Washington, DC: Evaluation of Driver Education

Northport Associates

February 16-17, 2005

Project to Develop Guidelines for Improved Evaluation of Driver Education

This is intended to provide a brief overview of this project and of the consultative workshop which took place last week in Washington, D.C.

Guidelines Project

The AAA Foundation for Traffic Safety and BMW of North America are funding a research project to develop guidelines for improving the evaluation of driver education (DE) programs. Northport Associates is conducting this project in consultation with an advisory group and other experts.

Over the long history of driver education, there have been a moderate number of evaluations, including quasi-experiments, random controlled trials, and ecological time series studies. Reviews of evaluations typically conclude that young people who complete DE programs crash at about the same rate as those who do not receive formal education. Do some types of driver education programs lead to better educational outcomes and safety impacts than others? How can driver education programs be improved in order to yield safer young drivers? Lack of systematic programs of research and methodological weaknesses in previous evaluations have left these questions partially or completely unanswered.

Northport Associates, lead contractor on the project, is reviewing the DE evaluation literature, examining methods and theories of driver education programs, identifying and assessing evaluation methods, measures, and data sources, and preparing a final report and guidelines for future evaluations of driver education programs.

Driver Education—A Challenging Evaluand

Evaluating and improving DE is highly challenging, but the potential benefits are very high. Road trauma is a costly public health problem, particularly among youth. Young, inexperienced drivers are at high risk—16 year olds have 10 times the crash rate per mile of experienced adults. Risk declines rapidly over the first few hundred miles of driving, but the learning curve is long, taking up to 10 years to finally level off.

The limitations in skills and abilities that contribute to elevated risk are known. Novice drivers are less able to control attention, scan the environment effectively, detect potential hazards early, make critical decisions quickly, and maintain consistency in critical thought and action. They often raise their risk through overconfidence and choices such as driving too fast, accepting small gaps in traffic, and leaving inadequate safety margins. Both skill deficiencies and risky choices contribute to their excess risk.

Driver education has long been seen as a societal response to the tragic losses of novice drivers. Traditional driver education takes place before the driver becomes licensed. Indeed, one of its principal purposes is to prepare beginners for license testing. Typical U.S. DE programs consist of 30 classroom hours and 6 hours in car. Content covers legal requirements, vehicle handling, interacting with traffic, and efforts to motivate beginners to fear the consequences of crashes. Classroom

methods most often include teacher-centred lectures, with some discussion and support with film and video, and sometimes simulators.

In recent years, there have been major changes in the technological, business, and regulatory environments of driver education and also in driver licensing, with the move to graduated licensing suggesting graduated training. There appears to have been limited development of new DE content, but instructional and delivery methods are rapidly changing. Self-instruction, computer-based instruction, simulation, and web-based instruction are increasingly becoming available. In some jurisdictions, recent regulatory provisions recognize a formal course delivered by parents.

While more education is always a popular prescription for improving safety, demonstrated effectiveness in reducing the risk of drivers of all ages through education alone is rare. It is widely believed, if not yet proven, that carefully designed multifaceted, multi-level behavior-change programs are required. Simply increasing knowledge and skill does not make safer drivers—"better" drivers do not necessarily crash less.

Because the needed comprehensive programs require coordination across bureaucratic boundaries, organizational interests and behavior become issues as important as individual behavior change. Organizational constraints provide great challenges for DE program development and to their evaluation. Utilization of evaluation results is also problematical in the DE field. Disappointing evaluations led to (or justified) reduced support for driver education in the 1980s, when a more rational response would have been to redouble efforts to make the programs more effective.

Content, structure, standards, governance, and market incentives are critical issues for driver education globally. Significant further development is needed for DE to fully satisfy the expectations placed upon it by society. More comprehensive evaluation and continuous improvement are seen as critical to progress. Developing guidelines for evaluation of complex programs is always challenging, but seems especially so for the highly diverse driver education field, whose two main goals—independent mobility and safety—are antithetical.

Guiding the Guidelines—The Consultation Processes

Consultation for the development of guidelines consists of an internet discussion board (www.northportassociates.com/aaafts) and a two day workshop. The discussion board has been active and received contributions from driver education experts and evaluators. Much of the board discussion has focused on appropriate objectives and success criteria for DE—safety impacts or other outcomes and impacts.

The consultative Workshop took place February 16-17, 2005 in the AAA's Washington, D.C. offices. Two dozen invited participants included academics, consultants and research staff from:

- National Highway Traffic Safety Administration
- National Institutes of Health
- Insurance Institute for Highway Safety
- American Driver and Traffic Safety Education Association
- State Departments of Motor Vehicles

- Driving School Association of the Americas
- University traffic research institutes: UNC-HSRC, TTI, UMTRI
- Traffic Injury Research Foundation of Canada
- The Evaluation Center—Western Michigan University
- Georgia State University, Institute Of Public Health
- Private sector safety research consultants

The Workshop members were asked to help answer fundamental questions from their own diverse perspectives. Questions and a few representative answers are shown below.

1. What has worked in driver education evaluation?
    - RCTs focused on safety impacts
    - Quasi-experiments with statistical control
2. What should be done differently?
    - More comprehensive, systematic evaluation, e.g., British Columbia GDl/DE ongoing evaluation/program development process
    - More formative evaluation, e.g., SPC process in the 1970s
    - Use of established evaluation standards—Joint Committee Standards for Educational Evaluation
    - Look at different approaches, e.g., Success Case Method

- Methodological improvements, e.g., sample sizes
- Hybrid designs, e.g., RCTs with modeling to compensate for limitations in control group equivalence

3. What do we want driver education evaluation to accomplish?
    - To track DE effectiveness, "see if it works"
    - To help improve DE, e.g., feedback & continuous improvement
    - To compare performance, e.g., across states.
    - Defend policy, e.g., choices regarding investment, etc.
    - Recognize needs versus objectives, e.g., real driver needs versus arbitrary objectives
4. What are the key evaluation targets, indicators and measures?
    - Product & process, e.g., needs assessment, program quality & consistency, quality management
    - Learning outcomes—knowledge & skills, e.g., risk perception, insight
    - Behavioral outcomes—risk response, e.g., speed & space choices
    - Societal impacts—safety & mobility, e.g., licensing & crash rates
5. Who are the key users for DE evaluation guidelines?
    - Evaluators
    - Policy makers, legislatures

- Parents
- Consumer protection
- Insurers & policy holders
- State level administrators
- DE program managers
- Researchers

6. What is the best format for the guidelines?

    - Emulate good models, e.g., CDC, Ottawa Health Unit
    - Moderate in size
    - User friendly to a wide range of users, e.g., clear definitions
    - Examples of good & bad practice
    - Cover simple needs, e.g., program quality checklist
    - Support higher level evaluations, e.g., data acquisition for intermediate objectives and impacts

The Driver Education Evaluation Guidelines project will proceed through drafting and review of materials, as well as ongoing consultation. It is scheduled to be completed in the Fall of 2005.

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