

TEACHING OLDER DRIVERS: A HANDBOOK FOR DRIVING INSTRUCTORS

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ABSTRACT

Older drivers want to maintain driving independence. Licence review, illness, disability or a change in circumstances may mean that the older driver participates in driver assessment, retraining and/or rehabilitation. Driving Instructors (DI) are often involved in these processes. As the number of older drivers in our community increases, the need for DI education and retraining will increase. However, there is a need to develop teaching approaches, which suit individual requirements and the educational styles of older drivers. This paper discusses the development of an innovative project, which aimed to develop and produce a Handbook to assist driving instructors with teaching older drivers. The need for a resource was identified through various consultation processes involving the Road Safety branches of the ACT and Tasmania. A participative model (involving driving instructors and groups representing or resourcing the needs of older or functionally impaired drivers) was used as the project framework. The booklet was developed, trialed and launched in 2001 and is currently in use.

1.0 BACKGROUND

Over the next thirty years, we will see a steady increase in the number and proportion of drivers over the age of sixty-five. As the “baby boomers” achieve retirement, more people will be living longer and healthier lives and will expect to continue to drive. Various personal changes may influence an individual’s capacity to drive and driving competence may come into question. The maintenance of an older individual’s driving independence needs to be carefully balanced with the requirement to maintain the safety of other road users. This policy priority was clearly identified by the recent Ageing and Transport – Mobility needs and Safety Issues, OECD Report (OECD, 2001).

Retaining a licence to drive is dependent on a number of factors, including health status and physical, sensory and cognitive capacity, combined with maintenance of adequate driving skill, suitable safety related knowledge and behaviour, and personal qualities such as self confidence and insight. National licensing laws place the onus on individual drivers to notify state licensing authorities if they have a permanent condition which may impact on their long term driving performance (Austroads, 2001).

Licensing authorities may have a driver’s competence to continue driving drawn to their attention by police, health professionals including occupational therapists, medical practitioners and family members (Carr, 2000). On road tests may be undertaken with licensing authority personnel or occupational therapy driver assessors (OTDAs) in conjunction with driving instructors (DIs) (DiStefano, 1994). In some states there is also mandatory age based testing which includes a knowledge test and an on road test (Fildes et al., 1999).

DIs has a major role in assisting older drivers to maintain their driving skills and retain their licenses. There are many circumstances in which a DI may be engaged directly by older drivers. For example, “refresher” lessons prior to a mandatory aged based on road test or if resuming driving after an absence. Although it is less common, there are also older people, generally women, who take up driving to increase their independence. Another important role for DIs is their contribution to the OTDA service involving assessment and rehabilitation of functionally impaired drivers (Macdonald & Scott, 1993).

As more people move into the senior age bracket, there will be an increase in the demand for such DI services. There will also be a corresponding need to provide training to DI’s who wish to work in this field. It is acknowledged that the majority of the work most Driving Instructors undertake is in relation to young, novice drivers. Teaching older and usually already licensed drivers requires a different approach.

This paper discusses a project using a participatory research model to address the need for DI training resources related to older drivers. The project was developed for the Department of Urban Services (DUS), Australian Capital Territory and Department of Infrastructure, Environment and Resources (DIER), Tasmania with funding from the NRMA – ACT Road Safety Trust. The project steering committee comprised the authors, Mr. Robin Anderson, Road Safety Manager, DUS, and Mr. Jim Langford, Research Manager, Road Safety Branch, DIER.

2.0 ESTABLISHING A NEED

The need for a resource was initially identified through various consultation processes in the ACT and Tasmania. Informal discussions with driving instructors had indicated a lack of available training material related to working with older people. This paralleled the personal and anecdotal evidence the authors, in their work as OTDA’s, experienced in

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relation to Victorian DI's. Instructors were working in the field with older and functionally impaired drivers without formal training. They were learning "on the job". Further to these, searches of the literature and the World Wide Web as well as discussions with DI training facilities confirmed the lack of resources in this area.

The Licensing authorities in both Tasmania and ACT had developed resources for older drivers including versions of an "Older Driver Handbook". These contain material relevant to driving related concerns of older people, including strategies to improve driving knowledge and skills such as through driving school "refresher courses". In addition, in the ACT there is also a booklet specifically discussing retiring from driving. These resources are readily available and have been widely distributed to older drivers. It was felt that any new resource needed to complement the existing booklets and not duplicate the information.

3.0 PROJECT CONSIDERATIONS

Project development needed to consider five main issues:

1. The characteristics of older drivers
2. Driving Styles
3. Specific safety issues related to older drivers
4. Adult learning principles: as they applied to both the DIs and the older drivers themselves
5. Compatibility with existing Older Driver Resources available in both states

The following is a summary of key points related to these issues drawn from the literature review.

3.1 Characteristics of Older drivers

Older drivers usually have many years of driving experience when they present for testing, assessment or lessons. They have driven in different types of cars in a variety of traffic conditions and some may present with extensive driving experience in work related settings. Research has highlighted the fact that some older drivers believe they are good drivers irrespective of a history of adverse driving events or driving performance (Marotolli & Richardson, 1998). Some older drivers may have adapted their driving to avoid what they perceive to be more complex driving situations (such as driving in peak hour traffic or during inclement weather) (Ball et al., 1998; Gallo, Rebok, & Lesikar, 1999) however, there may be differences in the nature and frequency of self regulatory behaviours in certain sub groups of older drivers (Charlton, Oxley, Fildes, & Les, 2001).

Age related changes to physical, sensory and cognitive function which have the potential to impact on driving have been well documented in the literature (see for example Brouwer & Ponds, 1994; Eby, Trombley, Molnar, & Shope, 1998; Fildes, 1997). Of particular concern are those changes related to vision and cognition. Most of the sensory information related to the driving task is interpreted through the visual system. Both visual function and cognitive impairments have been shown to be related to self reported difficulty with driving tasks, self regulation and ceasing driving altogether (Ball et al., 1998; McGwin, Chapman, & Owsley, 2000; Owsley, Stalvey, Wells, & Sloane, 1999; Stutts, Stewart, & Martell, 1998). Cognitive impairment has been associated with older drivers' involvement in traffic accidents (Daigneault, Joly, & Frigon, 2002; Lundberg, Hakamies-Blomqvist, Almkvist, & Johansson, 1998; Stutts et al., 1998; Withaar, Brouwer, & Van Zomeren, 2000). The effectiveness of any interventions, such as training for older drivers is likely to be influenced by the driver's level of cognitive functioning (Cushman, 1996). Disability and cognitive impairment show similar patterns of increasing frequency with ageing (Barberger - Gateau & Fabrigoule, 1997).

Many of the diseases associated with older age, such as stroke, Parkinson's disease and dementia can also impair driving ability (Carr, 2000). Older people are also more likely to be taking medication and its' use must also be considered in relation to side effects impacting upon arousal levels, judgement, vision and reaction time which are necessary for safe driving performance (Darzins & Hull, 1999; Young, 2001).

The focus of the handbook was on healthy older drivers, therefore detailed discussion of medical problems associated with aging was outside the scope of this project. However, it was important to alert driving instructors to the law regarding reporting of medical conditions. DI's may encounter some circumstances where either the aging process or a medical condition could impact on sensory, cognitive and physical function and therefore on the ability of the older driver to benefit from retraining. Information and resources regarding referral to specialist services were included to address this.

3.2 Driving Styles of Older Drivers

Although age is recognised as a poor predictor of driving performance, older drivers can be observed to drive differently from younger drivers. Dobbs, Heller and Schopfloch (1998) found that the healthy older drivers in their study of driving performance were rated as good defensive drivers who overall were safe, but that they committed sufficient errors to fail under the criteria used for conventional licence tests. Older drivers tend to drive more slowly, make fewer lane changes, are cautious regarding decision making and do not exceed the speed limit. If they know the road rules, they are more likely to obey them. They may in fact be driving more slowly to compensate for deteriorating

sensorimotor skills (Retchin, Cox, Fox & Irwin, 1988) more specifically visual problems (Owsley et al., 1999), the need for extra time for preparation, or because they have difficulties performing different actions in parallel (Brouwer & Ponds, 1994).

Older drivers may have adapted their driving to compensate for changes related to ageing. But as Gallo et al (1999) identified, adaptation can be a double-edged sword: it is a healthy response to diminished ability but it may also be a signal of impending problems with driving. Some of the strategies older people have developed will be appropriate but others may pose a safety risk. For most people, driving itself becomes a habit or 'second nature'. Over time, all drivers develop individual characteristics or habits.

There are a variety of factors that may influence the driving performance of older drivers and the potential that older drivers have to change their behaviour. The use of targeted compensation strategies can assist older people with recognised driving problems to avoid accidents (De Raedt & Ponjaert-Kristoffersen, 2000). In addition, recent research examining the efficacy of an educational intervention has demonstrated that older drivers can alter their driving patterns by reducing their driving exposure and increasing their avoidance of visually challenging driving situations (Owsley, Stalvey & Phillips, in press).

3.3 Road Safety Issues

Driving instructors and older people need to be aware of the crash rates and patterns of older drivers, as they are different from younger drivers. Collision rates of older drivers are most significant when looked at in relation to distance travelled. The crash rate of drivers over the age of seventy-five is the highest of all age groups, including those under 21 (Fildes, 1998). Across all age groups, crash rates are higher for men than women. Older drivers tend to have more low speed, multivehicular crashes. Accidents tend to occur at intersections and with the older driver more likely to be killed or injured (Hakamies-Blomqvist, 1993). Preusser and colleagues (1998) have identified that uncontrolled and stop sign controlled locations, travelling straight or situations involving a failure to yield also pose a higher relative crash risk for older drivers. Ryan, Legge and Rosman (1998) found that older drivers had disproportionately more direct and indirect right angle crashes compared to other groups of drivers whilst Zhang and associates (2000) confirm these findings and include overtaking and changing lanes as factors.

An awareness of the types of situations where older people are likely to be at risk, together with information provided by the older person regarding their concerns, allows the driving instructor to prioritise areas for intervention. Recent research investigating older drivers and their confidence levels has highlighted that some groups of older drivers are aware that declines in physical and sensory capacities influence performance on driving tasks involving, for example, divided attention or lower light conditions (Parker, Macdonald, Sutcliffe & Rabbitt, 2001). Whilst not all older drivers share this same level of insight (see Marattoli and Richardson, 1998), it is important to evaluate the situations that older drivers identify as being problematic, both for road safety reasons and from the perspective of engaging the older person in the process of modifying their driving behaviour.

3.4 Adult Teaching and Learning issues

It is recognised that most of the work of driving instructors is with novice drivers. Older drivers are different in that they are not just getting started in the field, they are building on their own years of experience with the driving task (Kolb, 1993). A resource for use with older and already licensed drivers needed to offer ideas on different methods of teaching to apply to this different group. The handbook needed to reinforce general principles relating to both teaching and learning styles, which would optimise the learning opportunity for the older person and highlight key issues for the instructor involved.

Older people, like all adult learners, learn in individual ways and for different reasons as compared to children or adolescents. Some may improve their driving skills by practising repeatedly in the real life situation, whilst others may profit from using resources such as videos or model cars to, for example, understand the complexities involved with a particular driving technique. Adult learners may benefit from a more direct engagement in the learning process. They may want to understand the strategies aimed at identifying strengths and weaknesses, establishing priorities for skill revision/development and exploring individual preferences for instructional methods and feedback (Tennant, 1997). It is important that older people feel a sense of responsibility and ownership of the new learning in order to maximise the motivation for behavioural change (Main, 1985).

Some individuals may be anxious or nervous about becoming "students" again. An important role for the instructor is to provide a facilitatory learning environment. Older people may need to be encouraged to recognise that opportunities for learning occur in many spheres of life, not just through formal academic institutions and that everyone can be an "active learner" regardless of age or prior experience (Merriam & Caffarella, 1999). In some instances, the instructor may be faced with individuals who feel they are already "good drivers", who may be attending lessons for reasons other than their own. In this situation, the tactful instructor will need to develop a relationship based on trust and credibility in order to encourage the older person to gain insight into their own driving behaviour, the impact it has on

other road users and the means required to modify it. Utilising written and other resources which are relevant and confirm the existence of older driver needs in relation to driving behaviour may help direct the reluctant older person to acknowledge that, they too, may have a need to change.

3.5 Other resources

As discussed above, Older Driver Handbooks were available in both jurisdictions participating in this project. However there was little else available targeted to experienced drivers which would help them keep up to date on road law and road craft. Educational resources regarding driving and drivers were aimed at the learner driver. A new resource for driving instructors needed to complement the Older Driver Handbooks and be sure not to duplicate existing information.

4.0 PROJECT METHOD

4.1 Rationale for using a participative model

Participative models have been used in research and project activities for a number of years. The most widely known approaches include those related to “action research” (Malden, 2000; Stringer, 1999) and the participatory frameworks used in ergonomics and occupational health (de Koning & Martin, 1996, Wilson & Haines, 1997). Both models have an emphasis on actively involving user groups in processes involving enquiry, intervention and implementation related to their needs. The rationale for including users is based on the acknowledgment that users themselves have a lot of first hand knowledge and experience regarding issues. They can bring valuable insights to decision making and the process of participation encourages a sense of ownership related to the final outcome. In relation to this specific project, the committee identified two sets of “user groups”: the DIs and the “end users”, the older drivers themselves. In order to accommodate for this, both DIs and groups representing older people were involved in the project process.

4.2 Description of project approach

Table one provides an outline of the main project stages. The authors and steering committee worked closely with stakeholders to ensure that opportunities were available to contribute to the resource development process. A decision was made early on in the project to utilise a hard copy, text based medium for the resource. This was chosen as the most practical option considering that the teaching aid needed to be used in the driving school vehicle and would probably have to be stored in a glove box. In addition, it was felt that a familiar, “user friendly” and easy to access medium was necessary to encourage DIs to use the resource.

The main components of the project are presented here. It should be noted, however, that many of the stages presented sequentially, were in fact, occurring concurrently (for example, the literature review which occurred over many months).

Table 1: Teaching Older Drivers: A Handbook for Driving Instructors: Project outline

Stage 1: User consultation.

The general content and format of the resource was confirmed through consultation.

Stage 2: Literature review and development of draft one of the Handbook

Feedback from stage one contributed to this activity.

Stage 3: Consultative review of initial draft.

Reviewers included instructors, licensing authorities, groups representing the needs of older persons, retirees, and people with disabilities, occupational therapists and health/community services.

Stage 4: Development of draft 2 of Handbook

User needs and user friendly requirements were incorporated into the content and presentation. Feedback from reviewers was included in the revision.

Stage 5: Useability trial of the Handbook and Feedback from instructors

Driving Instructors trialed the handbook with suitable clients over a specified time period.

Stage 6: Printing of handbook and distribution

Feedback from the useability trial was analysed and the final version of the handbook developed. Distribution included posting on the World Wide Web.

Stage 1: Initial User Consultation

A discussion document was used as the starting point for collaborations in the ACT and Tasmania early in the development phase. Driving Instructors and licensing authority representatives were invited to attend the seminars and/or express an interest in contributing to other phases of the project. The project team members delivered a presentation giving the background to the project and the proposed development process. Participants actively contributed to the discussion in addition to completing feedback forms, which documented their specific ideas regarding the content, design, distribution and evaluation of the proposed handbook. Meetings were held with occupational therapy driver assessors in both states to advise them of the project.

Stage 2: Review of draft 1 of the Handbook.

Feedback from the seminars and the literature review were used in the development of the first draft of the handbook. In addition, the authors utilised their extensive clinical and teaching experience regarding older and functionally impaired drivers to prioritise and develop content material. Driving instructors who responded to the first communication and/or participated in the seminars were sent a draft copy of the handbook together with an evaluation feedback form. In addition, relevant stakeholders were advised of the project and also invited to participate in the review process. These included groups representing the needs of older persons, retirees, people with disabilities and health/community services.

Stage 3: Feedback re: Draft 1

Feedback on the first draft was received from a total of 16 individuals and organisations across both states. This feedback contributed to the development of Draft 2 of the handbook.

Stage 4: Development of Draft 2

In addition to developing specific content, various options for presentation of text, graphics and photographic material were evaluated. The needs of both DIs and older drivers had to be balanced with the requirement to optimise useability.

Stage 5 a: Useability trial of the Handbook

Driving Instructors who expressed an interest in the handbook project were invited to participate in the useability trial. Victorian instructors who were known to be active in the older driver / rehabilitation area were also approached as there are a larger number of specialist instructors in this state. Their experience was considered important in determining the relevance and applicability of the handbook content. The useability trial involved using the handbook with suitable clients over a specified time period and incorporated completion of an evaluation form. In total, 28 Driving Instructors expressed an interest in participation.

Stage 5 b: Useability trial feedback

Feedback was received from 13 Driving Instructors who had had the opportunity over the trial period to use the handbook with an older driver. The feedback was analysed and the final version of the handbook was developed. In addition to specific comments regarding the handbook, driving instructor participants were asked about the need for further education in the field. Responses to this question included the need for workshops or seminars (x8), training courses (x6) and a more detailed handbook (x4). (Note: more than one response could be given).

Stage 6: Final draft of handbook

After appropriate consultation with the NRMA - ACT Road Safety Trust and State authorities, the final version of the handbook was approved. The handbook has been distributed and is currently in use. Although developed specifically for use in the ACT and Tasmania, most of the material is relevant to driving contexts across Australia.

5.0 CONCLUSION

As the proportion of older drivers in our community changes, there will be a corresponding increased need for services and resources related to maintaining the safety of older drivers. Driving Instructors have a valuable role in assisting older people to gain or retain their licenses and they need and want to have the skills required to work with this group. This paper has discussed the process involved in the design and development of a handbook for driving instructors to help them with teaching older drivers. A participative model was used as the framework for the project. It is hoped that this handbook will eventually form one part of a collection of multi media resources available to instructors to assist them to meet the needs of this important group of road users.

Handbook availability

The booklet is available through the NRMA – ACT website located at: www.act.gov.au/roadsafety

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