



Medical review process and license disposition of drivers referred by law enforcement in Virginia

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ABSTRACT

Introduction: Medically at-risk drivers come to the attention of licensing authorities through referrals from a variety of sources, including: physicians, family members, court systems, and law enforcement. A recently sponsored project by the National Highway Traffic Safety Administration examined a training intervention for law enforcement to increase their awareness of medical conditions and medications that impair driving and the procedures for reporting these drivers in Virginia. **Method:** A component of this project included an evaluation of the medical review process and licensing outcomes for 100 drivers randomly selected from a pool of over 1,000 drivers referred from law enforcement officers to the Virginia Department of Motor Vehicles over a 6-month period in 2007 and 2008 prior to any training program intervention. **Results:** Key findings from the evaluation of 100 drivers referred for medical review by law enforcement were as follows. Over two-thirds of the drivers came to the attention of the referring officer because they were involved in a crash. The most prevalent indications of a medical condition or functional impairment provided by law enforcement for these referrals were: loss of consciousness, blackout, or seizures (28%); disorientation, confusion, and mental disability (16%); and physical impairments (8%). Eighty-eight percent of the drivers received some type of licensing action (e.g., restriction, suspension, or periodic review). Only 12% of the referred drivers did not require any licensing action. **Conclusions:** Law enforcement provides a vital role in the identification and referral of medically impaired drivers to licensing authorities for reexamination. Training programs can inform law enforcement officers of the signs of medical impairment (both on-road behavior, and physical and psychological clues once a driver has been pulled over), and procedures for reporting their observations and concern for safety to licensing authorities. **Impact on Industry:** Reexamination of drivers with functional and medical impairments and any consequent restrictions and/or periodic reporting requirements can improve the safety and mobility of these drivers, and the motoring public as well.

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1. Introduction

The baby boom generation began reaching age 65 in the year 2011 when there were 41 million people 65 or older in the U.S. (U.S. Census Bureau, 2013). The U.S. Census Bureau (2004) projects that this age group will grow to more than 54 million people by 2020 and will exceed 70 million by 2030. Driver licensing is close to universal among those who will become age 65 in the next 15 years, with almost every U.S. man and more than 9 out of 10 U.S. women entering their retirement years as drivers (Rosenbloom, 2004). By 2030, 19% of the nation and 22% of its licensed drivers will be age 65 or older (Vincent & Velkoff, 2010).

Along with the increase in the number of older licensed drivers will be increases in the number of drivers with age-related medical conditions and functional declines that impair safe driving, and in the number of older drivers who take potentially driver-impairing medications to treat these conditions (LeRoy & Morse, 2008; Lococo & Staplin, 2006; O'Neill & Dobbs, 2004; Owsley, 2004). The increasing number and percentage of medically and functionally impaired drivers will pose many challenges for traffic engineers and driver licensing agencies in the coming decades, as independence and quality of life continue to depend overwhelmingly on the personal mobility afforded by automobiles.

Medically at-risk drivers come to the attention of driver licensing authorities through referrals from a variety of sources, including physicians, law enforcement, the courts, and, in most jurisdictions family, friends, and other concerned people. The mechanism to detect and intervene with functionally impaired drivers depends critically upon the success of outreach efforts to encourage referrals to the licensing

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authority. In addition, medical review processes need to be in place with the licensing authority and/or through its Medical Advisory Board to conduct case reviews and reach determinations of medical fitness-to-drive that are valid, efficient, and perceived to be fair by the driving public. It will be critical for these processes to be in place to accommodate the projected surge in the proportion of older licensed drivers.

Very few studies have documented the circumstances prompting referral of drivers to the licensing authority for medical review and the outcomes of such referrals. Soderstrom et al. (2009) studied the driving actions, medical concerns, and medical conditions for 486 drivers referred by law enforcement officers to the Maryland Motor Vehicle Administration Medical Advisory Board. The majority of the referred drivers (72.4%) were age 60 or older. Confusion and disorientation concerns were more frequent among the older drivers referred, and loss of consciousness concerns were more frequent among the younger drivers referred. Seizures/epilepsy and diabetes were the most common medical conditions among the younger drivers and all mentions of dementia involved older drivers. Referrals from drivers receiving traffic citations found that there were fewer drivers age 60 and older than referred drivers younger than age 60 (33% vs. 54%, respectively). However, this study did not evaluate the license outcomes for these drivers who underwent the Department of Motor Vehicles (DMV) medical review.

Another study by the Pennsylvania Department of Transportation (PennDOT) reported on the outcomes of referrals from physicians (Pennsylvania Department of Transportation, 2010). In Pennsylvania, all physicians are authorized to diagnose or treat disorders and disabilities and must report to PennDOT any patient 15 years of age or older, who has been diagnosed as having a condition that could impair driving safely. Over 27,000 new reports are submitted each year to PennDOT, and approximately 22% of these individuals have medical impairments significant enough to merit recall of their driving privilege. An additional 21% of reports result in restrictions placed on the individual's driving privilege. These reports also cross the age spectrum with half involving drivers younger than age 65 (Pennsylvania Department of Transportation, 2010).

Recently, NHTSA offered grants to states willing to develop a training program for law enforcement to increase their awareness of medical conditions and medications that impair driving and the procedures for reporting these drivers. The Virginia Department of Motor Vehicles (DMV) received the grant. The Virginia DMV contracted with Eastern Virginia Medical School to develop a training program for law enforcement. The interventions included a training video and an educational "Red Flag" card to fit in the ticket book. These training materials provided examples of the kinds of traffic violations that medically impaired drivers frequently make, and the physical and psychological characteristics associated with driver impairing medical conditions and medications. Instructions for completing and submitting the medical referral form were also provided with the training materials. These educational products are being used by law enforcement throughout Virginia today.

The evaluation component of the project included a task to analyze the disposition of law enforcement referrals before and after implementation of the training intervention. The manner in which the training program was executed precluded such a study. However, the evaluation of the disposition of law enforcement medical referrals in the pre-intervention phase provides insight about the quality of such referrals in bringing at-risk drivers to the attention of the licensing agency. This article provides a summary of this evaluation. The full report was published by NHTSA (TransAnalytics LLC, 2011).

1.1. Study objective

The purpose of the study was to document the medical review process and license disposition of a randomly selected set of drivers referred by law enforcement to the Virginia DMV. The research questions

addressed by this analysis were: (a) what are the demographics of drivers referred to the licensing agency by law enforcement? (b) How did these drivers come to the attention of law enforcement? (c) What reasons did the officers provide for referring these drivers? (d) What was the process and outcome of the referrals? (e) What percent of these referrals resulted in a licensing action? The outcome of this analysis provides data describing the value of law enforcement medical referrals to licensing authorities.

1.2. Virginia medical referral process

The Virginia DMV is charged with the responsibility of ensuring that drivers are able to safely operate motor vehicles. Virginia DMV's Medical Review Program is comprised of a Medical Advisory Board (MAB) and an in-house Medical Review Department. The MAB functions to advise the DMV on medical criteria and vision standards for licensing; its physicians assist the DMV medical review staff in making fitness to drive determinations for individual cases (as requested, or when a driver appeals a medical review action); and it assists on legislative proposals. The DMV in-house Medical Review Department currently consists of 10 nurses (medical evaluators) and 1 office manager who is also a nurse.

In Virginia, when law enforcement officers encounter drivers during traffic stops or at crash scenes who they suspect of having medical conditions or functional impairments that may affect the person's safe driving ability, they complete a Medical Review Request Form (Fig. 1) and submit it to the DMV's Medical Review Department. Officers include their observations of drivers' physical and mental status when completing the form, and also include any additional information provided by the drivers during these traffic stops (e.g., self-reported medical conditions and medications).

The DMV is concerned with a driver's level of consciousness, mobility, judgment, and visual perception, as well as any adverse effects that certain medications may have on the ability to operate a motor vehicle safely. The medical review process begins with the requirement for a driver to have his or her personal physician complete medical forms and return them to the DMV. Based on the information provided by the driver's physician, the medical evaluators may suspend the license (for specific medical conditions such as seizures); require more testing (DMV knowledge testing and/or road testing, or evaluation by a driving rehabilitation specialist); add license restrictions; place the driver on periodic medical review; or allow the driver to retain driving privileges without any further requirements.

Additional testing may be required based on recommendations made by the referring law enforcement officer or the physician, as both the Medical Review Request form and the Customer Medical Report, which is subsequently completed by the driver's treating physician, have checkboxes to indicate whether, in the officer's or physician's opinion, the driver should have a vision exam, knowledge exam, road skills test, and/or an evaluation with a certified driver rehabilitation specialist.

The DMV medical review evaluators will request additional testing only for drivers who have submitted an "acceptable" medical report, as those with "unacceptable" reports are automatically suspended. Drivers who must comply with requests for knowledge and/or road testing must pass the test(s) within 30 days of receipt of their notice of the requirement, or their driving privileges are suspended.

If the physician indicates that an evaluation with a driver rehabilitation specialist is needed to determine fitness to drive, the DMV will suspend driving privileges, request that the driver enroll in a driving rehabilitation program, and require the program specialist to fax confirmation of enrollment to the DMV. The DMV will then issue a restricted license that allows for driving only under the supervision of the driving evaluator.

If the driver successfully passes the driver rehabilitation specialists' evaluation, he or she may be required to also successfully pass

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