, it would.

CHAIRMAN GOGLIA: Is that it? Okay. I guess it's time for a break. Yes?

DR. COMPTON: If I can just interject to add a comment? Richard Compton from the National Highway Transportation Safety Administration.

We've had a program going on almost a decade now that's called CODES, Crash Outcome Data Evaluation System, that involves merging data from EMS run reports, emergency room reports, and police crash reports. I believe we now have nine states that are participating that are in fact linking all of these reports on an annual basis. We're continuing to try to add states each year. In fact, once the linkage is made, personal identifiers are struck out, but it does allow a type of analysis you cannot get just from the police crash reports.

CHAIRMAN GOGLIA: Okay. Thank you.

Let's take a break. Let's be back at 3:00.

(Whereupon, a recess was taken.)

CHAIRMAN GOGLIA: Dr. Marshall, would you proceed, please?

DR. MARSHALL: All right. The next session on our agenda is entitled State Oversight, and Dr. Mitch Garber will introduce the Technical Panel and the witnesses.

State Oversight

DR. GARBER: Thank you, Dr. Marshall.

Again, I'm Dr. Mitch Garber, the Medical Officer for the National Transportation Safety Board, and for this panel, the other NTSB Technical Panelists will be Mr. Chris Voeglie and Ms. Michele McDonald.

The purpose of this panel is to provide an overview of representative state programs which oversee licensed drivers who suffer from potentially impairing or debilitating medical conditions and to evaluate the effectiveness of such oversight programs. Also to discuss the application of these programs to specific conditions and/or situations.

I should note there's been a change to the witness list for this panel. Replacing Dr. Robert Raleigh will be Dr. Carl Soderstrom, the Associate Director of the Medical Advisory Board for the Maryland Motor Vehicle Administration and of the MVA's Driver Safety Research Program.

In addition, witnesses will include Mr. Kurt

Stromberg, the Program Coordinator for the Medical Program of the Utah Driver License Division, and Ms. Susan Stewart, the Manager of North Carolina's Driver License Medical Review Section.

And I'm going to start with just a general question, and I'd like each of the panelists to respond to this in turn, to please provide an overview of your state's medical advisory board, including, if you can, the authority of the board, what the make-up of the board is, what hearing and review processes you have, and what powers are granted to the board in your state, and we'll start with Mr. Stromberg, please.

MR. STROMBERG: Thank you.

Our medical advisory board is made up of -- well, it's legislated, first of all. The Governor and the legislature has legislated the state to establish a medical advisory board. It's made up of three regular members that are part of the executive committee and three expert panel members. Six members of the board total that are appointed by the Commissioner of the Department of Public Safety, and they're assisted on the panel by expert panel members, is what they're called. The expert panel members and the board are made up all physicians, and they, under the law, shall establish guidelines and medical standards based on medical research and medications and statistics.

What was the other part of the question?

DR. GARBER: Any information you have about the hearing and review process and what power the board actually has

to take action.

MR. STROMBERG: The board meets at least once a month. It's legislated to meet regularly. We meet once a month, and I provide the cases for the doctors. The doctors review the cases and make a decision as to the restrictions or the medical -- whether they want more information, whether the information they have is sufficient to make a decision or if they want other -- or to deny the license, basically just to deny the license. I inform the driver of the decision of the board and then the driver has the right to appeal.

What was the other part of it?

DR. GARBER: And what power does the board have to actually revoke licenses or place restrictions?

MR. STROMBERG: The authority that they have comes from their appointment by the Department of Public Safety, and basically the letter that we write just says that based on the decision of the board, based on the information that was given to the board, it is the decision of the Driver's License Division to deny your license. So, it really comes from the Driver's License Division, but it's based on the board.

DR. GARBER: Okay. Thank you.

Ms. Stewart, same question, please.

MS. STEWART: Our medical program is working in two different sections. We have -- first when it comes in to be reviewed, we have three staff auditors and some administrative

staff that put the files together. Once they review it, and these are certified doctors in different fields, and when they review this information by statute, they have the authority under the Commissioner to either deny their license, restrict their license or ask for additional information, and I know previously we were talking about the reporting part of that. If we have something that comes from a doctor saying they feel this person should not drive and they give reasons and we ask for a medical report, if it comes from a different doctor than the one that submitted the first inquiry, we will send back and let them know that we need something from that doctor.

Now, should we decide to cancel them or place restrictions on them, if they disagree with that, we have a medical review board process which is, these are Department of Health Services-appointed doctors and two nurses, and they actually hold a hearing in person if they disagree with the decision. Once that decision is rendered, whether it is restrictions or remains canceled, the next appeal process would be to the Superior Court.

DR. GARBER: And so they would have the authority initially, though, to revoke or to --

MS. STEWART: Yes.

DR. GARBER: -- Place restrictions on those licenses?

MS. STEWART: Yes, they do.

DR. GARBER: Okay.

MS. STEWART: And this is a -- normally, I know it would come up to the doctors making the decisions previous. Our medical report is like an eight-page report and it asks for the different conditions and if they have it, there's a form that goes with each one that we ask the doctor to fill out, and we do ask them for their recommendation, but it's not always -- we don't always agree with their recommendation because we do know the doctors there have more of an idea of what would be a threat to highway safety. So, we don't always go by that.

DR. GARBER: When you say -- I'm sorry. Was that a report filled out by the private physician?

MS. STEWART: Right.

DR. GARBER: Okay.

MS. STEWART: Because in many cases, they may not be aware of other issues and we also have a copy of their medical report, their accident report, anything that's happened with them it's imaged, and so the doctor at DMV reviewing that has complete information of anything that's gone on with him and our retention is like 10 years. So, they will know if anything's happened in the previous 10 years with that record.

DR. GARBER: Okay. Thank you.

And Dr. Soderstrom, can you give us an overview of Maryland's program?

DR. SODERSTROM: Yes. I'd like to first give Dr. Robert Raleigh's regards to the many individuals who know him in

the room. He knows much more about this topic than I do. I'm new to the Medical Advisory Board of Maryland, and he has been an icon in our state for a long time. He's had a few little medical problems, so you're going to have to put up with me today. I'm a little younger than him but he's a lot smarter and a lot better looking. Okay.

The Medical Advisory Board in Maryland is authorized by the motor vehicular law of 16.118, which allows the MVA Administrator appoints a board of qualified physicians and optometrists to enable the Administration to assess physical and mental conditions of individuals who seek to drive on the highways in the state.

The Administrator refers to the MAB for an advisory opinion. The Medical Advisory Board gives opinions. They don't make the final disposition for what eventually happens to a driver. There are many different routes as to how an individual comes under the consideration of the Board -- do you want me to do that now or is that okay?

DR. GARBER: Yes. Please.

DR. SODERSTROM: There are many different routes as to how one would come before -- come to the attention of the Medical Advisory Board in Maryland. One is physician referrals. Physicians, occupational therapists, nurse-practitioners can refer someone to the Medical Advisory Board. Someone at the time of renewing their license or applying for a new license may be

referred to the Board. The old application asked if a person had any medical condition that could affect your driving or a visual problem. If you check yes, then we are going to ask you to fill out a health questionnaire and get a report from your physician.

We have law enforcement issues which we've been talking about for the last while. If someone has an incident on the road, such as a car runs off the road, strikes a tree and the police officer comes along and says what happened and the person said, well, I blacked out, I had a seizure, whatever, the police officer will write up what we call a Request for Re-Examination and then that's referred to the Medical Advisory Board to make a first disposition and on. We also have counter referrals. If someone comes into the counter to renew their license, get a license, and maybe they're drunk at the time, that's not good, maybe they're -- it looks like they're severely impaired with some type of condition at the time. They may be asked to fill out a medical packet and get referred to the board. Finally, another issue we've discussed today is what we call concerned citizen complaints or letters. A concerned citizen may send in a letter saying that their father, wife, neighbor, or whoever has or they think has a problem.

Then depending on the source of the referral, it's handled different ways. In the last case relative to a citizen complaint, as someone appropriately alluded to before, sometimes someone doesn't like their ex-spouse or their neighbor, and so

these concerned letters are really not truly of concern. They're really more retribution, and I would have to say in my experience over the last eight months or so that the overwhelming letters of concern are factual, but about 20 percent of the time, my guess is that somebody's out to get somebody.

So, we send out an MVA field investigator in those cases to talk to neighbors, talk to the person named in the complaint, look around the house and get a sense of the things we were talking about. Do they have a boatload of medications on the counter? Do they have dents all over their cars? Is everybody in the neighborhood saying, oh, my goodness, I run into my house when I see them coming down the street? But those are different ways that individuals get to the Medical Advisory Board.

When a person is referred, they're asked to submit a physician's report relative to the condition. They are asked to fill out a health questionnaire. Again depending on how they get reported, they may have to fill out an occupational therapy evaluation -- they may have to be seen by a rehabilitation specialist, and then the Driver Wellness case manager puts all the information together to be reviewed by an MAB physician -- let me get to the composition of the MAB now.

I'm full time. The director is part time. We have 14 other physician members of the board. The board members put in about 12 to 14 hours a week of reviewing cases with nurse case managers and I'll get to them in a second. In addition, we have a

number of sessions a week where the Medical Advisory Board asks individuals to come in to be interviewed. Most of the reviews of cases are done by looking at the paper trail that is submitted by the client, and then less frequently, we do interview clients. We do this both in person at the MVA in Glen Burnie, the main headquarters, or by video conferencing to two other sites in the state or personal interviews at the MVA and at one of the other sites in the state.

Dr. Raleigh brought a very good innovation into the Medical Advisory Board about -- I think it's about 18 months ago now, where we now have six nurse case managers. So, for non-alcohol cases, the individuals that collate the information to present it to a member of the board to look at is an experienced nurse who knows the medical language, understands what they're putting together and they basically then present a case to the physician reviewing it and say here's all the data, here's the things I've looked at, and then all the information is reviewed and then some type of decision is made to say yes, the person's okay to drive, I want more information, suspend the driver, etc., etc. There's all kinds of dispositions of what goes on.

We also have another six case managers that primarily review clients that are referred to the MVA because of alcohol-related issues. More and more of those issues are now going to come under the purview of the nurse case managers over the next period of months.

Dr. Garber, does that answer everything right now or do you have more?

DR. GARBER: Yes. No. I'm sorry. I guess the one thing that we didn't get into was what power does the board have then to revoke or limit a certificate, a license?

DR. SODERSTROM: I think the board seems to have a great deal of power. The board can make a recommendation that someone have their license emergency suspended or routinely suspended and that the recommendation is almost universally upheld by the Administration, but it's basically a recommendation to the Administrator.

DR. GARBER: Great. Thank you.

We're going to have some more specific questions for each of you. I would like to ask just one very brief question to get sort of a handle on the numbers that we're talking about. Just each of you, if you can just give me the number, either monthly or annually, of how many cases your medical review process reviews in that period of time.

MR. STROMBERG: Our review board reviews about 30 cases a month.

DR. GARBER: Ms. Stewart?

MS. STEWART: Okay. Now, our review board which is after we've first made an initial decision, they would see 50 to 60 a month, but now as far as the medical advisors in house, the staff doctors, we will review anywhere from 5 to 600 cases a week

and that many out of the month, there's normally 50 to 60 that will appeal our decision that have to go to the Medical Review Board.

DR. GARBER: Those would be cases on which you would be making a determination, though? You'd be making 5 or 600 a week you would be making a determination on?

MS. STEWART: Right.

DR. GARBER: Okay.

MS. STEWART: Well, they're not always a decision. It could be for additional information or it could be to counsel or restrict, but we actually review that many a week.

DR. GARBER: Right. And Dr. Soderstrom?

DR. SODERSTROM: It's probably about a thousand, a thousand cases a month. We don't really have good hard data on this at this point. We probably review/make decisions about 13,000 decisions a year, but our sense of it is that there may be several decisions per person. So, I'm going to guess that as far as new clients per year, it's probably about, ball park figure, 8 or 9,000, but probably about 13,000 decisions per year.

DR. GARBER: Okay. Thank you.

We'll begin with some of the specific questions for Mr. Stromberg from Ms. McDonald and then that will be followed by Ms. Stewart and finally I'll direct some questions to Dr. Soderstrom.

So, Ms. McDonald?

MS. McDONALD: Good afternoon.

Mr. Stromberg, what are the current statistics regarding noncommercial drivers with medical conditions in the State of Utah at this time?

MR. STROMBERG: We have approximately 1,795,000 noncommercial drivers at this time. We have about 173,432 drivers with a medical condition, so almost 10 percent of our drivers. We have 3,723 drivers right now that are driving on a restricted license, whether it's speed, area, daylight or licensed driver.

MS. McDONALD: Okay. What's the usual outcome of the process in Utah? What do you see as what's normally going on with those individuals who come to your attention and then what's the outcome?

MR. STROMBERG: In most cases, a driver that comes to us will end up with a license. It just may be restricted as some of them are heavily restricted to area, five miles, you know, enough to get them to church and school -- excuse me -- shopping centers. Sometimes it's two miles. I've seen it restricted to a county. In very few cases do they lose their license. Maybe about two to five cases a month I'll take away a license.

MS. McDONALD: How is this result documented and communicated from the review board to your division?

MR. STROMBERG: I prepare the cases for the doctors and the review board. I either fax them to them and they make a decision and call me back and/or we meet, like I say, meet monthly

and we review -- mostly those monthly meetings are for appeals, but any cases that haven't been reviewed during the month are then reviewed at that point. They make a decision and then I write a letter to the driver explaining the outcome of the board's review and what restrictions are requested at that time. Sometimes it's just merely we'd like to have them perform a driving test with one of our examiners and see how they do on that test and then I get back to that doctor on that individual case to find out how he -- you know, let him know how he did on the driving test and then he may recommend no restrictions or he may recommend the restrictions that the examiner felt was necessary at the time.

MS. McDONALD: And how are these decisions by the board enforced for things where there's a restriction, it's not a complete revoking of a license, but there's a restriction to a certain distance? How do you do follow-up, and how exactly are those things enforced, and do you ever come across individuals who are not abiding by those restrictions, and what consequences are there?

MR. STROMBERG: I've run across a few cases mostly I heard when I was examiner. I haven't heard of any of those cases since I've been the program coordinator for medicals. When I was an examiner, I heard of phone call from concerned citizen that says I know he's driving outside of Farmington, which is a little town north of Salt Lake, and all we can do is what law enforcement -- if law enforcement stops them. There isn't much that the

driver's license does. Like in DUI cases, we take away their licenses, but they still continue to drive.

What was the first part of that question? I'm sorry.

MS. McDONALD: It was, how are these decisions enforced for those individuals? How do you handle the follow-up if they do have a restricted license? Do you go back and check on them with investigators or do you rely on family or the person to report whether or not they're actually following what they've been told to do?

MR. STROMBERG: Thank you.

What I do is when I send out the letter, I list the number of restrictions. These are the restrictions that are going to be placed on your license, and I give them 30 days to go into the Driver's License Division and obtain those restrictions. We do it at no cost. We say in the letter you need to obtain a duplicate license at no cost to you, so that they -- you know, it makes it easier for them to do that. If they're close to a renewal time, then they will pay for that, but then I monitor it within 30 days to see if they've gotten the restrictions. If they haven't, then at that time, I deny their license and I put a note in their computer field that says it's denied because they didn't obtain the restrictions.

Other than that, there is no follow-up until their next year review comes across. Some of them are reviewed yearly, and at that time, I send a letter asking for more information,

recent medical records, and anything else I can present to the board that will help them make a decision. At that point, I talk to the board and say this individual was reviewed last year, he has these restrictions on his license, and he has no citations, what are your recommendations?

MS. McDONALD: I have no further questions.

Mr. Voeglie, do you have any questions?

MR. VOEGLIE: I have no questions.

MS. McDONALD: Dr. Garber?

DR. GARBER: Just briefly. Who would have access to the information reports or the files that you maintain there? Who actually gets to see those? Is that just the Medical Review Board or could anyone else, law enforcement or investigative authorities, take a look at those?

MR. STROMBERG: I'm not sure about law enforcement. We really have -- I'd run it past the records manager to see if it fit in DPPA policy to allow them to review those records. The Medical Advisory Board reviews the records, but they don't get a copy of the individual's driving record. If they ask a specific question, does that individual have a citation, when was the last accident, or what is the current status of his license, then I answer that with a copy of his driving record, but we don't generally show that to the board.

DR. GARBER: Thank you.

That's all I've got.

MS. McDONALD: I'll go ahead and pass the floor to Mr. Voeglie.

MR. VOEGLIE: Morning, Ms. Stewart. How are you today?

MS. STEWART: Just fine.

MR. VOEGLIE: It's afternoon actually.

We spoke a little bit about the generalities of North Carolina's program, how it is structured, the authority that it has. I'm curious. How much time would typically elapse from the time that a driver has been brought to your attention until that driver or the driver's file goes through the process, through the Medical Review Branch, and until the driver is actually notified of your decisions?

MS. STEWART: It would depend on how it come to us, if it was -- like if an examiner had one in that was just in to renew his license and he observed his ability, his road test was really poor, then he would, as well as sending in the form, he would give us a call and we would start the process then or if a physician sent something in that states that this person is really a risk and needs to be off the road, then we do ask for -- because of the Privacy Act, it's just a form saying that we have the okay to review this information. We give them 30 days. If it's not in within 30 days, it will cancel their license. It's just by virtue of not supplying.

Our system is completely automated. So, when we

require a restriction, they’ve got 15 days, and at the end of that 15 days, the system will cancel them. They'll send them a letter. The system will generate a letter saying that you do not comply with restrictions, therefore your license will be canceled.

But as a rule, just the average driver, it's anywhere from two to four weeks, six weeks sometimes, unless it is a walk-through, and then we can get an answer in one day.

MR. VOEGLIE: I'd like to address a driver re-examination recommendation form that the State of North Carolina uses and is predominantly utilized by law enforcement to bring to your attention an encounter with a driver, correct?

MS. STEWART: Hm-hmm. It's an HP-640. Is that what you're discussing?

MR. VOEGLIE: Yes, ma'am.

MS. STEWART: Hm-hmm. I know they mention that if enforcement stopped someone that they think is driving erratic, even if they don't give them a ticket, they can fill out that form and say customer seemed to not be in control or anything that they observed. Now, we won't -- what we would do when we get that form in is send it to our examiners and we would say this HP-640 was received on this person and what the trooper had written, so they'd have an idea what they're looking at.

Our examiners are trained. They have a whole medical section in their Examiner's Manual and it tells them certain medications to look for that are -- and it's broke down by

seizures or heart disease or anything like that and they're asked a whole series of questions of have you suffered from and they'll give a list or, you know, what medications. We've even developed a medication form that makes it a little easier for the examiners not to have to be able to pronounce some of the words. I mean, it's just because some of the medications are very hard. They ask the person to look at this and give them the list of anything and they know which ones would mean, even if the person had said, well, no, I don't have heart disease, well, based on the medications he's taking, he would know that he was. He would then hand him the medical report and our medical report is eight pages long, and it would be a self-addressed envelope with it that he takes to his physician and the physician completes it and sends it back to us and it's listing anything that he's taking, what's wrong with him or anything.

MR. VOEGLIE: But in that particular instance, how long would it take for that process to come to its completion when it's coming from law enforcement?

MS. STEWART: Coming from law --

MR. VOEGLIE: This particular format.

MS. STEWART: If it's coming from an examiner, we give them 30 days to get the medical in because they're not always able to see the doctor that quickly, and in some cases, if they'll call, most of the time I ask for verification from their doctor that they can't see them within that 30 days. Well, if the doctor

can't see them within 30 days, we will grant an extension of time which is normally another 30. So, I mean, anywhere from -- it may take eight to 10 weeks, depending on how fast we can get the information in.

Once we receive the information, we've got pretty good turn-around of at least two weeks, once we receive all the information.

MR. VOEGLIE: Okay. What is North Carolina's current policy on seizures or seizures related to accidents?

MS. STEWART: Well, basically one year. If they've been seizure-free, you know, no other episode, then we will allow them to drive. There is -- occasionally we'll go six months, if their doctor can produce -- maybe they were changing their medication and this is what brought on the seizure or some other related problem that could have brought on the seizure, then we may let them drive in six months, but it would be certainly with a follow-up in six months to make sure that they still haven't had a seizure and they're safe to drive.

MR. VOEGLIE: Okay.

MS. STEWART: That would be with another medical report.

MR. VOEGLIE: Okay. So, typically the suspension period would be for one year, special occasions six months, --

MS. STEWART: Six months.

MR. VOEGLIE: -- and do you see the person during this

review in person --

MS. STEWART: No.

MR. VOEGLIE: -- or do you review them on paper?

MS. STEWART: Paper.

MR. VOEGLIE: Okay. I'd like to ask you a question about -- and I can't come up with the appropriate term for this because these folks are not offenders, but repeat clients that are before the Medical Advisory Board multiple times for the same ailment, let's use seizures as an example. He's had his license suspended for one year. He fills out an affidavit or a form and says I am free from seizures and he goes out, has another accident with a seizure and he's before you again and again and again.

Are there graduations in suspension periods or is this a blanket policy?

MS. STEWART: No. When you say the Medical Review Board, the Medical Review Board and the advisors typically do about the same thing. It's just an appeals process. The board actually sees the people in person. So, they may make a little different decision than our medical advisors who are just doing the paper cases.

But when you say repeat offenders, most of our people are not -- they're not cut loose. In one year, when we say okay, we think you're okay to drive now, it's never they're just cut loose from the medical program. We still follow them. Most times, it will be within six months, and we'll send them a medical

report and say we need information to verify that you are still in compliance, that you have not had a seizure, and I hate to say it but once you're on our medical program, we have to really believe from medical information, not from you signing an affidavit, but it has to come from a medical authority that you are capable of driving now and being removed from our program, and there's very few people that get removed, unless -- well, they don't ever get removed, unless they do have the medical background to prove that they are fine to drive.

MR. VOEGLIE: Okay.

MS. STEWART: Sometimes we review them in one month, six months, a year. If it's something that's vision that we know is not -- it's maybe progressive but it's very slow, we may let them go three years. It just depends on what the condition is.

MR. VOEGLIE: Okay. Thank you very much.

MS. STEWART: Hm-hmm.

MR. VOEGLIE: You answered my next question.

Michele, do you have any questions? Ms. McDonald?

MS. McDONALD: No, I don't.

MR. VOEGLIE: Dr. Garber?

DR. GARBER: Just one question.

Actually Mr. Stromberg cited a figure that I found interesting, and I actually heard a lot of intakes of air throughout the room, so I guess other people did as well. It sounded like you said that 10 percent of the drivers in your state

are under some sort of medical review.

MR. STROMBERG: Ten percent of them have a medical condition. It could be a vision problem, it could be diabetes, but they're not restricted.

DR. GARBER: Right. But had been reviewed at some point in time or --

MR. STROMBERG: Oh, I'm sorry. No. No, they haven't been reviewed. They submitted -- when they filled out an application, they checked the box and they said in their medical, they were asked to provide us with a medical and it came profiled with no restrictions and no board review.

DR. GARBER: Okay. Let me ask Ms. Stewart then. What percentage of the licensed drivers in North Carolina have had either that initial type of response where they have said that they have a condition or reviewed by your advisors or reviewed by the full board? What percentage of the licensed drivers would that be in North Carolina?

MS. STEWART: We have about six million drivers, and there's probably a 102,000 that are actively on the program. This means that they are either pending a review or they're actively being reviewed now. So, we don't have a figure of how many have been marked because there could be some that have been removed, deceased of course, and some that just voluntary -- we found a lot of people, when they're restricted, that they just choose to surrender because they don't want to go through the whole medical

process. So, they have alternative travel with family and whatever, so they just surrender their license. But right now, we're actively reviewing in our process about a 102,000 to 105,000.

DR. GARBER: I'm sorry. I've just done the math. Of the numbers that you had stated, it sounded like you were doing probably about 30,000 a year that hit you. That means that if you've been doing this for 20 years, you've hit a substantial portion of your population there.

MS. STEWART: Really, and like I say, some have been removed but not many. It's just -- and a lot of the cases don't take that long to review because we get in the medical report and if the condition's not worsened, it hasn't -- there's no indication anything's changed, we just keep following them and it's just a quick process.

DR. GARBER: Thank you.

That's all I've got for you. Thank you.

The last few questions are for Dr. Soderstrom and actually I'd like to start out with that same question just because I find it an interesting one.

Do you have any feel for what percentage of the population in Maryland has come to the attention of your office at some point in time or another? What percentage of the licensed drivers?

DR. SODERSTROM: I don't think we know that. I don't

think we have those figures. I think at any one time, probably less than one percent of drivers, less than -- about -- quickly doing the math, I would say that about 3/10ths of a percent of drivers are in the queue of the Medical Advisory Board in a year.

People do get out of the queue. They don't stay in forever and ever and ever. We do track patients for certain conditions, and then if they get a number of good medical reports, shows good compliance, their condition's controlled, we close the case. Otherwise we would have the entire -- you know, someone at some point -- I think we would end up having a million and a half people in -- we have 3.1 million drivers. We would just have an inordinate number of individuals. If every person that has a medical condition remained in the queue and had to be reviewed every year or every other year, it would be an impossible task, unless someone has an awful lot of money.

DR. GARBER: Okay. Thank you.

We heard from Dr. Broadhurst in the last panel that -- and Ms. Stewart can correct me if I misunderstood this, but it sounded like North Carolina reviews all motor vehicle accidents which may involve medical conditions, whether or not a referral form is submitted to the medical review process.

Is there a similar program in Maryland for the review of -- routine review of accidents that may involve medical conditions?

DR. SODERSTROM: No, not that I know of. The routine

review comes from, as I said, if there is a crash and the police officer writes out one of these, what we call, Request for Re-Examination.

I look at almost all of them now, and I can give you kind of a guesstimate. I would say that I probably review about 15 to 20 of these per week. So, you can do the math on that. It's about 750 to a 1000 per a year.

Again, though, when they do a Request for Re-Examination, it may be that they -- it's very frequently not -- it's not a citation. It is simply a referral to the Medical Advisory Board. Sometimes if you look at it carefully, they may have tacked on a citation for something, but usually it's because they felt that the error was made was because someone had a medical condition. But if someone is in Maryland with our great EMS and trauma center system for our state, people are not routinely referred to the Medical Advisory Board, for instance, after they're admitted to a trauma center -- that just doesn't happen -- or are hurt and go to the emergency room.

DR. GARBER: Actually that was going to be my next question because I know you've worked with the Maryland Shock Trauma Center.

I have a specific question regarding seizure disorder and seizure-free interval with regard to Maryland's law, Maryland Code, and I'm going to actually read from the Maryland Code just briefly, so that everybody has the information that I do.

"If the Administration suspends or revokes a license of an individual based upon evaluation of competent medical evidence that the individual's driving may be adversely affected by the individual's epilepsy, the period of suspension or revocation may not exceed 90 days, unless the individual experiences a seizure within 90 days after the period of suspension or revocation begins."

It seems that the Code has written now requires that an individual with a seizure disorder be reinstated after a 90-day seizure-free interval, regardless of any other circumstances. Is it routinely the case that an individual is permitted to drive so long as they have not had a seizure within 90 days?

DR. SODERSTROM: My sense of how this Code works is the critical words that you read is the "period of suspension or revocation may not exceed 90 days". Operationally, it tends to work that the administrative law judges and even physicians that give us back medical reports, neurologists give us back medical reports, the implication is that you should get your license back after 90 days, if you haven't had a seizure.

Now, I'll just bring you up to speed with some, I think, innovative change that is now occurring in Maryland. Seventeen years ago, Maryland, we became a state that instituted the 90-day period, and I understand that before, and as Dr. Krumholz alluded to this morning, it's rather unfair that if individuals have a seizure in a number of states, they

automatically get suspended for a year or year and a half, and in times past, I understood that was often as long as two years.

Seventeen years ago, Maryland, I think working with good clinical evidence, suggested that 90 days is a reasonable period to think that someone is seizure-free. Unfortunately, operationally, the way that has worked out is a person seems to be allowed to or supposed to get their license back after 90 days. Coming up with a consensus piece of legislation that just got out of committee in the Maryland House yesterday without any opposition that's been put together with the Epilepsy Foundation of the Chesapeake Region, epilepsy specialists, such as Dr. Krauss from Johns Hopkins and Dr. Krumholz from the University of Maryland and Dr. Berge from Johns Hopkins, that 90-day period is now going to be taken out of law and kept in regulation and this works to everyone's benefit, we believe, because what it means is that individuals -- there are plenty of individuals that have seizure disorders that don't have to wait 90 days, and the COMAR regulations are going to reflect favorable and unfavorable modifiers.

So, for instance, if an individual has been on an anti-seizure drug for a number of years and the physician took them off and they got a seizure, well, guess what, the decision wasn't exactly right, why wait 90 days? When they're back on the drug, they have a reasonable AED drug level, then they go right back on. If someone has a seizure as a result of a medical

procedure, that's not a person that necessarily has to be off the road for 90 days.

So, then again, if you have someone that is a poor complier, someone that is not taking their medications and regularly their doctor reports that they're not taking their medication, you have someone that has a whole host of seizures, if you have someone that has something like a vagal nerve stimulator put in, Dr. Krumholz would tell you that if someone has a vagal nerve stimulator, they probably don't belong -- they may not ever get back to the road, but if they do get back to the road, it may be a good six months to 12 months or even longer to determine whether this new device is going to be efficacious.

So, basically what we've done is -- hopefully this new legislation, which we're very optimistic is going to pass the Senate and become law, is we'll treat epilepsy like any other medical condition, so that, yes, the person that is in a favorable condition can get back on the road before 90 days, and the person that is not in a favorable condition at the recommendation and evaluation of a neurologist, maybe it should be 90 days, maybe it should be a 120 days, maybe it should, as he alluded to, there are some people that are going to be refractory to all types of treatment that may not be able to get back on the road, unfortunately.

DR. GARBER: Thank you.

Those are the questions that I have for Dr.

Soderstrom.

I have a couple of questions for the whole panel before we wrap this up, but first, are there any questions for Dr. Soderstrom from the other panel members?

Mr. Voeglie?

MR. VOEGLIE: Yes, I have a few, if I may.

Dr. Soderstrom, I would like to talk about the process in which your drivers are allowed to be reinstated. You just told us now that there's new legislation that would actually remove the 90-day restriction.

Okay. Is there anything in your regulation right now where, almost the same question I asked Ms. Stewart, repeat offenders or, you know, drivers that are before you on a regular basis, is there any type of enhanced investigative efforts made to determine whether it's because they're a non-compliant patient or because they don't belong on the road?

DR. SODERSTROM: We now have a new system where everything is being computerized, and we can look at the entire track record of an individual that's being followed by the Medical Advisory Board, and also when we review them, we also look at their driving record and their driving record has the entire history of whether they've been suspended in the past. So, we know how they've interacted with the Medical Advisory Board in the past.

If their physician indicates, if their crash record

indicates, if their violation record indicates that there seems to be recidivism about a number of behavioral things, such as not taking their medications or drinking and driving or whatever, yes, there's ways that we can act on that and recommend further investigation or even suspension of them, bring them in for interviews and talk to them.

Yes, there are behavioral issues that we can look at.

MR. VOEGLIE: Interestingly enough, this morning when Mr. Suydam did his briefing, I'm sure you're aware of the accident that we are investigating in Frederick, Maryland. You just mentioned that you look at the driver's records to see how they've interacted with the system.

Throughout the course of our investigation, we found that this driver had been involved in multiple accidents which did not show up on his driving record. In some of those multiple records, in police reports, there's belief that he also suffered seizures in those accidents. You also stated that should someone have a vagal nerve implant, that they would probably be suspended for 12 months or indefinitely.

DR. SODERSTROM: That's correct.

MR. VOEGLIE: And in this particular case, this driver had been before the Medical Advisory Board several times and did receive the implant, received his license back and one month later was involved in the accident that killed this gentleman and all three of his children.

Can you explain to me how that system allowed something like that to happen or elaborate on whether or not the system was in place at that time?

DR. SODERSTROM: I'm not sure how much I can comment on that case at this point because of where it sits legally. I'm looking to Mr. Tom Manuel, who's the Manager of our Driver Wellness Section and he's been at our organization several more years than me. I'm not sure whether I should comment on this right now.

MR. VOEGLIE: Okay. Maybe I can rephrase it for you.

DR. SODERSTROM: Okay.

MR. VOEGLIE: Hypothetically or generally, when would there be an input on to my driver's license if I'm involved in a crash? Do I have to receive a summons in order for that to show up on my driver's history?

DR. SODERSTROM: A medical crash?

MR. VOEGLIE: I'm involved in a crash. The patrolman says I'm not going to issue you a summons because I told him that I had a seizure. He didn't put in the referral form. He filled out the blocks and said that no citations were issued. Is that possible?

DR. SODERSTROM: I don't think it gets into our system then.

MR. VOEGLIE: Okay. That answers part of my question.

DR. SODERSTROM: It doesn't go on the driver's record.

There's no way to pick up on that.

MR. VOEGLIE: Okay. So, --

MR. OSTERMAN: It has to be a citation or the referral form.

DR. SODERSTROM: It has to be the -- from the police aspect, it has to be the Request for Re-Examination which is a police citation. It's not necessarily points or a violation. It's a referral to the Medical Advisory Board that said I found some irregular driving in this individual.

MR. VOEGLIE: Okay. So, then, in this particular case, we found that he was in another accident. He could have hit a parked car and therefore maybe he did not receive a summons and therefore you would not have known about this episode.

DR. SODERSTROM: Yes, that's correct.

MR. VOEGLIE: Okay. And I have one last question for you.

DR. SODERSTROM: Yes.

MR. VOEGLIE: How would the driver get his license back after the 90 days that it was suspended for? What does the process involve?

DR. SODERSTROM: We ask for them to provide to us a medical report from the person taking care of them. We ask that -- we look at the reports. I'll tell you how I review the reports, and I think other MAB individuals do this, too. Believe it or not, it's a four-page report. I go to the last page first because

I want to know who the physician is. Dr. Krumholz made the comment that we don't call him very much. We don't call Dr. Krumholz very much because he is incredibly well respected, along with Dr. Krauss, Dr. Bergey, Dr. Ken Johnson and other neurologists in the state.

If Dr. Krumholz says a person can drive, you better believe he can drive. If he said they can't drive, they can't drive. So, he won't hear from me, but other physicians will get a call from me.

I look at the -- this is the way we do it. We look at the physician. We look at the specialty. Now, there's a number of physicians, we believe, based on their clinical experience that can take care of certain conditions. I don't think it's appropriate to get a seizure, an epilepsy evaluation from a psychiatrist, nothing against psychiatrists, but that doesn't normally fall within their bailiwick.

I look at how long the physician has known the client. I look at how long the physician -- that person's been under their care, when the last visit was. We ask for things like their medication level, if it's measurable -- if it's a drug that can be measured. The questionnaire that the physician fills out asks prognosis and treatment to date, and they are specifically asked, is the patient being compliant?

If the person has a good level, they haven't had a seizure for awhile, they haven't had a seizure past the 90 days,

they've been on a consistent level of the drug, not changing levels, then we will probably put them back on the road.

MR. VOEGLIE: Okay. Thank you.

DR. SODERSTROM: That's kind of a long answer to a short question.

DR. GARBER: If I can, I'd like to follow up on that.

DR. SODERSTROM: Sure.

DR. GARBER: The way I read the Code, thought, at 90 days, if you've not -- even if you've made a determination that a license needs to be revoked, at 90 days, the individual, according to what I read, would be authorized to get their license back. You couldn't, at least until any new legislation is passed, you couldn't actually restrict it for more than 90 days.

DR. SODERSTROM: Dr. Garber, you're absolutely right. We have had cases where we have had crashes with unfortunate results, where the recommendation to the administrative law judges has been to not allow for driving. I didn't cover this earlier. Any client, based on our decision, particularly if it's an adverse one for them - a recommendation to be suspended - can ask for a hearing. This happens on a goodly number of occasions. In fact, this is what prompted Dr. Raleigh with his experience over the years to say, and the other frustrated physicians on the MAB to know that they're going to get their license back, if they haven't had a seizure in 90 days, despite the fact that there may be things in the medical report that suggest that that's not the best

thing to do.

DR. GARBER: So, in fact, I guess it would seem to me that what Mr. Voeglie's question was going after is then, how does that actually logistically work? In other words, if I have a seizure, you say no, you definitely shouldn't be driving, at 90 days, what do I do? Do I just go back to DMV and get my license back? How do I do that?

DR. SODERSTROM: The MVA's going to -- the MAB of the MVA is going to ask you for a medical report that's going to show you, currently as it is, that after 90 days, that your physician says that you've been on a -- consistently on the same medicine for 90 days, you haven't had any seizures and you're being compliant.

DR. GARBER: But what if it says I'm being non-compliant but haven't had a seizure for 90 days?

DR. SODERSTROM: We would recommend that you don't drive -- and physicians do do that. They will say this person hasn't been compliant. I make a lot of phone calls because there's other information written in there. Under “treatment to date,” it states, “Provided that Carl stays on his medication,” that says to me call the physician. I will make the personal touch. I will make the connecting phone call and the information I will get is yeah, there is actually a problem. You know, he doesn't come for every one of his visits. He's not coming in on a consistent basis and there is a problem here, and then we may have

a little dialogue and say, well, do you think he's really compliant? Do you think he's safe to drive?

DR. GARBER: I'm sorry to cut you off, but --

DR. SODERSTROM: That's okay.

DR. GARBER: And again, I'm sorry to go into this in so much detail, but some of this is central to our investigative issues.

DR. SODERSTROM: Right.

DR. GARBER: That's why we're spending so much time on it.

But I guess still the question is, since the law states that you can't hold it from somebody for 90 days unless they've had a seizure basically, how -- even if you say, okay, 90 days, we want to get something back, if that person hasn't had a seizure, do you really have the authority to say you can't have your license back?

DR. SODERSTROM: No. It's simply a recommendation is made and there are cases when the administrative law judge will say you have a right to have your license back because the physician would have documented and you submitted a seizure affidavit that says I've been on this dose of drug for this period of time and I have not had a seizure.

DR. GARBER: So, the logistics would be if I wanted it back, basically even if the MVA said I couldn't have it back, I would go before an administrative law judge --

DR. SODERSTROM: Absolutely.

DR. GARBER: -- and say the law requires I've been 90 days seizure-free, I need to get my license back?

MR. OSTERMAN: Are there occasions where the reverse is true, where the administrative law judge says even though the 90 days has passed and you're seizure free, clearly you need to be restricted further?

DR. SODERSTROM: Okay. I'm asking -- it hasn't been in my experience, and Mr. Manuel's been there a lot longer than me, and it hasn't been in his experience. No, it does not happen that way.

MR. VOEGLIE: I just want to clarify this again. Knowing in today's systems of computers that are running our databases, is it possible in the system for a driver to be suspended for the 90 days? The 90 days expires. The Medical Review Board makes a recommendation that he come forward with medical records. By law, he doesn't have to, and he goes into the local DMV, requests a duplicate license and checks the box that says I do not have any medical or physical conditions, and he gets his license back.

DR. SODERSTROM: No. If I understand it correctly in our state, when you're suspended, at 90 days, you must -- you cannot get back on the road and get a recommendation to be back on the road unless you have submitted a medical report that says you haven't had a seizure and you've been under constant treatment for

that 90-day period.

Now, you can't walk in with a seizure -- you're in the queue and it's on your license that says you have been suspended by the MAB. To get the MAB to take that back, you're going to have to bring in the medical information. In fact, it's not uncommon to get a physician report early. People -- you know, it's very important to drive. People will not uncommonly submit a report that's eight days early or two weeks early. So, what we will do is review the case, see if the information's there, and knowing that on March 21st, they can drive again, the nurse clinician, the nurse case manager will make a call to the office or call the client and say we have your medical report now, it's the 90th day or – it was two days ago, and ask how you or they doing, and go with that information.

MR. VOEGLIE: And at that point, would they need to appear at the DMV local branch and request a duplicate license? How would they get the physical license back?

DR. SODERSTROM: Can I ask Mr. Manuel to give you that answer?

MR. VOEGLIE: Certainly.

DR. SODERSTROM: Is that all right? How do you physically get the license back?

MR. VOEGLIE: Yeah. What's the procedure?

MR. MANUEL: A duplicate license when they've lost their license or when they don't have it any more, in this case,

they'd be suspended, and with that suspension, they wouldn't have a duplicate license, they would get another license and it would have a new issue date on it.

MR. VOEGLIE: But the paperwork they would fill out would say duplicate?

MR. MANUEL (Manager of Driver Wellness, Maryland MVA): When it's a duplicate, it has a D on it. When it's a new issue date, it doesn't have a D.

MR. VOEGLIE: Okay.

MR. MANUEL: The duplicate is when they lose it or it's stolen or something like that. They would get a new license if it's been suspended.

MR. VOEGLIE: Okay. That's all the questions I have.

MR. STROMBERG: Can I say something? In Utah, to obtain a new license, we generally don't take it physically from them. The only time we take -- the officer should take a physical license from a driver is under a DUI arrest, and so in the medical, if they're denied, we generally don't take their license and so when it's reinstated, they just keep it. If they've lost it, then they go and apply for a new one.

DR. GARBER: Thank you.

I have just one brief question, and I would ask you to keep your answers brief in the interest of time. Really it's sort of yes or no for these two issues.

Does each of your states have a reporting requirement,

in other words, is anyone in the state required to report medical conditions to you, and two, does your state provide immunity for that reporting? Just those two questions.

MR. STROMBERG: Yes, on the first one -- on the second one, we do provide immunity, but it's the obligation of the driver to report to the Driver's License. Dr. Clarke mentioned this morning that he's not in favor of having drivers -- doctors report, and it's something I'm going to look into because I've talked to several doctors that said that in some conditions, especially in neurological conditions, they check no because they think in their mind that they are okay.

DR. GARBER: Okay. Ms. Stewart?

MS. STEWART: They do have immunity. The only ones that are required is the court if they -- if someone's adjudicated incompetent, then they have to report that to us by a form and any mental health hospital that someone has been involuntarily committed to, then they have to send that to the Medical Review Branch.

DR. GARBER: Thank you.

And Dr. Soderstrom?

DR. SODERSTROM: Vehicular Law 16.119 says any physician or any other person authorized to diagnose, treat or detect or treat disorders defined under this subsection may report to the Medical Advisory Board.

Yes, they are protected as far as making those

reports, but there's no mandatory report.

On the application, the driver is asked do you have a condition that may affect your ability to drive, and in the COMAR regulations, again most drivers don't know this, there is a list of conditions that they are supposed to report.

DR. GARBER: Is that mandatory? Is there a law that requires them to report that?

DR. SODERSTROM: The COMAR regulations say you should report those conditions, yes.

DR. GARBER: But that's not statutory, that's regulatory?

DR. SODERSTROM: That's regulatory. That's correct.

DR. GARBER: Okay. Thank you.

Those are all the questions I have.

Does anybody else on the Technical Panel have any questions for the panelists?

MR. VOEGLIE: I have none.

DR. GARBER: Thank you.

Dr. Marshall and Member Goglia, Chairman Goglia, we'll pass it back to you.

CHAIRMAN GOGLIA: Okay. We'll go to the tables, and we'll start with Advocacy Group I.

MS. STRAIGHT: Audrey Straight, AARP.

This is for each of the panelists. Do you have any procedure in your state for determining whether a medical

condition has actually resulted in a functional impairment that would affect driving capabilities?

DR. SODERSTROM: I -- other than the doctor submitting a form or the driver submitting a form, what we call the Functional Ability Evaluation Form that profiles them in a certain category, if they submit one of those, then we follow up on that. If none ever comes in, then we never know about it. There are other factors. There's a 117 form that we have, a DL-117, that if they're involved in an accident, an officer fills it out and it's similar to the other state forms, that he could request a medical or he could request another driving skills test and that sometimes comes to our knowledge. These forms can also be filled out by health care professionals and by friends and neighbors, but they need to be signed. We don't go after ones that are anonymous.

MS. STEWART: In the accident report, even if there was not an HP-640 form filled out to have it reviewed, in reading it and the occurrence of the accident, like if it was a lane change, if this accident was because of that, if it was a vision problem, say it was a vision problem, with vision in that peripheral field, then we would look at that as that the disability in itself did contribute to the accident. So, definitely this person would be interviewed and in many cases, if we had already reviewed him and then this accident occurred, we would definitely take action then and possibly cancel the license or at least restrict him more heavily.

MS. STRAIGHT: In this situation that you just described, how would you determine that the visual impairment actually contributed to the accident?

MS. STEWART: If we -- like I say, this person that was already on our program because of vision and then because we get every accident, whether there is a citation written or not. We review the accident, if there's anything that could link it to a disability. So, we see this a lot in our commercial drivers because we review all the accidents, and if we have granted a waiver and it says it's a vision waiver and they've had a lane change accident, then we definitely call them back in then. The same thing with a Class C driver.

MS. STRAIGHT: But if you've gotten a referral from a physician, just from the physician's office, not as a result of an accident, do you have any way of determining whether the physician knows that there's actually an impairment to the driving capabilities?

MS. STEWART: If we receive something from a physician that says we need to review -- is that what you're talking about?

MS. STRAIGHT: Right.

MS. STEWART: What we -- we always, if we get it from physicians, we may take it faster, I'll say, if it gives us enough information that we straight out order a medical report. If he says he feels he should be evaluated for his driving, then we do send it to the field for the examiners to drive with this person,

ask all the health issue questions, and then he would order the medical, but in the meantime, we found out if he can drive, which in some cases gets them off the road right then because if they go in and take that test as a medical -- that we've asked it. If they fail the road test, the vision test or the sign test, then they're canceled because they can't pass the road test, but sometimes that's a faster way, okay, of getting them off the road.

DR. SODERSTROM: I hope I understand your question correctly. The physician in their report says the person's either okay to drive or not okay to drive. Frequently, in Maryland, it's becoming more and more common that -- let's say someone has had a stroke or a traumatic brain injury or severe right hip fracture/dislocation or something like that. The physician in some cases -- the physician may say I think this person has mild to moderate dementia, they'll ask us to make the determination, ask us to help out. In other words, say “Call me,” or can you guys do it for us. So, there's a number of paths we take.

If it involves an elderly driver issue, possibly with early dementia, we have a test that we've been using as a research tool and I think it's going to come into fruition as the real deal in a number of years, called a Functional Capacity Test, and we can check visual perception, cognition, tracking, spatial relationships, and get back to the physician and say this is how so and so did on this test and work with the client and physician, and then we can also then get a driving test, brake reaction time

test, then even sit down and interview the client and say, “Gee, based on your lifestyle and a whole bunch of things we've discussed, maybe we should limit you to or give you a specific geographic test for a couple of miles around your house.” We work on a case-by-case basis with them.

There are seven occupational therapy programs that have been certified by the MVA in Maryland. So, as I indicated, post-stroke, post-traumatic brain injury, we will usually ask drivers to go off to one of those programs and get first a clinical evaluation and then, depending on the results of that, a get a behind-the-wheel evaluation. If the results indicate that the driver may be ready to come back and take the driving test again, then we the test for each client based on how long have they been off the road, age and a whole bunch of other things. So, maybe we can come back and say, Yes, let's get you back on the road, let's give you the course test.” Or, “Gee, you haven't driven for a couple years, why don't we just kind of limit that or give you that one that will give you mobility for the essential aspects of your life. So let's give you a three-to-five-mile test.” “Our testers will go out and drive this familiar area and do the things that you do during your day-to-day activities -- get you functional.” So, we kind of try to tailor it bit-by-bit on a case-by-case basis.

MS. STRAIGHT: One other question. Amongst the three of you and you may not be able to answer this, but would you say

from your knowledge of the role or activities of medical advisory boards across the country, whether you sort of cover the way medical advisory boards work or are they all very different, more or less active? Do any of you have more of a national feeling for how medical -- how state oversight works in this area?

MR. STROMBERG: I'm not sure how they work in other states, but from listening to the conversation today, I think they're fairly similar in their approach. I just think the world of our Medical Advisory Board. I think they're all brilliant doctors and there's been cases where they've looked at the profile and from the medications, they've said, well, this doctor, the doctor that this person/driver went to, profiled him wrong and he should be profiled to this number, you know, and it will raise him up and then base the restrictions on that.

I think they're just brilliant people to work with, and I'm sure that's true with all the states. I'm amazed at what they come up with.

MS. STEWART: Just from what I've heard today, I mean, I can think there's a lot of different ways. I'm not saying that one is any better or whatever, but they seem much different in the way we handle things. First of all, we have two layers and it seems that -- and we have, I guess, a different program that allows the medical advisors, and like I said, they are doctors as well, to make a pre-decision and the board doesn't have to see all the cases, and on the board, there's three doctors and two nurses,

and they actually see the person face-to-face along with witnesses or any other medical information they want to bring in, and our first step is to bring them in and see if it's something that can be handled without bringing them actually to the offices.

I mean, I think they all work, I'm sure, no different.

DR. SODERSTROM: My sense is that obviously we all have the same goals and that's to keep people safe, have people on the road, keep them driving for as long as possible. I have the sense from today's discussion and other things I've been learning over the last year or so, is that there is a great deal of variation as far as resources and monies available to accomplish these goals. But I think the goal is obvious throughout, to try to keep safe drivers on the road and get the bad drivers, get the unsafe drivers off.

I'm looking forward to seeing the results of AAMVA's survey. I understand that AAMVA is doing a survey about medical advisory boards, and I think that that is going to teach all of us a tremendous amount, to find out what is the composition, resources, rules, regs, everything. Everybody's waiting with baited breath for those results to come out eventually.

MR. COHEN: I'm Perry Cohen from the Parkinson's Disease Foundation.

You just said a name, AAMVA?

DR. SODERSTROM: Why did I say that? I'm not going to know what I'm talking about.

MR. COHEN: Okay. For those who don't know the acronym?

DR. SODERSTROM: I'm sorry. There you go. Right there.

MR. COHEN: Oh, thank you.

DR. SODERSTROM: American Association of Automobile --

MR. COHEN: Okay. I have a question.

DR. SODERSTROM: Vehicle Administrators. Yes.

MR. COHEN: I have a question regarding getting into the systems for the first time. Is there a requirement that anybody with any particular medical condition report that to the Division of Motor Vehicles or any other source? In other words, what is the requirement for the patient with medical conditions to report information regarding their medical conditions to the licensing agency?

MS. STEWART: When you go in even for renewal, it doesn't have to be an original license, you go in to be renewed, our examiners have a whole list of questions. Have you ever suffered from, medications you're taking, and based on that, they are supposed to tell the truth, and there are certain triggers, you know, flags go up on diabetes, insulin dependence, if they've had surgery, if they've had a heart attack, different medications they are taking, and at that point, the examiner, provided they pass the skills test in the office and everything is fine, and he sees, you know, nothing wrong physically, then he'll issue, but

depending on what he finds out in that evaluation, he will also give them a medical report and that is filled out by their physician and then mailed back into the division.

MR. COHEN: Okay. Thank you.

MR. STROMBERG: Our procedure's the same in Utah.

DR. SODERSTROM: The procedure in Maryland is if you have certain conditions and if you check them off, then you will be asked to submit a medical report.

MR. COHEN: Thank you.

MR. FLAHERTY: Gerald Flaherty from the Alzheimer's Association.

For anyone on the panel. Is there a counseling component associated with your suspensions process?

MR. STROMBERG: Do you mean is there a counselor provided for them to discuss the denial?

MR. FLAHERTY: Yes, and to, in the case of specific diseases, to be sensitive to other needs for alternate transportation or to have a collateral source there to help with the decision. A family member, for example.

MR. STROMBERG: In my experience, all those cases have come up. We don't provide a counselor, so to speak, but they're always welcome to appeal the decision of the driver's license and to go through the Medical Advisory Board and they appear in person to do that appeal.

If the board still thinks they should be denied, then

their next course is judicial. They go through the court, and it's been my experience in the last five years, we've had one court case and the court upheld our decision. But as far as counseling a driver, there isn't any recourse that way. In most cases, though, in Utah, there are strong family ties that allow them to pick up the slack and drive them where they need to go.

MR. FLAHERTY: For all the rest of the panel as well. Do you work with community agencies, such as he Alzheimer's Association or others represented here at the Advocacy table, in -- do you refer to these agencies, I should say, advise the families that there is counseling available to them around the no drive decision?

MS. STEWART: North Carolina doesn't. We don't do any of the counseling.

DR. SODERSTROM: In Maryland, we do work with a number of medical advocacy groups, and in fact, there is a pamphlet that has been prepared for drivers and for their families relative to Alzheimer's issues.

We also have put together -- kind of related to that -- pamphlets for the public and for physicians about issues relative to the older driver. We try to work with the families and work with the physicians to -- there's a whole dynamic process about someone getting referred and eventually losing that license, and we try to -- I personally try to triangulate the family physician into the procedure because well-meaning people in many

cases report, you know, “Mom shouldn't be on the road,” and the physician is in the weird position of being an employer of the patient, and so we try to get everybody on the same page and talk to them and say this is for your best good and we'll try to work out something.

But there are people with mild dementia that can be on the road in Maryland and that's why we have geographic testing. That's why we will interview people and, you know, go the extra mile, but there obviously comes a stage where there is moderate to severe dementia, to get off the road, but we do try to work on a case-by-case basis. Specific counseling services, no. Sorry. Long answer.

MR. FLAHERTY: Thank you.

The Association, of course, doesn't believe a diagnosis of Alzheimer's is a reason in and of itself for a license to be taken but agree with you that at some point, these decisions have to be made.

DR. STROHL: Kingman Strohl, American Sleep Apnea Association.

Dr. Soderstrom, I'm wearing another hat as well. I'm interested in fatigue and sleepiness and medical residency training. It brings up a point in terms of at renewal, there's usually a question about regarding loss of consciousness.

Does the medical board construe a fall-asleep crash or a fall-asleep event as being a loss of consciousness? On the

other side, would an individual renewing their license, do you think in general they construe falling asleep or drowsy driving as being a form of loss of consciousness?

DR. SODERSTROM: Wow! I'm not sure what you asked. I don't think -- we do not ask about lapse of consciousness. We do not ask about falling asleep at the wheel. If a person talks about a loss -- a lapse of consciousness, we will ask for a medical report to kind of clarify that. What does that mean?

Having been involved with the training of several hundred residents per year in my former position, we actually had a number of times a year when residents, in fact two on one day, who drove home the day after being up about 30 straight hours and both of them were on the way back to Washington drove off the road. Neither of them had a crash but they were in the wrong -- it was not these gentlemen.

(Laughter.)

DR. SODERSTROM: One was a resident.

DR. STROHL: Could be the emergency room.

DR. SODERSTROM: I don't think I answered your question.

DR. STROHL: Well, I think that it's that lapse of consciousness question, how people answer that becomes, you know, important, and I guess the other flip side is, do you think the medical board's in a position to identify educational initiatives towards both the public and the physicians that would -- on this

issue of medical conditions, because I think that you may be the resource, seeing all those questions, that would know how -- what sort of educational intervention might be necessary.

DR. SODERSTROM: That's a great question, and I'm only going to answer for two hours instead of five. I like to talk about this.

Dr. Raleigh and I have discussed this at great length. When I took this job with the MVA, there were two reactions from people. One is, “Oh, you're the medical nazis who take everybody's license away, and can you get me one of those blue things you can hang in my window so I can park anywhere I want?”

But in my talking to physicians, calling them, people asking me about what I do now, I have become amazed that I was immune to this whole process and I had no education about this, and essentially physicians and nurses in Maryland, and I'm gathering from all the conversation we're hearing today, know nothing about this process at all.

Luckily, we are a small state in Maryland. There are two medical schools, one's a little bit better than the other -- just teasing, just teasing -- and two major nursing schools, one of which is better than the other where my wife works. I have to say that. I think what we need to do is absolutely education, education, and it should be part of basic medical education at some level just to bring up the issues when one is taking care of a patient to consider that they spend an awful lot of time in

their life driving a vehicle.

So, where we're going to insert that, I don't know, but we are going to try to get lectures routinely into the medical schools and the nursing schools, particularly the nurse-practitioner programs. Another thing that we're going to be working on in the next six months to a year is try and answer all of the questions that come back to me from clinical colleagues on the website for the MVA in Maryland. Hence, when a physician says, “Oh, I didn't know who I had to report or what I'm allowed to do,” or confidentiality issues, just say go to our website and there are the regulations, here's what you can do, here are your protections, the immunities, here are things we suggest that you ought to do.

But education, education, education is really something I've learned about today. My sense is it's been lacking in our state, and I gather it's lacking everywhere right now. It's basically not part of medical education. And then we need to educate the public and that's another huge issue, and I'm not sure how you take that on.

DR. STROHL: I guess the other is for Ms. Stewart. I've been a recipient of some of eight-page requests for information on some of my own patients, and I really have never had training as to how to fill it out or what degree of detail, and then I always wonder about how much time I really should be spending and whether I should charge for that or not. Is that

part of the visit? There are a lot of other things that I think that have to be sorted out in that interaction to make it both humane as well as efficient and worthwhile in the system. So, that's more of a comment than a question, unless you have some insight into how that could be done.

MS. STEWART: Well, normally, what problems we hear is when the customer gets it. The first thing he says is you sent me a book, but we try to -- we do have customer service representatives that help the customers and the doctors as well, and on the second page, it asks the questions. Do you have this impairment, this and this, and then there's corresponding pages there. So, it's not a book unless you've got all of these impairments and yes, we need to know about all of them.

Something that -- and we are -- we've just revised our mission statement, and we are going to revise this again. A lot of times doctors fill out exactly the questions that are on here when sometimes it would be much better if we just had a letter from them stating what they think this patient's condition is, not just those yes and nos to these answers. So, we're going to ask, you know, maybe for a summary from that because it will keep us from having to ask for additional information because if it's not what we're looking for, then they will send back for what they call an open paragraph letter to the doctor telling exactly what we're looking for.

DR. STROHL: Thank you.

MS. WARD: Julie Ward with the Epilepsy Foundation.

I wondered if each of the panelists could comment briefly on the extent to which they utilize medical experts in the evaluation process, considering epilepsy's a rather complex disorder to treat, and many, many factors are involved in making this decision.

MR. STROMBERG: It depends on the profile level of how the doctor fills out the Functional Ability Evaluation form, but if they're an E4, I believe, or an E3, then they go to the Medical Advisory Board and then I use them quite a bit. They like to know what kind of medications he's taking, when was the last seizure, when did he lose consciousness, and what kind of medications, and what were his blood serum levels at the time or at this time, and sometimes the doctors forget that and so I have to write them specifically or call them and say can you answer these questions so I can send it to the board.

MS. WARD: Just to follow up quickly. So, is there a neurologist on your Medical Advisory Board?

MR. STROMBERG: Yes.

MS. STEWART: We don't have a neurologist, but we ask for the report to be from their neurologist, unless they've had another condition and now the neurologist's turned it over to their doctor for the routine check-up, and then we will take it from their physician, if it's recommended through the neurologist. We always ask for medical. We don't ever make it just by

administrative decision. It's always based on the specialist's opinion.

DR. SODERSTROM: We abide by recommendations contained in a consensus report drafted by neurologists and the Epilepsy Foundation that’s recommends that the regulatory board have a medical advisory board or similar group that includes at least one member with expertise or experience in treating epilepsy and episodic disorders of loss of consciousness. Our board has one board-certified neurologist and another member of our board who's an associate professor at one of the medical schools and has a practice that consists almost completely of neurologic issues. So, we basically have two full-time neurologists on our advisory board. Complex neurologic cases are referred to them for review.

MS. WARD: Thank you.

And to follow up in Maryland, just so I understand the impact of the proposed changes to your law, it appears that it's actually making for people with epilepsy, making it a more individualized assessment by moving it from law to regulation, and it also appears to be treating seizures more in line with other medical conditions. It seems to be treated in the same way and then, as we've discussed, you do utilize the experts. So, that's a key component to us.

Are those first two -- am I accurate in describing that?

DR. SODERSTROM: You described it. That was the

intent of bringing that legislation. Exactly.

MS. WARD: And to follow up, will you be able to do any public education about the changes, you know, to the medical community, to the general public, to the people with the medical conditions, once this change is made? You had mentioned some pamphlets and other public information that you do with other conditions. Do you think that will be an outcome of this change?

DR. SODERSTROM: We've discussed with the Baltimore City Medical Society, which is a group limited in size, and then with the MEDCHI (the Maryland Medical Chirurgical Faculty), publishing in their newsletters. In MEDCHI we're actually going to probably have a standing offer submit a column any time we want relative to these issues. And our plan is to put new information into the MVA's website.

MS. WARD: And I do believe our affiliate, the Epilepsy Foundation of the Chesapeake Area, is planning on doing a public information campaign as well.

Just real quickly in the other two states. Do they have any mechanisms for public information and education around these driving issues to the general public, to people with the medical conditions, and to the doctors? Do you have any programs?

MS. STEWART: We have a Medical Advisors Guide that we supply -- well, we have sent them out to all the doctors, but as Dr. Broadhurst mentioned now, we haven't updated that, but we have

a lot of doctors and different ones that call in and would like us to send one and we are sending them out. We do have a pamphlet that is kind of just touches on the different problems of disabilities and how they should be handled.

MR. STROMBERG: We have a guidebook also that the board wrote that we send out to all the physicians, but I think our state's really lacking in public information. I think they do some in the high schools and in the teaching of the high school students, but I think once it gets out of there, in a lot of cases, people forget about it, and I think we can do better in public announcements. If you have a medical condition, report it, you know. Even getting down to even just basic driving skills, I think we could do better that way, too.

MS. WARD: Thank you.

CHAIRMAN GOGLIA: Advocacy Group II?

MR. SNYDER: Thank you very much.

I'm Dave Snyder with the American Insurance Association, and I drive on Maryland highways frequently. So, I'm going to ask you a couple questions about that.

This morning, we had a presentation on three accidents that occurred in Maryland, one on November 3rd, 2002, another one June 7th, 2001, and a third one on March 23rd, 2002, and the one case involved a person who had suffered from epilepsy, another one had a history of seizures, one of the drivers, and a third one was taking seizure medication.

Following any of these accidents, what changes has Maryland made to its system, to improve its system after any of those accidents?

DR. SODERSTROM: I think we've just basically ratcheted down to make sure that we do a better job of following individuals that have seizures and other medical conditions and make sure that we get their reports in a timely fashion. I believe that's the only major change.

MR. SNYDER: Okay. So, no changes in regulation or law?

DR. SODERSTROM: Well, yes. The new epilepsy law is an attempt, very much an attempt to allow, as was pointed out, that epilepsy should be treated like all other medical conditions in that you belong on the road when you're supposed to be on the road and not have the decision in the seat of an administrative law judge that says you now have a right to drive because you haven't had a seizure for 90 days. That definitely is a step in the direction of saying let's do the right thing.

MR. SNYDER: Okay. Now, let me ask you about the proposed regulation on that, because as I recall your description of it, there's still a 90-day element to it?

DR. SODERSTROM: It's to keep the 90 days in regulation. The 90 days historically and according to our epilepsy experts is a benchmark to start with. That's kind of a good basic period, but there are clearly people that don't have to

wait 90 days to get back on the road and there are clearly people that need much more time than that or maybe can never come back on the road. But it's just a benchmark as opposed to something extremely punitive in the past that, as we heard this morning. In the past, if you ever had a seizure, you could never drive, where there are some states that say you can't drive period, irrespective of the seizure disorder. In some states you can't drive for 18 months after a seizure. Our medical experts in the field of neurology, epilepsy and seizure will tell us that 90 days is a reasonable starting point.

So, we'll keep that in the regulations and then, based on favorable or unfavorable modifiers, work with that.

MR. SNYDER: So, based on unfavorable modifiers, now it could be longer than the 90 days previously required by law?

DR. SODERSTROM: Yes. The clinician is in a good position now and doesn't feel like he or she is obligated to give someone their license automatically in 90 days. They can look at the modifiers. The nice thing about regulations is you can change things rather rapidly rather than law that takes a lot longer. One can look at those factors a good reason to the client that, "No, I'm not obligated to give you your license back. You haven't been compliant. You've had problems. You've had multiple multiple seizures. You haven't been compliant with your drugs. You're having a problem with alcohol and other addiction problems and these do not make you a favorable candidate to drive."

MR. SNYDER: Okay. Now, let me ask you. If you were compliant and no seizures during the 90-day period, would the regulations still require the return of the license?

DR. SODERSTROM: The regulation -- no. The regulation will require that you get a satisfactory medical report, if you've been suspended, and then you're back on the road if your physician says you're ready to go.

MR. SNYDER: Okay. Even if you've had a seizure during that period of time?

DR. SODERSTROM: Oh, there -- no. The clock starts again. The clock starts again, but you don't necessarily have to get your license back after 90 days. Am I answering?

MR. SNYDER: Sure. Well, I'm sure it can be submitted for the record. I guess where I'm going with this is to try to find out, does this simply -- does this -- which way does this provide leeway? Does it allow the return of a license before 90 days only or does it allow -- does it potentially tighten up to deal with the circumstances that may have been involved?

DR. SODERSTROM: I think because of the way the previous statute was interpreted, it makes things safer now because the previous statute interpreted both by clinicians and by law people was that I owe you a license after 90 days, irrespective of anything else about you. You haven't had a seizure and you are owed a license. That type of thinking has been removed. Now it's based on medical judgement as applied to

any other condition. The main thing is it removes the basic interpretation that you are automatically owed a license on your 91st day.

MR. SNYDER: Okay. Irrespective of your compliance or anything else. So, potentially the license could be returned at a period later than 90 days --

DR. SODERSTROM: Oh, absolutely. Absolutely.

MR. SNYDER: -- and the law before that required it within the 90 days?

DR. SODERSTROM: Basically, the law said you are owed a license on the 91st day.

MR. SNYDER: Let me ask the other states. Have you ever had something like this 90-day law in place?

MR. STROMBERG: Yes, we do do 90 days. What it is is that if they've gone seizure free on medication without any side effects for 90 days, we'll allow them to have their license back, but we review them again in six months. Then after six months, the same thing, on medication, no side effects, seizure free, then we'll review them a year.

MR. SNYDER: So, you have some follow-up after the initial 90 days?

MR. STROMBERG: Right.

MR. SNYDER: Ms. Stewart?

MS. STEWART: In certain occasions. We don't have a 90 -- we have a guideline for six months, unless -- six months or

a year, unless there is some circumstances, like a medication change, or in some cases, for people that have seizures only at night or they have an aura before they have them and it would give them ample time to get off the road and prevent an accident, all those things are considered and there is some cases that would be even shorter because of the situation.

MR. SNYDER: But generally, your rule of thumb is six months?

MS. STEWART: Six months, yes.

MR. SNYDER: Thank you.

Now, let me ask each of you a question about the limited suspensions or whatever term, bread and butter licenses or whatever term you want to put on these things.

Is the public notified that someone has had a -- because they'll still be out driving. So, they're out on the road with the rest of us. Is the public notified in any way that someone has gotten a -- that there's been some action taken? Is that a public information?

MS. STEWART: We don't put anything out to that. I mean, the face of the license would have that restriction on there.

MR. SNYDER: Okay.

MS. STEWART: But other than that, no.

MR. SNYDER: Are the local police notified that there's been a restricted --

MS. STEWART: No.

MR. SNYDER: -- license? Are their physicians told that they've been given restrictions on the license?

MS. STEWART: No, not in North Carolina.

MR. SNYDER: Okay. Now, do you put restrictions on these licenses because you believe there's something unusual about their driving hazard?

MS. STEWART: We believe their disability would impair them to -- many times, we restrict them to 45 and no interstates or a certain radius of home, no night-time driving. These are things that are on their license, so if they are stopped by law enforcement, they can see if they're, you know, driving at night time, they're in violation of that restriction.

MR. SNYDER: How do each of you enforce these things? I think we heard, I think, from Mr. Stromberg, I think, I don't want to mischaracterize you, but I think it was basically, you know, if the police are lucky enough to pull them over, they don't have any particular information about this driver, so they're not on the look-out for them, that they just happen to be pulled over.

Is there any other enforcement that any of you do on these limited suspensions?

MS. STEWART: Well, we have, when we ask them to restrict them to that different driving requirements, we know that they have to put them on there. They have got them on there, and we really in North Carolina, because we have a lot of people that

will call in and ask, you know, I've been driving for six months, can I get this restriction changed? So, I mean, the feel is that they are definitely complying with their restrictions in most cases, and you're going to have some if we cancel them, they're going to continue to drive anyway. But we have very few that come from Highway Patrol or anyone else that's stopped them outside the restrictions.

We did have one that was kind of funny that was the patrolman, highway patrolman noticed this person stopping every so many miles, and he finally pulled over and asked him was he having trouble, and he said no, and he had a restriction on his license of only 10 miles from home. So, he was driving 10 miles and he would stop and rest and then he would drive 10 more. So, they had to help him get back home.

(Laughter.)

MS. STEWART: But he misunderstood his restriction. He thought it meant drive 10 miles at a time. That's the only one we've ever had.

MR. SNYDER: So, how about anyone else? Any other enforcement devices that you use or tools? So, basically, the police don't know, the public doesn't know, their physicians don't know, and the only enforcement is really sort of a happenstance enforcement that would otherwise apply to anybody else, even though these people have been identified as being unusually risky drivers?

DR. SODERSTROM: It would be the same for any condition restriction. In other words, if a person has an alcohol restriction, their neighbors and everybody else in church, does not know they're not allowed to drink and drive. It's just on their license. I'm not trying to be flip about it, but no, others don't know about it.

MS. STEWART: The only thing I can think of that might would be for insurance or companies that might be wanting to hire them, is it does go on their driving record in North Carolina. So, if they pull a copy of the driving record, they would see that they have had a medical cancellation or medical restriction. It would show on that. So, if someone's going to employ them or even for a job and they ask for a driving record, they would have that.

MR. JASNY: Henry Jasny with Advocates for Highway and Auto Safety.

Good afternoon. Dr. Soderstrom, you had mentioned a Functional Capacity Test that you were looking forward to being implemented. Could you explain what that is and exactly how that works or will work?

DR. SODERSTROM: There's a whole body of research that Dr. Raleigh and his colleagues have put together which I'm just beginning to learn about over the last couple of months. Basically a person is asked to do a series of test maneuvers. It takes about 15 to 20 minutes to do this test. It assesses visual

perception, tracking, ability to walk rapidly, useful field of vision, memory and a some other elements for which a person is scored. I'm just talking about the little I know about this right now. In the future our division, and I don't have a clue when that might be, may require that when you or 65 or older, that you would not only get your vision tested but it might be a good idea to get a functional capacity test done at the time of renewal or when applying for a new license.

MR. JASNY: So, this is for the general population as a whole, not necessarily for a medical or disability?

DR. SODERSTROM: That's correct. That's possibly the vision for the future for of it. This has been developed to a great degree by considering the older driver as per the discussion this morning. It's actually advocating for the older driver.

Maryland has a policy of wanting to keep people on the road for as long as possible in their life and to make sure they're on the road safely. It's not looking to be a bunch of license nazis and try to get older drivers off the road. We're very convinced that there are quite a few good drivers are elderly. My mother has never driven in her life. She's going to be 84 years old next month, and I hate to say this but she's sharper than everybody in this room, including me. She just has never driven. So, age is not -- just because one gets to 80 or 84 or 80 or 90 -- does not necessarily mean one has to stop driving. But it probably wouldn't be a bad idea to have some type of

screening test out there to see if someone is maybe loosing a little something here or there.

MR. JASNY: Would that Functional Capacity Test also apply to chronic illnesses? Like we heard earlier this morning's panel, Dr. Dobbs was talking about testing people for specific problems rather than just giving them a garden variety test. Would that be -- would this be designed to test for individual capacity, based on a particular disability or disease?

DR. SODERSTROM: I don't think so. I think probably my guess would be that that would be more along the lines of specific occupational therapist testing for specific conditions.

MR. JASNY: That was my next question. Do you know who would administer the test, and is it in vehicle or is it simulator?

DR. SODERSTROM: It is administered in a room by MVA staff person who is medically-licensed or a medically-trained person. They're just taught how to do it.

MR. JASNY: Okay. Mr. Stromberg, I think you mentioned something about a functional capacity test that your state uses. Is that similar?

MR. STROMBERG: It's a Functional Ability Evaluation Form that the doctors fill out and profile the driver, based on categories that the MAB set up.

MR. JASNY: And that's a screening for the degree of the condition?

MR. STROMBERG: Right. If you mark that you had a high blood pressure on your driver's license application, you'd be sent one of these forms to have your doctor fill out and then mail back to us.

MR. JASNY: I see. So, it's done by the physician?

MR. STROMBERG: Right.

MR. JASNY: We heard something, and I know in many states that self-restriction is relied on for many people who don't have severe conditions. Do you have any data or information or surveys in your state that talk about what percentage of the people who have physical or medical conditions self-restrict their driving?

MR. STROMBERG: I don't have any data, but I know that it happens quite a bit. I've talked to several drivers over the years who say, well, I don't drive at night anyway. I don't go on freeways. I hate freeways. I find that quite often in Utah. I don't know what the number would be, but I find that quite a bit.

MR. JASNY: Is that because the freeways are federally-funded?

MR. STROMBERG: They're terrible to drive on.

MS. STEWART: We have basically the same thing. They'll say I don't drive at all. They go to church. I mean, a lot of the older drivers, we found out, when we send out a letter saying that we need this restriction added, they'll call back and say, well, I haven't been driving there in years. I just drive to

church or to the grocery store. A lot of them have self-limited themselves, no night-time, no interstates, and we find that a lot of times when we do actually put that restriction on their license, they say that's not a problem, I don't do that anyway.

MR. JASNY: That was my next question. In the cases you review, how often do you find people, what percentage or how frequently, people say, well, I'm already not doing that?

MS. STEWART: Because we do have customer service, a lot of times, we have found with -- I'm not going to say older drivers, but maybe people that don't quite understand our letter will call in and say, well, I haven't been doing that. So, we do have right many that call in and say the restrictions that we're asking them to put on, they're already in compliance with. We have a lot that come in through our customer service.

DR. SODERSTROM: We don't have any data in Maryland right now but we will because of several thousands of drivers, old and young, who have been followed in a longitudinal study with functional capacity testing. They do fill out a survey at the end about many miles they drive annually and weekly, whether they've self-restricted themselves, whether they almost never or never or sometimes or always drive on freeways, and a whole host of questions like that. So, we actually will be able to have some data relative to that group of clients in the near future.

MR. JASNY: Of course, the self-restriction data will be self-reported.

DR. SODERSTROM: That's correct.

MR. JASNY: One other question.

DR. SODERSTROM: Good point.

MR. JASNY: How often --

MS. STEWART: I would like to add to that.

MR. JASNY: Sure.

MS. STEWART: On our medical report form, the first page is for a person to fill out, and it asks them how many hours do you drive, where do you drive. So, like I say, a lot of times when we look at this report, they're already doing what we are going to do to them. So, a lot of times then when they fill out where they drive, this is -- and also the examiners, when they're issued, they ask them how many miles day and night. So, we have a lot of evidence that they are doing it. They're already self-complying.

MR. JASNY: So, in effect, that makes the restriction that you otherwise would impose much more acceptable?

MS. STEWART: Right.

MR. JASNY: And one final question. In your experience with the cases you have, when you find that a driver has -- comes up -- in the case of a passenger license or a noncommercial license, and you find that they have a commercial driver's license as well, does that play any role in your proceedings or in the outcome?

MS. STEWART: It does for us, very much so.

MR. JASNY: How so?

MS. STEWART: First, they've got to meet the federal regulations, and if they're on our medical program, obviously they've got something that could not be in compliance with the federal regulations. So, we would ask -- at that time, we would start reviewing the different levels of standards that would be more in compliance with the federal regulations.

MR. JASNY: I see.

MS. STEWART: And we do restrict them to CMV and school bus. We will put that on their commercial license. We can't actually downgrade them, so we can restrict that classified CDL to no CMV or school bus.

MR. STROMBERG: I've had some drivers, commercial drivers that we've denied their commercial license because they don't meet the federal guidelines, but we also have a K-restricted license in Utah that allows drivers that don't meet federal guidelines to drive commercially just in the state of Utah and they could lose their license commercially but still maintain a private vehicle license. I've had cases, also, where they've lost both.

DR. SODERSTROM: It's not uncommon in Maryland when someone's referred to the Medical Advisory Board that has a commercial driving license that they get downgraded because they're found not to be in compliance with a commercial license. That's a fairly regular activity.

MR. JASNY: What does downgrade mean in that context?

DR. SODERSTROM: Well, they have a commercial driving license to drive a 20,000-pound truck and they've got diabetes or something like that that doesn't fit with the federal regs, then they're not going to -- we will downgrade them from a commercial license to a Class C license.

MR. JASNY: Okay. Thank you very much.

MS. ROSS: Nancy Ross with Mothers Against Drunk Driving.

I just have one brief question for the panel. During the information-gathering process that the Medical Advisory Boards take part in, what, if any, scenario would you speak with other people, other than medical providers, such as family, caregivers and victims perhaps of past crashes that involved this individual, to gather information?

MR. STROMBERG: What happens a lot of times in our state is that somebody will -- a driver will be called in on an M-117. It's a Medical Review 117. Sometimes it's a Review 117 where they provide medical information and also a skills test, and the family member at that time will generally bring in the parent and they'll whisper to the examiner, I don't want him to pass. I don't want them to pass. They shouldn't be on the road. But we in Utah believe they have the right to drive or the privilege to drive, but they have to have the ability to prove themselves safely to drive, and just because the family member doesn't want

them to drive, if they meet the medical guidelines, if they pass the vision test and the written test and a driving skills test, we license them. But then at that point, we may talk to them about having a restricted license. Do you drive at night? Well, no, I don't drive at night. Do you drive -- how far to your church? How far to your pharmacy? How far to your doctor? Restrict them that way.

MS. STEWART: I would like to hear the question again.

DR. SODERSTROM: Thank you.

MS. ROSS: I'm sorry. I'm just wondering if there's ever a scenario where you're looking at information, other than the information from a medical provider, other than from their doctor, but you're talking to their family members, their caregivers perhaps, or perhaps this individual was already involved in a crash. Do you ever contact the victims of those crashes to get their input on whether or not this person should have a driver's license?

MS. STEWART: We don't normally contact them, but it's not uncommon when there has been an accident, that the family of the victim would send us a letter and it does go into the file, but we have to base our information on medical information, but we do have it in the file, so we do keep it.

DR. SODERSTROM: DR. SODERSTROM: We don't speak to victims of crashes, but we do get, as I indicated before, concerned citizen letters that we will investigate, and it's not

uncommon that one of those letters may be something to the effect that my neighbor is always falling down drunk in his yard and crashing into my mailbox and there's liquor bottles. I'm not being flip about this. That complaint is saying that there's a major drinking problem and we will ask them to get an alcohol and drug evaluation relative to that, if it warranted as the result of field investigation, a doctor’s report or some other information.

To go a little further with that, we also look at the questionnaire that the client submits and the kinds of answers they give. Physicians are generally not going to ask about drinking. That's just not something they normally do in a normal office visit, at least right now, but if the client fills out that they routinely drink seven days a week and they drink five drinks a day, then if they're don’t realize those are not good answers, then we will ask for/gather some more information and ask for an evaluation. If at any time, any physician ever alludes to anything about alcohol use on the part of their patient, we will then ask for that. For instance, “He's a good driver, provided he doesn't drink.” That to me is the biggest red flag waving all over the place. So, we'll ask for more information.

MS. ROSS: Thank you.

CHAIRMAN GOGLIA: Okay. Next table, Federal Group?

DR. DELLINGER: Ann Dellinger, Centers for Disease Control and Prevention.

I was wondering if you can tell me, how do you know

how well your programs are working?

MS. STEWART: Well, as Dr. Broadhurst had mentioned earlier, we have had, with the ones that have been reviewed, I feel like we are imposing these people to get health care because they're going to have to have that medical report. So, they're going to the doctor more frequently, and I'll just take diabetes off the top. It's very important that they do follow-ups, and if they didn't have us to be looking over their shoulder, a lot of times, they wouldn't get that. So, I think in our continuing to follow these people, it makes them continue to get health care which I think helps them to safety of their driving.

MR. STROMBERG: You never know. You go to bed at night and you hope that you put somebody on the road safely and still allowed him his privilege to drive and protected the rest of the public at the same time. You just do the best you can. I don't have any statistics or data. I know that it's a concern and I appreciate it when drivers restrict themselves, even if there isn't a health problem.

Part of the problem we're running into is that sometimes they're profiled at a level that they need to get the form filled out every year, even though there's a place on the form that says -- that the doctor can fill out that says they can go to a different interval. The doctors don't know that or they don't see that or they don't mark it and so we get a lot of people that get it. I just filled this out nine months ago. Well, we

sent it out 75 days, so you can get it in a year, and they said, well, this is such a hassle, I'm just going to tell my friends not to be honest and I'll tell my friends to mark no to anything, and I inform them, well, when you sign that application in front of the examiner, you're being sworn that everything on that affidavit is true and correct, to the best of your knowledge, and sometimes that helps, sometimes it doesn't. But you just hope you're doing a good job.

DR. SODERSTROM: The data aren't there. The proof of the pudding is give us all lots and lots of money and figure out how we can figure this out. Intuitively, you know you're doing the right thing if you are suspending some people with some very, very dangerous medical conditions. You have to believe that by keeping individuals with those conditions off the road temporarily or -- well, my answer's obvious, but hopefully a couple hundred thousand or millions of hours of unsafe -- potentially unsafe driving should be affecting something going on on our roads, but the data are not there.

DR. COMPTON: Richard Compton from the National Highway Traffic Safety Administration.

I just have a real simple procedural question for each of you. You all have a review board or an advisory board, yet from the comments you've made, it sounds to me like typically one person makes the decision or the determination rather than there be some sort of consensus or board meeting and reviewing it.

So, I guess I would like to know who makes the decision? Does one individual? Is it referred to one physician? Is it a group decision? What?

MS. STEWART: Our first process is through one physician, but it is based on a lot of information. It's based on the letter, the information, the medical reports from their doctors, their driving record, and anything else that has been submitted, accident reports, driving record, which would show even if they've had accidents, they were not at fault, because in some cases, it is that they were not the one that caused the accident. They were not cited, but they were maybe the one that actually caused it in their driving habits. But one person, one physician does normally make it, unless they have a case that they see reason to consult. We have three that are on staff at all times. So, there is cases that they consult on if they have any questions, and then once that decision's made, should the customer not agree, it does go to a panel of three doctors.

DR. COMPTON: And are there any sort of written guidelines or standards that they use for making this determination or is it just their clinical professional judgment, based on all the available information?

I guess what I'm leading to is if one of the different physicians got the case, could the outcome actually be different?

MS. STEWART: Yes, because they are individual, and some of them feel more strongly, like we do about religion. We

have different religions. Some see diabetes as a greater risk, some see alcohol, some see vision. So, it's very possible that it would be somewhat different, but it's very rarely a complete different decision, and I can say that because when we have customers call in and they're really complaining about the decision, in the sake of fairness, I will normally take it back unbeknowing to the one that had it the first time to one of our other advisors to get an unbiased second opinion and most of the time, it is pretty much -- it may vary as far as the review time, but the restriction or even if they're ordering additional information, it's pretty much the same, and we do have a physician's guideline that they have kind of a basis to go by.

MR. STROMBERG: In our state, there can be -- well, like I said, we have the board that meets once a month, and a lot of the cases that I get that I send out to the individual doctor, there are some cases, like neurological and musculoskeletal, they'll be marked real low in the category. So, that might be something I'll hold over till the board meeting because I have a doctor that's an expert in musculoskeletal and I have one that's in neurological and that's something that I'd like to let them both decide and so they'll both review it.

Vision cases. Most of the board members don't know vision cases, but I have two ophthalmologists, and so I just fax those cases directly to the vision doctors and the ophthalmologists and they make a decision and let me know what way

to go.

But in most cases, it can be reviewed by one doctor, but there have been many times that the whole panel's reviewed them.

DR. SODERSTROM: Generally, the decision's made by one physician, but they do rely on the expertise of each other and sometimes they'll turf it over to another person and say take this to Dr. So and So, please, to get his or her take on it, but it's generally one physician. The other thing is that irrespective of what the may to tell teach us, medicine is, I think, hopefully a craft that's based on a lot of exact science, but it's not an exact science, and so it is possible to get two different opinions.

Generally, I think our opinions are fairly consistent. If you were to take 10 cases to different physicians, you would probably get the same disposition nine out of 10 times or 10 out of 10 times, but there is some individual ways that people look at a problem.

MR. SNIDER: Mark Snider, Federal Transit.

My question is a follow-up on Mr. Compton's. You have the individuals make the decisions. Now, when you make a decision to suspend and then you've all talked about appeal processes, how does the actual appeal process work? Does it fall back on the individual to prove whatever they might want to prove, and who hears that decision, and how much does hardship, such as needing

to get to work, play in the appeal process?

MR. STROMBERG: I've only been to a few board meetings. I've only been in this position about six months, but it's been my experience -- well, what happens is they decide -- the individual driver says I don't want to lose my license or I want to drive outside these restrictions, and so I say, well, the board's meeting at this time, you're scheduled at this time and give them a 15-minute block. They come in with any records. I tell them to bring more records that they think will help the case be reviewed by the doctors. They'll bring their records. The board gets -- most of the time, the board doesn't see them. So, when the board sees them in this condition, the way they are, they think, well, it's been my experience that it's been a real positive experience for the driver.

There was one case I had where the driver had musculoskeletal but she also had diabetes, and she wrote that she has diabetes black-outs or I can't remember the term right now, but she -- that was a real concern to the doctor and the doctor on the board said no driving. So, she appealed and came in. She brought in some records and talked to the doctors, and when they saw her and asked her more questions and then she brought in the new records, they allowed her to drive without any restrictions at all, and so that's the process, but it helps, I think, in a lot of cases just to have them be able to -- the board to be able to see them and talk to them.

MS. STEWART: I agree that it helps. When they go to the board hearing, they're actually face-to-face. Normally when we schedule these hearings, depending on if it's vision, neurologists or, you know, ophthalmologist, we have those doctors on the panel that are more familiar with those certain cases, that maybe the advisory group office was not a specialist in that field. So, when they go to the hearing, they are seeing someone that has much more information on what they can and cannot do, and then seeing the person versus just reviewing it on paper, you can see that his ability to get around or his -- you know, they do do tests at that time, maybe vision or whatever. They'll see that the person is really more agile than you would think by reviewing what's on paper or they are more knowledgeable in the field of whatever's wrong with them. So, sometimes they will allow them to drive when we've canceled or they may impose restrictions and sometimes they uphold our decisions and it's probably about a 50/50.

DR. SODERSTROM: In Maryland, the client has a right to a hearing, and it's really up to the Driver Wellness Division to build their case. So, a statement of case is developed by the case manager and reviewed by the physician. So, we have to actually state why we think this suspension needs to be upheld, and there are -- the body of evidence consisting of the driving record, the medical record, and other elements. Sometimes the case is so weakened by the fact that -- we were talking about

physician issues before -- if a physician wants somebody off the road but doesn't want to state that for the record. We will respect a physician's decision very clearly that says so and so should not be on the road because they're not medically able to drive safely. But if they will not allow that to be part of the statement of case, then the case becomes weaker. But it's our business to develop the case, to submit a statement of case with enough exhibits in it to say this is why we continue to think that this person should be suspended.

Sometimes we're overturned, most of the time we're not.

MR. STROMBERG: If I could have a follow-up to that case I talked to you about? The only restrictions that were placed on her were not on her license, and she was restricted to check her blood glucose before she drove, to check her -- to have a blood monitor in the car with her and to eat something before she drove, and so, you know, there was no speed, area or daylight. She could drive wherever she wanted to, as long as she followed those guidelines.

CHAIRMAN GOGLIA: Next table, Medical Group?

DR. WANG: Claire Wang, American Medical Association.

If I understood Ms. Stewart correctly, she said that once a driver comes to the attention of the North Carolina Medical Advisory Board, they remain in the system and they receive periodic follow-up.

I was wondering if there's any kind of similar follow-

up in Maryland or in Utah for a client with, say, a chronic progressive medical condition, like Alzheimer's, dementia, who at that initial time is found safe to drive with or without restrictions. Is there any kind of an administrative process that kicks in after six months or one year where they're brought in again for follow-up assessment?

MR. STROMBERG: It depends on the way the doctor profiles them, but in most categories, if there's a medical condition, they're reviewed yearly, and they'll be sent a form about 90 days before the expiration date of their -- they're given 45 days to get that form in -- well, after the initial 90 days, they're given 45 more days, then they're denied.

DR. SODERSTROM: Depending on the condition and depending on the treatment-to-date and prognosis by the physician, we will follow people for periods of time, a year, maybe forever, or close their case. For instance, someone has MS, if the physician's report is that they've been stable for years and they're progressing very, very slowly, we might ask for a medical report every two years or at the next time of renewal. We try to work on a case-by-case basis.

If it looks like, based on other reports that we've seen before that, that there's a deterioration, we may ask for more frequent reports. Again, it's a case-by-case decision. I think that in a sense addresses the beginning of your question. There are people that do get out of the queue. You don't have to

be in the queue forever and ever, but if you do have a condition that is most likely to progress in the future, then you're probably going to stay in the system. It's just a question of reading the reports and deciding do we want a medical report every six months, every year, every two years, every renewal.

DR. JOLLY: Til Jolly from AAAM.

Just a quick question, if somebody has a response to this. This whole system assumes that all the people we're dealing with have primary care doctors. Do any of you have a mechanism for dealing with somebody that says I don't have any insurance, I don't have any money, I don't have a doctor, I can't go get that evaluation?

MR. STROMBERG: I just ran into that last week. A young lady had been profiled in three categories five years ago, and she was -- her doctor had written at the time she only needs to be renewed -- re-evaluated upon renewal, and so she got her letter at the same time she got her renewal notice, and she says, well, I don't see those doctors anymore. I don't take those medications. I had to explain to her that because there was a medical on file, we needed her medical to be filled out, and she says, well, I don't take those medications, and I say, I believe you, but I can't take it off the record unless I have something signed by a doctor and that's where it came up that she didn't have health care, she didn't have a doctor.

I think in Utah, I recommended that she check into

some of the agencies there, but I think there is a mechanism where they can go in and see a doctor on kind of a -- I don't want to say homeless. What was it? Yeah. Indigent care or I think there's another one, but the name of it slips my mind right now, and I recommended that she go see those two. So, hopefully she will be able to get a profile letter from them.

MS. STEWART: We hear that quite often because what we hear is my insurance won't pay for it because my doctor doesn't think I need it, and I don't know whether the doctor really said that or the person's trying to get out of it. So, in most cases, if they say that, then I'll ask them to give me a letter from their doctor, have their doctor contact me or whatever, and I try to explain to them that it's for highway safety and that, you know, as unfortunate as it is, we do have to have this information to allow them to maintain their license, and it is unfortunate but we do run into that a lot, and then they'll say, well, you're going to pay for it or the State of North Carolina, and I'm like no.

DR. SODERSTROM: I don't think we have a lot of resources in Maryland. For alcohol and other drug evaluations, you can go to the county health departments and basically they're done at cost or very cheaply.

Til, I think one of the things that happens is it's self-selected. If people don't have physicians and they need a driver's license, my guess is they're not going to be checking off

a lot of things because it's going to cost money, if I have to admit -- not admit -- if I have to check off that I've got these three medical conditions, and with the state of health care and not enough money around and people not having health care, my guess is in many conditions, many situations, people are not going to check off because they know they don't have the money to go on a regular basis to see someone.

DR. BREWER: Phil Brewer from the American College of Emergency Physicians.

A couple of questions. Incidentally, those people are probably somewhat likely to not have automobile insurance either, coming from a state which has a very high rate of uninsured drivers.

First question is, what impact, if any, or have you done a review of the impact that HIPAA will have on this whole process? We're about to enter an era of much stricter federal regulations on the passage of medical information between different entities, and has anybody asked for a legal opinion in their state on what effect, if any, HIPAA will have on this evaluation process?

DR. SODERSTROM: It hasn't happened for us yet, and I'm sure it's coming.

DR. BREWER: Is anybody preparing for this, though, by asking for a formal review of what impact

-- certainly hospitals are doing that left and right. Are state

medical advisory boards also asking their attorney general, for instance, for a legal opinion as to what effect HIPAA will have on their review process?

MS. STEWART: Right off the top, we, of course, would check with our attorney general's office, but because of the way our statute is written, that any medical information, we are allowed to see that but it's only used for the purpose of determining whether someone can drive or not. So, ours is not public knowledge or anything and it's stated that.

DR. BREWER: HIPAA requires specific authorization at many steps by signature, by the individual, in order to be able to transfer the information from one individual to another, and so your current procedure may not be HIPAA-compliant, and if it isn't, then you're going to be in trouble with the Federal Government because of illegally passing -- illegally with respect to federal law, passing information from one agency to another.

I don't know of anybody who is doing this. I think it's something that certainly hospitals are very aware of, but I don't think it's really on the radar screen of medical advisory boards. It doesn't sound like any of the three here are --

MR. STROMBERG: The last I heard was a couple of weeks ago, was that our Records Bureau chief was looking into it, and he expressed the opinion that he thought we were compliant.

DR. BREWER: Okay. The other question has to do with the issue of driving while suspended. I'm sure our MADD

representative is very familiar with this problem. A lot of people, in spite of being suspended, continue to drive anyway. What are -- what's the current status in your states with that problem? Are you simply looking at it or are you doing any follow-up of subsequent arrests or tickets or so forth of people who have been suspended and you subsequently find out that they're driving anyway?

MS. STEWART: Well, in North Carolina, it's only if you're stopped and your status on your driving record is suspended or medically canceled or whatever, they will and can write you for driving on a suspended or revoked license and that would -- in turn, if they're convicted in court, there would be a one-year suspension, additional to whatever was previously going on.

DR. SODERSTROM: We don't know how many people are driving that are suspended, but we are cognizant of the national problem. Hence, when we put drunk drivers back on the road now after they've fulfilled all the things that we ask of them, more often than not, we will put them on an interlock. At least we know that when they're in that vehicle, they can't start it when drinking. We have a very rigorous program in which they have to get downloads once a month and the records come to us, and if there are violations, tough. They're out. They're out very quickly.

So, being cognizant of that, we just like to use the interlock as much as possible, and usually it will be a year,

almost always it's two years to start with.

MR. STROMBERG: We only suspend licenses in Utah for failure to pay tickets or for DUI actions and then it could be a suspension or a revocation. In medical issues, they're just denied, and so if a person gets a ticket for driving on denied, we don't add lifetime, but the fees in the county or the city where they got the ticket could be really high, almost a thousand dollars extra for driving on a denied license.

If they were driving on a suspended or revoked license, then we add like time. If they were suspended for a year, then we would add another year and sometimes that helps, sometimes it doesn't. I've seen them suspended until 2011 and every time they drive, they get another ticket.

MS. STRESSEL: Donna Stressel from the Association of Driver Rehab Specialists.

With many things, states do things so differently, I was wondering if there's any initiative for there to be developed guidelines or best practices on how states can deal with motor vehicles, can deal with people who are trying to comply and report themselves, particularly with the more complicated patients who may have gone in and they have multiple problems, maybe musculoskeletals, say from a stroke, cognitive impairments, visual impairments, or a head injury who might have a seizure disorder along with the other disorders.

Often I have found in trying to assist them going

through the motor vehicle process, that they're kind of divvied up and one person is looking at one aspect of their condition and the person as a whole gets lost through the system.

The other issue I run into sometimes is when an individual does have a medical suspension, they're not appropriate for driving, yet they need to be re-evaluated or retrained at a later date and their license is medically suspended, in order for them to legally pursue remediation or additional testing, they're kind of in that Catch-22 where their physician needs to recommend that they be -- you know, that they're okay to drive, but they're not going to be able to get that clearance until they've gone through the process, and I'm finding that particularly in the state where I'm from, there's the guidance for the Motor Vehicles Department, either from the Medical Review Board or in general from other states who have better systems in place, that it's just lacking and there's no real guidelines to help them deal with the more complicated patients.

Is there any initiative to do things -- again, I know that there's always going to be variations from state to state -- but to provide them with more general guidelines for best practices?

MS. STEWART: The only thing I can think of is a driver from North Carolina that is on our medical program and maybe we have him just for a follow-up or we've canceled him for not getting his medical information in, we can release him, if

he's proved, given us evidence that he is relocated to another state. We notify that DMV in the other state and then we put like a reminder on the record in North Carolina. We release him to that state for them to make the decision on whatever they deem necessary, but we also put a notation on our record, should he come back to North Carolina, we will pick up where we left off.

As far as in our department with people that have adjudication problems as well as medical, if it's something we can clear to let them go through with the judicial part of it through adjudication, we do it. If it's something that they can release them from, if the medical is a stronger problem, then they release them to us. We do try to work together in the best interest of highway safety and that customer.

DR. SODERSTROM: I'm not sure I understand the question completely, but for consistency in the State of Maryland, seven facilities have been designated and evaluated by the MVA as the places where you have to go to get rehabilitation evaluation and those are the only places you can go. I think I'm answering your question there.

MS. STRESSEL: Yes. My question is more it sounds like you have a very good system in your state. For those states that don't necessarily even recognize the process of driver rehab specialists in providing information, is there anything that would help those states develop systems, such as you have in your state, to, you know, help them with a better process? Does that clarify

my question?

It sounds like in your state, you have a very good program. Is there any initiative to help states that don't have such a program to do better in identifying those resources --

DR. SODERSTROM: Not that --

MS. STRESSEL: -- that are available?

DR. SODERSTROM: Not that I'm aware of, but as said, if a person does leave Maryland, we will ask for a must clear when they come back to our state relative to certain issues. We're not working with other states, though, no.

MR. STROMBERG: We do the same thing in Utah. We'll close out the department action if they're denied for a medical problem and put a note on their record that they are -- if they ever come back to Utah, they will be required to provide us with new medical information. But with working with other states, I'm not aware of any procedures that we follow there.

CHAIRMAN GOGLIA: Is that it from the Medical Group?

State Group?

MR. GRANT: John Grant from the International Association of Chiefs of Police.

Dr. Stromberg, in Utah, they seem to make a lot of use of restricting a license as opposed to canceling or denying the license. That restriction is noted when -- if that person is stopped by a police officer. It's noted on the file that the officer -- so the officer will know that that person's restricted?

MR. STROMBERG: The license will have the code, like G is for daylight driving only, V is for speed, and J is for area. Then J will -- in the alert, there's an alert field that the officer can see on the header that he can pull up on his computer. He just gets the header of the driving record that has name, address, height, weight, and that kind of information, but in the header, it'll have the alert and it'll show J restriction is for five-mile radius of home and that's about the only way that they would know.

MR. GRANT: Now, if a person is stopped and cited or in some way dealt with, does that information ever get back to you? Do you ever find out whether those restrictions are being abided by?

MR. STROMBERG: At this point, I haven't ran into that. I know that it happens. It has to happen, but they will get the citation. The only way I'll see it again is in the review. If I'm looking at the record, and it's a year later, and I see the medical record, I see he has a license for driving on a denied, I do not know what happens, whether we are driving outside the restrictions. I'm not aware of what we do at that point.

MR. GRANT: But that doesn't initiate some process for you to review whether you should take other action as opposed to just restricting?

MR. STROMBERG: It might be something that I bring up to the board, this individual was restricted to this and he drove

outside the restrictions, and, you know, once they have all the restrictions, I don't know that you can put more restrictions, but you could probably deny them, but I've never ran into that scenario.

MR. GRANT: Also, I was just kind of curious. What is the length of time now that licenses, normal licenses are issued for in your states?

MR. STROMBERG: Five years.

DR. SODERSTROM: Five years.

MS. STEWART: Five years, and I know that Dr. Broadhurst had mentioned a eight-year license and that was only at one time. That was when we were trying to get everyone to the five years. So, someone might have got one for eight years, but from that point on, they'd be on a five-year license.

MR. GRANT: And absent some sort of intervention, such as somebody filing a request for review, there's no requirement for the individual to notify you of a change in medical status or there's no mechanism required to notify you of a change in medical status during that five-year period?

MR. STROMBERG: In Utah, it's the individual's -- it's in statute that the individual must notify the Driver's License or if they feel like there's a condition, they must confer with their doctor and then their doctor must confer with the patient about his driving and what can happen if he's on these medications, but it's up to the individual driver to report any changes. There's

no mechanism, other than we might send out a yearly review or a two-year review, depending on the doctor's recommendations from the last review.

MR. GRANT: And just a final question. When a police officer or a physician files a document to request that this person be re-evaluated or retested, do they ever get any feedback as to what the results of that process are?

MR. STROMBERG: When I was a hearing officer with the department, I had drivers -- officers tell me that they would follow them. They bring them up on the computer every month or so to see if anything had happened to them.

MR. GRANT: But you never sent anything back to the officer --

MR. STROMBERG: No.

MR. GRANT: -- saying that this person's been denied or restricted?

MR. STROMBERG: Right.

DR. SODERSTROM: We don't either. In fact, when I was at the Trauma Center for years, there was always the thought of wanting to help the field providers get some feedback, but you have to be very careful what kind of feedback you get because it's confidential medical information. So, the amount of information you could give back would not really reveal any kind of specific medical information because you're really not in a position to do that.

MR. GRANT: But even you wouldn't tell them of a change in license status?

DR. SODERSTROM: We don't have a mechanism to do it. But I think that from the medical point of view, you literally could not provide any information to say yes or no, they have this. I mean, that's out of bounds. Even with field providers for trauma centers, at best, we can say that thank you for transferring so and so to the center, they had severe injuries. I mean, that would be it. You can't go beyond that.

MR. STROMBERG: I wouldn't tell an officer whether someone was denied medically. I wouldn't tell anyone that. You know, I kind of think they're my people, my patients, you know. I'm not a doctor, but they're mine and they're my files and I can kind of keep them sacred.

MR. GRANT: Thank you.

MS. COHEN: Lori Cohen with the American Association of Motor Vehicle Administrators.

This question is for Dr. Soderstrom. Drunk driving is a critical impairment that requires medical oversight obviously, and I have heard about Maryland's program to have medical oversight of drivers with drinking problems, and it avoids adjudication. It avoids the courts and the prosecution by having medical oversight, by reporting it to the Medical Review Board.

I was wondering if you wanted to say just a few words about that program and whether you define that as effective?

DR. SODERSTROM: I don't fully understand that whole system at this point because of my other activities I have, but right now, if you do have drunk driving problems, you are referred to a section of the Driver Wellness Division and they make some stipulations as to under what conditions you can and cannot drive.

One of the things is that we require for people that is now in Maryland law, that after their second drunk driving conviction, they must have an evaluation for alcohol problems. Depending on what that shows, they have to prove that they have been abstinent and had at least six months of treatment before they're considered candidates to go back on the road, and then, as I said, we freely use the interlock system in our state.

When individuals in Maryland have three or more drunk driving convictions, before they're put back on the road, they're always brought before the Medical Advisory Board for an interview to get an idea of where are they. You just can't, from looking at paper, get any kind of idea as to where they are with their drinking problem.

Dr. Krumholz said before that his clients, his patients get a lot of alcohol questions. That's now been changed in Maryland. Depending on why you were referred to the Medical Review Board, you can get three questions about alcohol use, which is the standard three we would ask everyone now. If you’re referred because of an alcohol problem, you're going to get a boatload of questions, and how you answer those questions tells us

something.

If somebody's who's had two drunk driving convictions tells me that the most number of drinks they've ever had in their life is four at any one time, I don't believe them. If they tell me the most number of drinks they've had at any one time in their life in a sitting was 20, I believe them because that is a right answer. They most likely have done that a whole bunch of times.

We look at whether they consider themselves a recovering alcoholic. There are a whole series of questions, and if there's any question about the responses, we'll bring them in and say let's talk about this. We do a lot of interviewing for people after the third and fourth offense. The automatic part of it goes to the other component of the Driver Wellness Division – the alcohol, no other medical problems -- which just basically places sanctions and asks for six months of treatment before they're considered to be put back on the road.

CHAIRMAN GOGLIA: Okay.

DR. SODERSTROM: Does that help?

MS. COHEN: It was a slightly different program.

DR. SODERSTROM: I don't think I'm answering your question because I don't think I fully understand it right now.

MS. COHEN: Yeah. It was a program I heard about at the Criminal Justice Summit in December. Maybe I'm misunderstanding it, but I thought that like a law enforcement officer could refer someone or even a citizen complaint or

something say I have -- I believe this person's under the influence of alcohol and they're driving.

DR. SODERSTROM: Yes.

MS. COHEN: They could be referred directly to some portion of the Maryland program, I don't know which, and they could be referred for evaluation --

DR. SODERSTROM: Oh, yes.

MS. COHEN: -- and completely avoid the courts. That was what --

DR. SODERSTROM: Oh, yes.

MS. COHEN: -- I thought was so innovative. You could deal with this problem and get the driver off the road without dealing with the court.

DR. SODERSTROM: That's always basically been in place, concerned citizen letters. As a result we send a field investigator out to get some more information about the client and then decide if further investigation is needed. That has always been available in Maryland.

MS. COHEN: Okay.

CHAIRMAN GOGLIA: Okay. Thank you.

Technical Panel, do you have any additional questions to follow up?

MS. McDONALD: No, I do not.

DR. GARBER: I'm sorry. Just one very brief question. Are any of the panelists aware of any national organization of

medical advisory boards? Any way in which you guys can get together and discuss some of these issues?

MR. STROMBERG: I'm not aware of any but that would be a good idea.

MS. STEWART: I'm not aware of one but it would be a good idea.

DR. SODERSTROM: Same answer, and I hope that that's where the AAMVA survey takes us.

DR. GARBER: Thank you.

That's all we have from the Technical Panel.

CHAIRMAN GOGLIA: Okay. To the Board of Inquiry.

DR. ELLINGSTAD: Just a couple.

CHAIRMAN GOGLIA: Vern Ellingstad.

DR. ELLINGSTAD: Just a couple quick things to sort of clarify capacity.

I believe that I heard that both Maryland and North Carolina have about a thousand cases a month, is that ball park?

DR. SODERSTROM: Yes.

DR. ELLINGSTAD: And in Utah, what's your --

MR. STROMBERG: About 30. Sometimes some months are even more.

DR. ELLINGSTAD: Thirty per month?

MR. STROMBERG: Yeah.

DR. ELLINGSTAD: Okay. Could each of you very quickly give me a sense of what proportion of these cases referred to your

Medical Advisory Board are generated out of accidents or some enforcement activity?

MR. STROMBERG: When an accident comes to our attention, it's usually through a 117 form that the officer had reason to believe that it was caused by an accident. I determine whether they send out a medical form on those, and I may get 10 a week on those or maybe 40 a month, 40 or 50 a month. Of those, I estimate I'll get two or three that will actually come back to the Medical Advisory Board and one of those will actually submit records. So, it's not a really high process.

DR. ELLINGSTAD: So, maybe 10 percent or so of yours are coming out of that source?

MR. STROMBERG: Right.

DR. ELLINGSTAD: How about in the other states?

MS. STEWART: I would say probably 30-35.

DR. ELLINGSTAD: Thirty or 35?

MS. STEWART: With the HP-640s and the accident report.

DR. ELLINGSTAD: Cases or percent?

MS. STEWART: Percent.

DR. ELLINGSTAD: Okay. Thirty or 35 percent of North Carolina --

MS. STEWART: Cases, incoming cases, yes.

DR. ELLINGSTAD: -- cases are coming out of accidents, and how does that break down between accidents and other kinds of

law enforcement actions?

MS. STEWART: Well, now I was saying accident and HP-640s would be 30-35 percent. Then the other ones would come from the examiners and citizens or physicians.

DR. ELLINGSTAD: Okay. How about Maryland?

DR. SODERSTROM: Maryland, 35 percent of the cases come to the attention of the MAB because of law enforcement or the courts. Now, whether they're crashes or not, more of those requests are for re-examination for incidents that occur on the roads. Seventeen percent comes from physicians and occupational therapists, the vast majority coming from physicians. Thirty-five percent come at the time of renewal when people say yes, I have a medical problem. Two percent come from counter referrals, incidences that occur at the counter where it looks like somebody's dramatically impaired or there's something going and they're asked to submit a medical package, and 11 percent come from concerned citizens, family, friends, letters.

DR. ELLINGSTAD: Okay. And just one other -- sort of a clarification of some numbers that you mentioned. In Maryland, you said that your drunk driving convictions are always brought before the Medical Advisory Board before they're reissued a license. What kind of a caseload does that represent per year?

DR. SODERSTROM: Of the -- again, whether it's reviews or whether it's individuals per year -- but it's about half of the work right now and it's about 5 to 6,000 a year.

DR. ELLINGSTAD: So, that --

DR. SODERSTROM: Takes a lot of time.

DR. ELLINGSTAD: -- DWI business is eating up a good share of the capacity of your Medical Advisory Board?

DR. SODERSTROM: That's correct, sir, and as alluded to by other people who have testified today, while other medical conditions are very important, the medical condition of alcohol dependence, abuse or however we want to characterize is the biggest problem.

DR. ELLINGSTAD: Okay.

DR. SODERSTROM: Probably very under-reported.

DR. ELLINGSTAD: All right. And just to clarify in each of these cases with respect to the cases, the numbers of cases you got, are these all non-commercial referrals?

DR. SODERSTROM: Yes.

MS. STEWART: Yes.

DR. ELLINGSTAD: Thank you.

CHAIRMAN GOGLIA: Mr. Osterman?

MR. OSTERMAN: No.

CHAIRMAN GOGLIA: Rafael?

DR. MARSHALL: No.

CHAIRMAN GOGLIA: Well, hearing no further questions, I guess that we've reached that time of the day where we can go home, a little bit later than we planned.

If anyone would like to leave their books and their

material here, this room will be secured. So, there's really no problem leaving any of your material here.

We will recess and reconvene tomorrow morning at 8:00.

(Whereupon, at 5:37 p.m., the hearing was adjourned, to reconvene tomorrow morning, Wednesday, March 19th, 2003, at 8:00 a.m.)