United States Department of Transportation
FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION
MEDICAL REVIEW BOARD

Meeting Summary

The Medical Review Board (MRB) of the U.S. Department of Transportation's Federal Motor Carrier Safety Administration (FMCSA) convened on July 18, 2008, at the Embassy Suites Hotel in Alexandria, Virginia. The meeting was open to the public.

Board Members Present:
Kurt Hegmann, MD, Chairperson
Michael Greenberg, MD, Co-Chairperson
Barbara Phillips, MD
Matthew Rizzo, MD

Board Member Absent:
Gunnar Andersson, MD

FMCSA Staff:
*Mary D. Gunnels, Ph.D., Director, Office of Medical Programs
Quynh Do
Stephen Garcia
Richard Johnson
Linda Phillips
Kristen Schrader
Mindy Shalaby
Chanel Winston

* *Designated Federal Official (DFO)*

FMCSA Contractors:
Ellison Wittels, MD, FMCSA Senior Medical Consultant
Glenna Tinney, Axiom Resource Management, Inc.
Purvi Shah, Axiom Resource Management, Inc.
Margo Weeks, Axiom Resource Management, Inc.
Jennifer Musick, Axiom Resource Management, Inc.
Lonnie Weiss, Weiss Consulting, LLC

Members of the Public:
Christy Cullinan, American Trucking Associations
Gerald Donaldson, Advocates for Highway & Auto Safety
Sheri Erickson, Sound Sleep Center
Anja Graves, Sound Sleep Center
Gary Gross, Epilepsy Foundation
Dan Huff, Associated Press Television News
Mike Joyce, Owner-Operator Independent Driver's Association
David Martin, Associated Press Television News
Janis Moebus, Workwell
Gary Moffitt, Road Ready
Bob Perry, Roadside Medical Clinics
Bob Rothstein, Trucker Buddy International
Craig Segasser, Soporex, Inc.

Call to Order

Mary D. Gunnels, Ph.D., Director, Office of Medical Programs, FMCSA, called the eighth public meeting of the MRB to order, noting that she was the DFO for the meeting. She announced there would be two periods for public comments during the meeting and that the MRB would continue

their discussion on the topic of renal disease that they began at the April 7, 2008, MRB meeting. She introduced Kurt Hegmann, MD, as the Chairperson of the MRB.

Dr. Gunnels requested that attendees complete the evaluation form they were given before leaving the meeting. She also announced that a detailed summary of the meeting would be prepared and posted on the MRB Web site at www.mrb.fmcsa.dot.gov.

Agenda Overview, Approval of April 2008 Meeting Summary, and Discussion of Other Business

As the first order of business, Dr. Hegmann called for approval of the minutes of the seventh public meeting of the MRB held on April 7, 2008. The minutes were unanimously approved. Dr. Hegmann asked if the MRB had any items of business to discuss.

Barbara Phillips, MD, stated that the MRB had been working on a revised fitness for duty standard for commercial motor vehicle (CMV) drivers over the last several months and she believed the MRB was ready to act on the following motion:

Recommendation #1: Fitness for Duty Standard
The MRB recommends that FMCSA change the fitness for duty standard to the following:

- CMV drivers shall have the physical and mental fitness required to safely operate a CMV. Drivers who are not fit may present a safety hazard to themselves and to the public.
- Physical and mental disorders may reduce driver performance and increase the risk of CMV crashes. Drivers with multiple medical disorders and/or taking licit or illicit drugs may pose additional increased risk for crash.

Dr. Hegmann clarified that with this motion the MRB recommends that FMCSA change the current fitness for duty standard with the wording presented by Dr. Phillips. The MRB unanimously approved this motion.

Matthew Rizzo, MD, made the following motion:

Recommendation #2: Evaluation of Fitness for Duty

- The MRB recommends that FMCSA use the following as a draft proposal for evaluation of fitness for duty among drivers with multiple physical and medical conditions, and also recommends that FMCSA convene a panel of experts to further refine the following proposal:

Number of Conditions ****	Certification
0 or 1	Maximum 2 years
2 +++	Maximum 1 year
3 +++	Maximum 6 months
>4 +++	Not eligible until resolution of at least one condition

****Diabetes mellitus requiring medication, cardiovascular disease, hypertension, dysrhythmias, obstructive sleep apnea (OSA), body mass index (BMI) > 35 kg/m2, opioid or benzodiazepine use, renal disease, pulmonary disease with pulmonary function test (PFT) abnormality, epilepsy seizure free for >10 years, musculoskeletal disease requiring medical, surgical or prosthetic treatment, requirement for visual exemption,

major psychiatric illness (as defined pending formal review by the MRB), and other conditions as identified by FMCSA.

+++ Evaluation to be conducted by a commercial driver medical examiner (CDME) who is a licensed medical doctor (MD) or doctor of osteopathy (DO).

Dr. Rizzo clarified that an evaluation by a CDME, who is a licensed MD or DO, is recommended to be required for individuals with two or more conditions, but not if there is only one or no condition.

Dr. Hegmann clarified that with cases of epilepsy, the person must be seizure free and off medications for more than 10 years. Dr. Rizzo agreed with Dr. Hegmann's clarification. Dr. Hegmann said that this is consistent with prior guidance on this topic. He asked if there was any further discussion regarding the rationale for this recommendation.

Dr. Rizzo said that there is emerging evidence on the problems associated with a single condition. Evidence-based reviews have evaluated a number of conditions such as OSA and diabetes mellitus. Many of these diseases occur simultaneously. It is assumed that having multiple conditions creates more risk than having a single condition. The intent of this motion is to recognize the added risk and develop operational guidance with FMCSA on how to deal with problems that create additional risk.

Dr. Phillips added that multiple conditions are treated with different medications. It is important to consider the potential for medication interaction and compounding adverse effects. Dr. Hegmann agreed and noted that this supports the need for the more complex issues to be assessed by an MD or DO. The MRB unanimously approved this motion.

Dr. Gunnels asked if standard clinical practice would require an individual with these conditions to see a physician (MD or DO) anyway. Dr. Phillips stated that the only change that would be evident would be increased communication between the medical examiner and the patient's physician. Dr. Gunnels emphasized that FMCSA's goal is to have medical standards that are consistent with current clinical practice and best practice.

Michael Greenberg, MD, made the following motion:

Recommendation #3: Fitness for Duty - Remediation

- The MRB recommends to FMCSA that remediation of some physical or mental conditions is possible, and drivers may be eligible for certification to drive a CMV following resolution of these conditions.

This motion was unanimously approved.

Dr. Gunnels asked the MRB to explain their rationale for this recommendation. Dr. Greenberg said that some disorders are linked causally. Resolution of one problem could potentially resolve all of the individual's related medical problems, and the individual would presumably be eligible to drive.

Dr. Greenberg made the following motion:

Recommendation #4: Mental Fitness for Duty

- The MRB recommends to FMCSA that drivers who physically or verbally threaten medical staff have demonstrated a lack of mental fitness to drive. They should not be qualified pending an evaluation, counseling or other appropriate measure.

The MRB unanimously approved this motion. As there was no further discussion from the MRB regarding fitness for duty, the MRB proceeded to their next recommendation regarding the review of guidelines.

Dr. Greenberg made the following motion[1]:

Recommendation #5: Review of Guidelines

- The MRB recommends that FMCSA seek and receive adequate funding for regular review of the guidelines. This includes all of the guidelines that have been discussed to date and those to be generated in the future.
- Reviews of each guideline should be conducted at least every 3 years to determine whether existing guidelines should be reaffirmed or revised.

Dr. Hegmann asked the MRB if there was any discussion on this motion. Dr. Greenberg added that the MRB is cognizant of the fact that medicine and science are constantly changing—new evidence is discovered and old evidence becomes stale. A mechanism for ongoing review would be appropriate given the speed at which science is changing. Dr. Hegmann added that the generally accepted timeframe for review of guidelines in the medical community is 3 years. This recommendation is consistent with that accepted standard and is recommended to apply to all disorders, not just a specific disorder.

Following this discussion, the MRB unanimously approved this motion and proceeded to the next item on the agenda.

Review of Chronic Kidney Disease and CMV Driver Safety—Evidence Report
Barbara Phillips, MD

Dr. Phillips reviewed the evidence report on chronic kidney disease (CKD) and CMV driver safety that was previously presented in full by Stephen Tregear, DPhil, during the April 7, 2008, MRB meeting.

Dr. Phillips noted that there are no regulations that specifically address CMV drivers with CKD, but potential risks are posed by drivers that have kidney problems. There are data to support that drivers with CKD are susceptible to fatigue, daytime sleepiness, neurocognitive symptoms, and increased risk of cardiovascular events. Diabetes and CKD frequently coexist, so those with diabetes are predisposed to hypoglycemia, which is another known risk of CKD.

Dr. Phillips noted that the literature search conducted for the evidence report identified two low-quality studies that looked at whether individuals with CKD were at greater risk for a crash. Neither of these studies suggested that there was an increased risk.

[1] Note: This recommendation was made during the Medical Review Board discussion of chronic kidney disease (CKD). Since it was not specific only to CKD, it was included under general recommendations.

Dr. Phillips explained that there were no studies that looked at risk of crash by stage of kidney disease. She noted that the MRB will be making recommendations based on stage of CKD, and explained the significance of Stages 4 and 5 CKD. Stage 4 CKD is considered pre-dialysis, and people in this stage will need dialysis in the near future. People with Stage 5 CKD, or end-stage CKD, are already on hemodialysis or peritoneal dialysis.

Additionally, there were no specific studies that looked at crash risk for people on dialysis (hemodialysis or peritoneal dialysis), but there were some studies that addressed surrogate measures that might predict crash. There were 13 studies that included nearly 1,000 people on dialysis looking at neurocognitive function and three studies looking at people with sleep-related issues. These studies suggest that people on dialysis have impaired neurocognitive function compared to those without CKD. Furthermore, individuals undergoing hemodialysis may be more impaired in neurocognitive function the day before dialysis than they are the day after dialysis.

The sleep-related data show that sleep-related breathing disorders, such as OSA, are four times more prevalent in those undergoing dialysis than in the general population. OSA is a well-documented risk factor for crash.

There is also some information about the probability of cardiac arrest in people undergoing dialysis as compared to people with CKD who have received transplants. The data show that people with CKD who have undergone a kidney transplant do not have an increased risk of cardiac arrest. However, the data show a markedly increased risk of cardiac arrest over time for individuals undergoing dialysis (hemodialysis or peritoneal dialysis).

Dr. Phillips concluded her remarks, stating that little crash risk data exist regarding CKD. However, indirect evidence shows that people with end-stage CKD on dialysis and related medications are at an increased risk for crash. There does not appear to be a difference in the risk for people on peritoneal dialysis versus hemodialysis in terms of risk for cardiovascular impact.

Dr. Hegmann expressed appreciation to Dr. Phillips for her presentation and turned the meeting over to Dr. Gunnels for public comments.

Public Comment on Chronic Kidney Disease

Dr. Gunnels invited the public to make comments on the topic of CKD. Noting no public comments, she turned the meeting back to the MRB for deliberations.

MRB Deliberations and Recommendations on Chronic Kidney Disease

Dr. Hegmann invited discussions and deliberations of the MRB on the topic of CKD, at which time Dr. Rizzo made the following motion:

Recommendation #1: Identification of Individuals with Chronic Kidney Disease
The MRB recommends that FMCSA accept *most* of the Renal Disorders Medical Expert Panel (MEP) advice and to require a blood test to measure serum creatinine and glomerular filtration rate (GFR) estimated through creatinine clearance for those drivers who have any of the following conditions:

- Personal history of potential CKD
- Age over 65 years
- Diabetes mellitus

- Hypertension (as specified on the CDME examination form)
- Proteinuria

Dr. Gunnels pointed out that this motion really discusses risk factors for people with CKD. She asked the MRB to comment on the five risk factors and to also clarify the difference between this recommendation and current practice.

Dr. Hegmann noted that current practice does not require a blood test, so this would be a significant change from that standpoint. The Renal Disorders MEP recommended that either everyone be screened, or individuals with risk factors be screened. Dr. Hegmann deferred the discussion of the risk factors to the other members of the MRB.

Dr. Rizzo said that the MRB discussed the risk factors at length. He noted that a personal history of CKD would be an obvious red flag. However, age over 65 years is not such an obvious risk factor. However, kidney function wanes significantly after 65, and there is a much greater chance of CKD than in a younger person. Diabetes mellitus is a well-known risk factor for CKD, which may even lead to dialysis and transplantation. Another well-known risk factor is hypertension. High blood pressure damages blood vessels in the kidney and can cause chronic renal failure. Therefore, it is something that needs to be evaluated. Finally, proteinuria (protein in the urine) is a sign of a diseased kidney, which should be screened as advised by the Renal Disorders MEP.

Dr. Gunnels clarified that this recommendation applies to those who should be screened for CKD consistent with good medical practice. The preliminary screening for proteinuria is already being done. The additonal blood test would be recommended in current practice if the individual had these risk factors.

Dr. Phillips concurred with Dr. Gunnels' clarification and added that there would not necessarily need to be an additional blood test. In the routine course of practicing good medince, physicans who are aware of their patient's condition would have already measured the creatinine. Improving communication between the patient's physician and the medical examiner is the goal.
Dr. Hegmann added that this motion also has the purpose of preventing the progression to dialysis as emphasized by the Renal Disorders MEP. The MRB unanimously approved this motion.

Dr. Rizzo made the following motion:

Recommendation #2: Screening of Individuals in Stages 1, 2 or 3 Chronic Kidney Disease
The MRB recommends that FMCSA accept the Renal Disorders MEP recommendation that drivers screened for renal disease be staged.

- Drivers with a more severe, higher stage renal disease should be screened more frequently.
- Drivers in Stages 1, 2 or 3 should have screening with repeat creatinine measurement and GFR performed with each CDME examination.
- Drivers in Stages 1 or 2 should be re-evaluated at least every 2 years.
- Drivers in Stage 3 should be re-evaluated at least annually.

Dr. Phillips pointed out that determining the stage of renal disease is relatively easy, since a urine test is already done as part of the driver examination. For high-risk individuals, the serum blood test combined with the patient's age can easily be entered into an algorithm. Dr. Hegmann added that this could be done with an Internet-based formula, so a staff person could do it for the physician. The MRB unanimously approved this motion.

Dr. Greenberg made the following motion:

Recommendation #3: Certification of Individuals in Stage 4 Chronic Kidney Disease

- The MRB recommends that FMCSA require those drivers with renal disease in Stage 4 (GFR 15-29 mL/min), be recertified at least every 6 months, including a GFR measurement and a supportive letter from their treating nephrologist.
- They should also receive a cardiovascular evaluation at least annually.

Dr. Hegmann noted that this is basically standard practice. Someone who is Stage 4 or pre-dialysis should be seeing a nephrologist and trying to aggressively manage and prevent the development of full-blown kidney failure. He invited the MRB to discuss the rationale for the cardiovascular examination. Dr. Phillips noted that the MEP was concerned about the interaction between heart disease and kidney disease. There is a strong correlation between left ventricular hypertrophy (LVH), risk of cardiovascular events, and the progression of kidney disease.

Dr. Rizzo stated that more detail about the cardiovascular concerns could have been explained in this motion; however, another MEP dealt with this issue. Dr. Hegmann concurred with Dr. Rizzo's comments and noted that the Cardiovascular Disease MEP report actually mentions LVH and the different ways it is measured. Dr. Rizzo added that the reason for added scrutiny is that many drivers with CKD progress to dialysis; the time may vary from months to a few years. Although it is not a certain outcome, it is a very likely outcome. The MRB unanimously approved this motion.

Dr. Gunnels clarified that it is the MRB's opinion that an individual with Stage 4 CKD should see a nephrologist, and asked the Board to explain what a nephrologist is for the benefit of the public.

Dr. Phillips agreed with Dr. Gunnels' clarification and said it is the MRB's opinion and the Renal Disorders MEP's recommendation that a person with Stage 4 CKD should see a nephrologist. A nephrologist is a doctor that treats people with kidney problems. She added that Stage 4 CKD is a GFR of 15-29 mL/min, which is considered very low kidney function. It is in the best interest of everyone that drivers in Stage 4 CKD see a nephrologist.

Dr. Hegmann explained that a nephrologist is a physician that has completed an internal medicine residency who has done a fellowship in nephrology and is board eligible or board certified by the American Board of Medical Specialties and specifically by the American Board of Internal Medicine.

Dr. Gunnels asked if a person with Stage 4 CKD would die if untreated.

Dr. Phillips said yes and explained that untreated Stage 4 CKD would progress to Stage 5 CKD, which requires dialysis for survival. Progression to this stage can be as short as weeks, especially if the individual were at the low end of Stage 4. It is the uncertainty surrounding how long it takes before dialysis is needed that makes frequent monitoring so important. More supervision and control of blood pressure, diabetes, and other risk factors will prolong the time that a person has before dialysis is required.

Dr. Hegmann asked if there were any other motions. Dr. Phillips made the following motion:

Recommendation #4: Certification of Individuals in Stage 5 Chronic Kidney Disease and/or on Dialysis

- The MRB recommends that FMCSA accept the recommendation of the Renal Disorders MEP and preclude drivers in Stage 5 and/or on hemodialysis or peritoneal dialysis from driving a CMV.
- Patients with successful kidney transplantation may seek certification.

Dr. Hegmann noted that there are some individuals that may technically be in Stage 5 but not on dialysis for a brief period of time. Dr. Phillips clarified that these individuals should not be driving and emphasized this recommendation would apply to those in Stage 5 *or* on dialysis. She added that if an individual was in Stage 5 and not on dialysis they would probably be bedridden and not able to function. This applies to individuals on either hemodialysis or peritoneal dialysis. The MRB unanimously approved this motion.

Dr. Gunnels asked the MRB to briefly explain the hemodialysis and peritoneal dialysis procedures, how frequently people have these procedures, and why it is important that they not drive.

Dr. Phillips explained that dialysis is an artificial way to remove waste products and extra fluid from a person's blood when kidneys can no longer do so on their own. The main types of dialysis are hemodialysis and peritoneal dialysis. Peritoneal dialysis is a continuous process done manually throughout the day or with a machine at night. There is risk of infection and a great deal of equipment required. There are also electrolyte and toxin shifts that can transiently result in cognitive impairment. It would not be easy to manage this process on the road or in the cab of a truck. Hemodialysis is typically performed three times a week, usually in a dialysis center. The data show that as people near the time when their dialysis is due, cognitive function is impaired. It may also be difficult to get to a dialysis center while traveling, and there could be a tendency to skip dialysis.

Dr. Hegmann noted that the data on cardiac arrest show that over a 3-year period, people in Stage 5 have a greater than 20 percent chance of having cardiac arrest. This suggests that these individuals are not safe to drive.

Dr. Hegmann asked if there were any other motions. Dr. Phillips made the following motion:

Recommendation #5: Further Research on Chronic Kidney Disease

- The MRB recommends that FMCSA accept the Renal Disorders MEP recommendation to acknowledge that there is a dearth of data pertaining to CKD and driver safety, and in particular the association between CKD and CMV driver crash needs to be examined.

Dr. Hegmann invited discussion on this motion. Dr. Phillips stated that the MRB and MEP were both frustrated by lack of knowledge about how people with Stages 3 and 4 CKD might progress and how they might function in terms of driving. She added that FMCSA is in a superb position to help answer some of these questions, so drivers can be treated fairly and to promote highway safety. The MRB unanimously approved this motion.

FMCSA Agency Update and Answers to Frequently Asked Questions
Mary D. Gunnels, PhD

Dr. Gunnels presented an update of Agency activities, explained the Federal rulemaking process and discussed how FMCSA intends to use the MRB recommendations in developing guidance or rules.

Dr. Gunnels explained that the proposed National Registry of Certified Medical Examiners (NRCME) would be a list of certified medical examiners who fully understand Federal medical standards and how they relate to the mental and physical demands of operating a CMV. Medical examiners would be required to successfully complete required training and pass a certification test before being listed on the NRCME. She emphasized that the work being done by the MRB will impact the proposed NRCME program so that when the MRB proposes a change in a medical standard for a topic such as renal disease, this information would be added to the training curriculum for the proposed NRCME program.

Dr. Gunnels highlighted the merging of the medical certificate and the commercial driver's license (CDL) as another proposed rule on which the Agency has received a lot of questions. This proposed initiative would merge driver medical information with the Commercial Driver's License Information System (CDLIS). She noted that the rule is currently undergoing departmental review and that the Agency hopes to publish a final rule this year. Both of these proposed programs will be critical in supporting the mission of FMCSA. The proposed NRCME will allow FMCSA to identify the medical examiner by number and have a way to link practitioners to the driver examinations they perform and driver data, and the Medical/CDL rule is critical to giving FMCSA the foundation to improve monitoring of the medical certification status of drivers.

Dr. Gunnels announced that the NRCME Role Delineation Study (RDS), a rigorous methodology used for developing certification tests, was recently completed and is available on the FMCSA NRCME Web site. She added that there is another study in progress that compliments the RDS that will be completed later this year. The RDS broke down the driver medical examination into a number of tasks and looked at the relative importance of each task. The other study examines practitioner differences and will incorporate data from direct observations of practitioners who perform the driver physical qualification examinations.

Dr. Gunnels concluded her comments and invited the public to visit the NRCME Web site for updates on the program and then turned the meeting over to Dr. Hegmann.

How the MRB Works: One Example by Medical Topic
Kurt Hegmann, MD, MPH

Dr. Hegmann presented an overview of the how the MRB generates recommendations for FMCSA. He explained that since the MRB's first meeting in 2006 they have addressed several topics to include, diabetes mellitus, seizure disorder, cardiovascular disorders, OSA, renal disorders, musculoskeletal disorders, schedule II medications, vision and fitness for duty. He added the MRB is working on recommendations for how to capture data and provide better guidance.

Dr. Hegmann highlighted the mission of the MRB, which is to: provide expert advice on medical standards, guidance, and research on the qualification and fitness for duty of CMV drivers;

evaluate the link between medical fitness and saving lives; and work to prevent crashes and injuries.

Dr. Hegmann explained that the driver's work environment is complex. It is not just physically demanding; there are also psychological demands. Drivers also need to do physical tasks beyond just driving, such as performing safety inspections and securing loads. These can be high force activities and can occur under adverse conditions. He noted sensory perception requirements lead to a need for vision and hearing standards; physical tasks, lead to musculoskeletal requirements.

Dr. Hegmann said that the MRB needs to review existing medical regulations and guidelines to determine what needs to be updated, considering ongoing advances in medical science and technology. Also, the evidence reports and the MEP reports need to be considered as they provide science-based guidelines and recommendations.

Dr. Hegmann further outlined the process the MRB uses to develop recommendations. He used musculoskeletal disorders as an example of how the process works. Dr. Hegmann discussed a few of the key research questions related to musculoskeletal disorders and highlighted the stringent requirements research has to meet to be considered quality data for the evidence reports. He reviewed the recommendations that the MRB made on musculoskeletal disorders and explained that the Agency reviews all evidence and recommendations made by the MRB and MEP to determine what, if any, action is necessary. He emphasized the Agency may or may not act on the recommendations proposed by the MRB. Detailed information on the musculoskeletal disorders evidence report and the MRB recommendations can be found in the April 7, 2008, MRB meeting summary and presentations at www.mrb.fmcsa.dot.gov/040708_meeting.htm.

Following his presentation, Dr. Hegmann turned the meeting over to Dr. Gunnels for public comments.

General Public Comments

Dr. Gunnels invited the public to make comments.

Gerald Donaldson, Advocates for Highway and Auto Safety, asked if the Agency has considered asking the MRB to make a risk assessment of the safety and health impact of a driver holding three simultaneous waivers from each of the following programs: the Federal Vision Exemption Program, the Diabetes Exemption Program and the Skill Performance Evaluation Certification Program.

Dr. Gunnels said that FMCSA can look at drivers in all three programs. However, it is not as much looking at the drivers in programs as looking at the kinds of conditions and the risks associated with those conditions. She said this would be an appropriate topic for the MRB and noted that the MRB had proposed a recommendation about multiple medical conditions earlier.

Dr. Phillips said that as the MRB proposed in the fitness for duty guidance, a driver with the three conditions requiring exemptions could be evaluated every 6 months by a CDME who is an MD or DO.

Dr. Hegmann added that the MRB purposely did not phrase the fitness for duty recommendation to be exclusive. The MRB recognizes and addresses the issue of interactions between disorders. When an individual has multiple conditions, there is increased risk. The individual needs a

qualified physician (MD or DO) to evaluate and rigorously assess whether that individual is able to operate a CMV safely.

Mr. Donaldson asked why musculoskeletal problems were characterized as "disease" rather than "disorders." He also said many drivers suffer either acute or chronic musculoskeletal disorders for which no organic cause can be found, and they are treated symptomatically for very long periods of time. Requiring a surgical intervention or prosthesis seems to be a rather stringent standard.

Dr. Rizzo said that the MRB has not made the distinction between "disorders" and "disease." There might be a difference, but the MRB has not considered what it is. Many people have musculoskeletal problems and whether it rises to the designation of a disease is a philosophical and technical issue. The MRB has not specifically addressed this question.

Dr. Hegmann explained that the CDME examination process does not handle acute impairments very well as it is a periodic evaluation that is performed typically every 1 or 2 years. If someone had a short-term impairment, it would not be identified unless it happens at the time of the renewal. During the examination, the CDME deals with diseases and disorders, not typically acute injury. Most issues appear to be acute onset of pain, and when fully examined, have chronic degenerative underpinnings. This terminology of disease, disorders, and injury is very unclear when it comes to musculoskeletal disorders, but the MRB did not make a distinction between disease and disorders.

Dr. Phillips said that the MRB did not limit the inclusion of musculoskeletal diseases requiring surgical or prosthetic treatment as a criterion that would require closer scrutiny. She clarified that the MRB included, "musculoskeletal disease requiring *medical* (including medications), surgical or prosthetic treatment," in their earlier recommendation.

Dr. Gunnels announced that the next meeting would be held on October 6, 2008 in Alexandria, Virginia. The proposed topic for this meeting is psychiatric disorders.

Adjournment

Noting no further comments, Dr. Hegmann adjourned the meeting at 10:30 a.m.

CERTIFICATION

The minutes were approved by the Medical Review Board on October 6, 2008
(Date)

We hereby certify that, to the best of our knowledge, the foregoing minutes are accurate and complete.

Kurt Hegmann, MD
Chairperson
Medical Review Board

Maggi Gunnels, PhD
Designated Federal Official
Medical Review Board