

## **Mentored Professional Enrichment Experience Application**

### **Applicant:**

**Name of Project/Experience:** Medical Fitness to Drive and A Voluntary State Reporting Law

**Location where Project/Experience will take place:** Alzheimer's Disease Research Center, Washington Univ. School of Medicine, 4488 Forest Park, St. Louis, MO 63108

### **Mentor Name and Contact Information:**

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### **RATIONALE**

The automobile is the most used method of transportation in the elderly (Collia, Sharp, & Geisbrecht, 2003). 13% of the current licensed drivers in the United States are over the age of 65 years, and this number is expected to increase to 20% by the year 2030 (U.S. Department of Transportation, 2003). Age-related diseases affect driving ability and raise issues of individual and public safety. Dementia of the Alzheimer's disease is by far the most frequent dementing disorder in the United States. Balancing the dual needs of mobility versus safety is difficult (Morris, 1994).

In 1998, the American Automobile Association (AAA), Washington University and other organizations lobbied the Missouri Legislature to pass a voluntary reporting law for potentially unsafe drivers called HB-1536. This law allows physicians, family members, law enforcement personally, and others to report potentially unsafe drivers for re-testing and possible license revocation (Meuser & Carr 2005). The original motivation for HB-1536 is to create a clear avenue for reporting potentially unsafe drivers due to cognitive disabilities, particularly Alzheimer's disease. To this date, 7077 drivers have been reported under HB-1536, with 93% being 50 or older.

No research group has evaluated the efficacy of HB-1536 or any similar laws in the 42 other states which allow voluntary reporting. An understanding on how the HB-

## MPEE

1536 law works and its efficacy will be helpful for state policy, public education, and the well-being of medically impaired drivers.

### GOALS

The portion of this project dedicated to studying the HB-1536 driving law is expected to fill 80% of this experience. For the remainder of the session, I will be working in the Washington University Alzheimer's Disease Research Center.

The goals of this 8-week MPEE project are:

1. To create an integrative database of reported cases of law HB-1536
2. Examine data regarding the Physician statement form (Form 1528)
3. To utilize this database and characterize the efficacy of HB-1536
4. Gain understanding regarding the effects of Alzheimer's disease in driving,
5. To become familiar with Alzheimer's disease treatment, prevention, and diagnosis by being active in the Memory & Aging Project Research Clinic (Clinical Core) and the Memory Diagnostic Center (a patient care clinic affiliated with Washington University Research Center)
6. Learn to administer and score the standard clinical interview for dementia, known as the Clinical Dementia Rating (CDR)
7. Participate in Alzheimer brain autopsy center with Dr. Allison Goate.
8. Participate in Wash Univ. Department of Medicine and Neurology research rounds.
9. Participate in the in-home assessment team to observe how dementia assessment occurs in the Saint Louis community.
10. Give a 15 minutes presentation on the Missouri Voluntary State Reporting Law project to the clinical group.

### METHODS

The first step in this project is to re-hatch and acquire the Physician forms from HB-1536 forms from Jefferson City. My goal is to review these forms, describe the reported health condition that physicians in Missouri are primarily focused on regarding medical fitness to drive. Currently, to our knowledge the data exists in one building, but different types of data may be in either paper or microfilm form. Once we have recovered 200-700 cases, we plan to input this data into an extensive database.

## MPEE

From this database the use of statistical analysis will be done to measure the most common complaint of driving cessation. Data analysis will also be done to determine the level of physician feedback and to determine what degree drivers are found to be safe or unsafe. We will also analyze what the retrospective and prospective crash rates of reported individuals are based on medical conditions; check to see if reported individuals correspond to expected population rates; and how many reported had their licenses revoked.

### **ANALYSIS**

The primary goal of this project will be met by the successful integration of all of the physician forms from the HB-1536 law. To our knowledge, no analysis has been completed on HB-1536. Thus, any correlation of reported drivers to retrospective and prospective crash rates, license removal, expected population rates, or any physician reason would be beneficial and a success. We believe that most of the reports are due to vision loss rather than dementia. However, this database would help judge whether current procedures are adequate for identifying those likely to be unsafe due to medical conditions of aging.

My secondary goal will be accomplished in the clinical field. I will be successful by becoming approved to administer the Clinical Dementia Rating (CDR) and by learning more information on the pathology, treatment, and prognosis of Alzheimer's Disease.

### **REFERENCES**

- Collia, D. V., Sharp, J., & Geisbrecht, L. (2003). The 2001 national household travel survey: A look into the travel patterns of older Americans. *Journal of Safety Research*, 34, 461-470.
- Meuser, Thomas., Carr, David. Medical Fitness to Drive & A Voluntary State Reporting law. 2005
- Morris, J. C. (1994). Conflicts of interest: Research and clinical care. *Alzheimer's Disease and Associated Disorders*, 11(Suppl. 1), 70-72.
- U.S. Department of Transportation. (2003). *Safe mobility for a maturing society: Challenges and opportunities*. Washington, DC: Author.

### **SUPPORT**

1. Do you request support funds? Yes
2. Would you be able to participate if a scholarship is not available? No