ONLINE TOOLS TO SUPPORT ROAD SAFETY PRACTITIONERS WITH OLDER DRIVER SAFETY

A report from research funded by the Road Safety and Active Travel.
Prepared by the Driving, Ageing, and Health Research Team (DART).

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EXECUTIVE SUMMARY

This ACT Road Safety Fund project aimed to improve the safety and mobility of older drivers in the ACT through the refinement and early-stage feedback of evidence-informed, user-friendly digital resources for both clinicians and older drivers. Building on previous work by our Driving, Ageing and Health Research (DART) team, this grant supported activities to gather clinician and driver perspectives on prototype tools designed to promote safer driving, enhance clinicial decision-making, and increase awareness of age-related changes in driving ability.

Activities funded under this grant included:

- Early-stage feedback and refinement of two digital tools:
    - the Multi-Domain Off-Road Screening Tool (Multi-D),
    - the On-Road Driving Safety Observation Measure (ORDSOM).
- Partial development, user testing, and feedback of the Ageing Well on the Road website, a digital resource for both clinicians and older drivers.

The ACT Road Safety Fund also funded feedback activities to explore how these tools could be used in real-world settings. Feedback gathered through this project will guide final design and implementation of these tools, supporting safer driving and improved mobility outcomes for older drivers across Australia.

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BACKGROUND AND RATIONALE

With Australia's ageing population, supporting older adults to remain safe and independent on the road is an increasingly important public health priority. As the proportion of older drivers continues to grow, planning for their mobility and safety needs is essential (Ang et al., 2017). This is particularly relevant in the Australian Capital Territory (ACT), where the ACT Road Safety Action Plan outlines the government's commitment to improving road safety and reducing road trauma (ACT Government, 2020). Whilst overall road fatalities in Australia have declined over the past decade, fatalities amongst older adults aged 75 and above has increased (Wallis et al., 2020). Age-related declines in vision, cognition, and reaction time can compromise driving safety and increase crash risk (Anstey et al., 2016). Older adults are also more vulnerable to serious injury, with those aged 75 and over spending an average of 10 days in hospital recovering from a road crash, which is twice as long of those aged 17-25 (National Road Safety Data Hub, 2024). Beyond the obvious human cost, crashes involving older drivers impose a significant financial burden on the community (Ang et al., 2017; Anstey et al., 2005).

This project aligns with the key goals set out in the ACT Road Safety Strategy from 2020-2025, particularly Goal 1: 'Reduce serious and fatal crashes', which supports the ACT Governments commitment to Vision Zero (ACT Government, 2020). Older drivers remain among the most vulnerable road users because of their reduced physical resilience and limited crash protection, along with age-related declines in cognitive, sensory, and motor functions (ACT Government, 2020).

Despite these challenges, 92% of older adults aged 70+ hold a driver's licence and many older adults continue to rely on private vehicles well into later life (Bureau of Infrastructure, Transport and Regional Economics [BITRE], 2014). Assessing fitness to drive (FtD) in this group is therefore both a clinical and ethical challenge for healthcare providers. Whilst most older drivers self-regulate their driving behaviour to minimise crash risk (Charlton et al., 2025), reducing road trauma requires more than focusing on driver behaviour alone. It also requires equipping clinicians who screen for unsafe drivers with the relevant knowledge, tools, and resources to make accurate, evidence-informed assessments.

Goal 2 of the ACT Road Safety Strategy, 'Build a community that shares responsibility for road safety', reinforces the importance of supporting practitioners in this role (ACT Government, 2020). Understanding current clinician approaches to assessing driving fitness, and the barriers they encounter, is critical to identifying areas for improvement and ensuring consistent practice. Practitioners such as general practitioners (GPs), occupational therapists (OTs), driving instructors (DIs), neuropsychologists, optometrists, and geriatricians play a key role in maintaining older driver safety. However, they often face barriers including time constraints, limited access to on-road assessments, inconsistent

guideline use, and a lack of practical tools to guide decision making related to driving outcomes (Wallis et al., 2020; McKernan et al., 2022).
Existing resources, such as the Austroads 'Assessing Fitness to Drive' guidelines provide a valuable framework, but uptake remains inconsistent due to difficulties in interpretation and limited time in primary care (McKernan et al., 2022). On-road driving assessments are considered the gold standard and the most direct measure of driving ability, but can be inaccessible due to logistical and financial constraints, particularly in rural and remote areas of Australia (Wallis et al., 2020). Strengthening clinician confidence and providing access to standardised, evidence-based resources are therefore critical for timely and effective interventions. A recent national survey conducted by our DART team identified considerable variation in how different disciplines assess older driver safety. Preliminary findings (currently in preparation for publication) indicate fragmented assessment processes, inconsistent guideline use, and limited access to on-road testing. This project builds on those findings by refining evidence-based digital tools to support future integration into routine clinical practice.

In the ACT, the Fitness to Drive Medical Clinic (FtDMC) at the Canberra Hospital plays a key role in assessing drivers referred for medical fitness to drive reviews. The clinic provides multidisciplinary evaluations and practical assessments for individuals whose medical or functional conditions may impact their ability to drive safely. Demand for these services will continue to grow as Australia's population ages, so strengthening community-based resources and digital tools that support early screening and self-management can help reduce the burden on specialist services like the FtDMC, whilst ensuring timely, evidence-informed decisions about driving fitness.

There is increasing evidence of the negative social and psychosocial consequences of driving cessation (Windsor & Anstey, 2006). Maintaining mobility through driving is often essential for independence and wellbeing in later life (Anstey et al., 2017). Driving supports social engagement, access to services, and quality of life, but also raises complex challenges in balancing safety with autonomy. In Australia's ageing population, there is a greater need for accessible driving-related health information to support informed decision-making and effective self-management (Fang et al., 2024). Web-based platforms offer flexible and cost-effective ways to deliver health information, and many older adults now turn to the internet for mobility and health advice (Tennant et al., 2015). Accessible, tailored resources can help older adults make informed decisions about safe driving and mobility transitions (Anstey et al., 2017). However, existing online content often overlooks age-related issues such as cognitive change and differing levels of digital literacy, limiting its accessibility for some older users (Levasseur et al., 2016). Our review of current materials available to older drivers in Australia (Appendix 1) identified these limitations and informed the development and design of our web-based platform, Ageing Well on The Road. Goal 3 in the ACT Road Safety Strategy, 'Changing road user attitudes and behaviour through education and compliance activities', highlights the importance of accessible education and awareness of road safety resources.

The success of digital health tools depends on how well they meet user expectations for usability, accessibility, and relevance. To ensure older adults can fully participate in the digital society, it is essential to create an age-friendly online environment (Fang et al., 2024). We used the Technology Acceptance Model to examine how perceived usefulness and usability affect older adults' willingness to adopt new digital tools, which has been used in previous studies in older drivers' adoption of advanced driver-assistance systems (Hansen et al., 2025). This framework guided our exploration of how older adults evaluate online driving safety tools and allowed us to identify features that support or hinder uptake, and explore preferences in consuming online content.

In response to the road safety challenges reported nationally, our DART team developed a suite of online resources to promote safer driving and prolonged independent mobility amongst older adults, and to support practitioners involved FtD assessments. Whilst the tools mentioned in this report were developed through broader national collaborations and funding, the ACT Road Safety Fund grant enabled focused feedback and refinement of these tools through clinician focus groups and older driver interviews, ensuring the resources are practical and user-friendly within the ACT context.

The early-stage feedback and refinement included:

- The Ageing Well on the Road website: a digital resource providing accessible, evidence-based information for older drivers and their families on age-related changes that can impair safe driving, mobility planning, and driving cessation. It also includes tools and guidance for clinicians.
- The Multi-Domain (Multi-D) screening tool: a brief online assessment measuring cognitive and sensory functions to estimate the risk of failing an on-road driving assessment and identify at-risk drivers early, potentially reducing referrals to on-road driving assessments.
- The On-Road Driver Safety and Outcome Measure (ORDSOM): an app-based = scoring tool for OTs to assess driving performance in real time, record driving errors, automatic scoring and reporting.

The Multi-D and ORDSOM tools are still in development and not yet publicly available, Figure 1 and 2 provide example screenshots of the current app prototypes. Feedback gathered through this project will inform final design, implementation, and dissemination strategies to benefit clinicians, road safety professionals, and older drivers across Australia. In line with Goal 4 of the ACT Road Safety Strategy, 'Strengthen collaboration across Government and with stakeholders to improve road safety in the ACT' (ACT Government, 2020), our project has actively engaged with Driving & OT Solutions, a local provider of driving services in the ACT. Their valuable input ensured our resources are practical and

relevant for the ACT community, supporting the broader goal of safer and more sustainable mobility for all road users.

***The Multi-D and ORDSOM prototypes shown in Figures 1 and 2 are provided for demonstration purposes only. These tools are still under development and are covered by a UNSW Invention Disclosure Agreement. All intellectual property remains the property of the research team. The images are shared here with permission to illustrate the project's progress; they are not to be reproduced, adapted, or used for any other purpose without prior written approval from us.*

Figure 1. Multi-D prototype

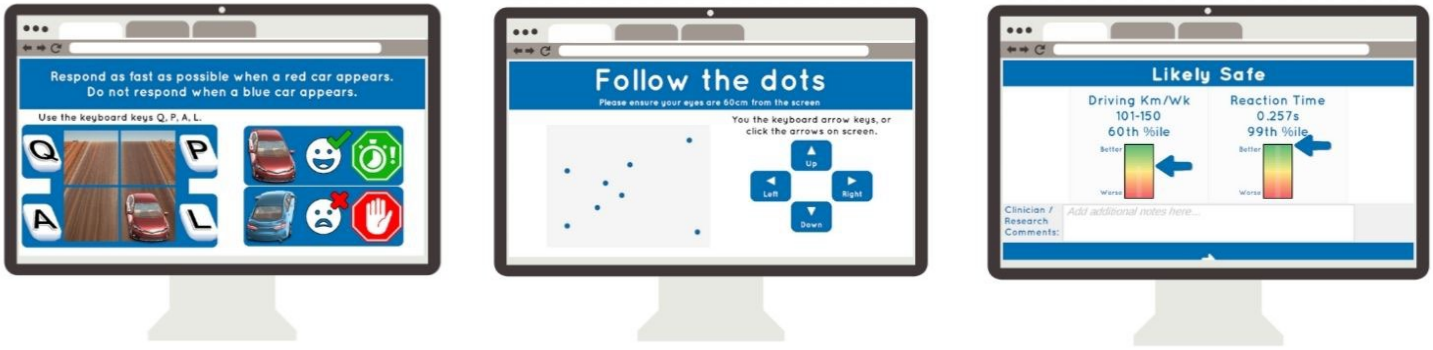

Figure 2. ORDSOM prototype

[App interface image redacted due to intellectual property restrictions]

METHODOLOGY

This 18-month project focused on adapting older driver safety resources for online use, focusing on the Ageing Well on the Road website, the Multi-Domain Screening Tool (Multi-D) and the On-Road Driver Safety and Outcome Measure (ORDSOM). This project involved refining and exploring their usability and acceptability, with the aim of informing future use by clinicians and older drivers in the ACT.

Activities were conducted under three separate studies and ethics approvals:

- iRECS 6396: Consumer feedback and evaluation of digital tools.

- iRECS 9286: Clinician feedback and evaluation of developed resources.
- iRECS 7160: Current FtD practices in Australia (separately funded, but ACT clinician results are referenced in this report).

All participants gave informed consent prior to participating in research studies. Interviews and focus groups were held online via Microsoft Teams, audio-recorded, transcribed, de-identified, and stored securely on UNSW platforms.

Stage 1: Project development

This project began in August 2024 with a start-up meeting with ACT Road Safety to confirm timelines and project scope. A project manager, research assistant, and software developer were recruited to the research team. Activities of this stage included: participant recruitment, conducting interviews with older adults, focus groups with GPs, website refinement, and development of tool prototypes. Stakeholder input and feedback guided the prioritisation of tool features. The team collaborated closely with Driving & OT Solutions to ensure ACT-specific content was incorporated and that the tools were suitable for use by ACT clinicians.

Stage 2: Website refinement

Through a separate ARC Linkage grant, research evidence on ageing and driving was translated into a practical resource for consumers via the Ageing Well on The Road website (Figure 3). This website launched on 13 November 2024 and was designed to be mobile-responsive and accessible to all possible users. Design priorities, informed by feedback from older adults and clinicians prior to public launch, included a clear visual layout, plain-language content, simple navigation, large fonts, and image text alternatives. Additional accessibility plug-ins were installed to support diverse user needs.

Figure 3. Ageing Well on the Road Website

The website's content was informed by a prior review of 26 existing Australian older-driver websites conducted by the research team. The review aimed to assess existing resources, identify

content gaps, and guide the development of a new platform. Appendix 1 provides a detailed overview of the content, format, and features of the websites reviewed. The review revealed several consistent patterns and gaps, for example, few sites offered tailored guidance specifically for older drivers on maintaining driving skills, using vehicle technologies such as Advanced Driver Assistance Systems (ADAS), or supporting independence and decision-making around driving retirement. Based on these findings and early user feedback, the team developed new content pages to address these gaps.

To inform website improvement and technical enhancements, feedback was gathered to inform improvements to navigation, content clarity, and accessibility. Participants were recruited via professional networks, social media platforms, and prior study cohorts who had consented to future participation in further studies. Sessions lasted 30–60 minutes and followed a semi-structured guide. Older driver participants were eligible if they were 65 years or above, proficient in English, and had access to the internet. They were invited to share perspectives on the adequacy of existing information sources, as well as provide feedback on the content, format, and usefulness of Ageing Well on the Road. Discussions were guided by structured questions covering topics such as current information-seeking behaviours, perceptions of online assessment tools, and views on the website's content for both older drivers and clinicians. Participants also completed a short online questionnaire collecting demographic information and self-reported knowledge about licensing, age-related changes affecting driving, and strategies for maintaining driving safety. This approach provided qualitative insights into barriers and facilitators to accessing driving-related information and the types of resources older drivers find useful and trustworthy.

Focus groups with GPs and stakeholder input informed the design for the "For Clinicians" section on the website, which provides guidance on the use of off-road and on-road driving screening assessments, and screening tool interpretation. Although the Multi-D screening tool has been finalised as a prototype during this project, it has not yet been commercially released to the public and is therefore not available on our website in order to protect intellectual property. The website currently provides a brief overview of the Multi-D with a reference to our published validation research. Initial mock-ups of the ORDSOM tool were also developed, but are not linked on the website whilst work continues on building a fully functioning app for future implementation.

Stage 3: Evaluation and report writing

Clinician tools were evaluated via online surveys and interviews with clinicians who assess driving fitness in older adults. Surveys assessed clarity, relevance, and ease of use of the developed tools. Initial mock-ups of the prototype tools were presented to participants to gather feedback and understand how these tools may be used in clinical practice. Qualitative data from interviews were transcribed, collated, and analysed in NVivo. Website engagement data is monitored regularly via WordPress Site Kit Analytics. WordPress Site Kit provides information on usage, top content, and engagement time for

key pages. Website usage data has been collected and shows promising reach and engagement since the websites launch, and has been used to better understand user behaviour and content reach.

ACT-specific results from our national survey reported a need for improved accessibility and integration of validated tools, improved training and more professional development.

RESULTS

This section summarises the characteristics of participants where available and presents the findings from the three distinct studies conducted as part of this ACT grant project. Results are reported separately for clinicians and older drivers, highlighting patterns in engagement, usability, and acceptability of the tools. Where relevant, findings include descriptive statistics alongside qualitative insights from interviews and focus groups. A more detailed interpretation and discussion of the implications of these results is provided in the Discussion section. Please note, some findings presented in this report are currently under review for publication and should not be disseminated or cited prior to publication.

Consumer feedback and evaluation of digital tools

This study aimed to gather initial feedback from older drivers and GPs on the usability, relevance, and perceived value of the Ageing Well on the Road prior to its public launch, and concurrently sought feedback from GPs on the Multi-D screening tool. This study aimed to explore how older adults access information on driving safety, what facilitates or hinders their engagement with online digital tools, and the challenges clinicians face when assessing fitness to drive in older adults. Insights from this stage were used to refine the website to better meet the needs of both older drivers and health professionals, supporting safer and more confident driving decisions, and to provide further input into the development of the Multi-D screening tool.

Sample characteristics:
The sample characterises of the eight older adults (male n = 7, female n = 1) who contributed to this stage of the study are shown in Appendix 2. The participants ages ranged from 67 to 85 years. All were current drivers, with one participant reporting restrictions on their license, requiring spectacles and annual medical reviews. Most participants drove more than half the days of the week, with three driving six days per week and three driving seven days weekly. Weekly driving distances ranged from 31km to over 150km. When asked about how many more years they anticipated continuing to drive, the mean number was 17 years (s.d=6.84), with the range spanning from 8 to 30 years. Half of the participants

reported having completed a medical review of their FtD by a doctor, whilst the other half had not.

Older drivers' confidence in understanding licensing requirements after the age of 75 was mixed. Three participants expressed high confidence and three expressed low confidence, with the others feeling neutral. Confidence in managing age-related changes affecting driving safety was higher, four participants reported high confidence, and three reported moderate confidence. Most (n=6) also expressed high confidence in managing their own driving safety. Regarding satisfaction with existing information on licensing and ageing and driving safety, participants were generally neutral about both quality (n=4) and quantity (n=5). Common sources of accessing information included family members (n=5), doctors (n=4), and friends (n=2), with online resources being the preferred format for health and driving information (n=6).

Ten GPs participated in an in-person focus group in August 2024, in Sydney. Their ages were diverse, with three participants in their 30s, two in their 40s, two in their 50s and three in their 60s. Three worked full-time and seven part-time. Two had joined their practice within the past year, whilst the others had been with their practice for over 20 years. All GPs held a medical degree and Fellowship of the Royal Australian College of General Practitioners (FRACGP). Two also held PhDs, and three held other professional roles, such as being on the board of the Primary Health Network (PHN), postgraduate medical education, or running a GP training program.

Although the total sample size of this stage was small (n=18), it aligns with the exploratory nature of the study and is consistent with qualitative research methodologies, where in-depth feedback from interviews and focus groups is prioritised. Such sample sizes are widely considered sufficient for identifying key themes and usability concerns in formative user experience research (Braun et al., 2019; Faulkner, 2003). However, the findings should be interpreted within the context of the focus group and are not intended to be generalised to the broader population.

General Practitioner findings:

This stage of the study explored GP perspectives on the usability, relevance, and potential integration of the Multi-D screening tool prototype into routine practice. Discussions focused on challenges GPs face when assessing FtD in older adults, the assessment tools and processes currently used, and views on structured digital resources to support clinical decision-making.

One theme noted was that older driver rarely initiate conversations about driving concerns themselves, making it challenging for GPs to identify at-risk patients. One GP explained: "*It's pretty rare… when a patient is the one who says 'maybe I shouldn't be driving'. I think that's happened to me once. It may be family members that may say something, but it's rare for the individual to say 'no, I'm not good enough".* Related to this, participants reported that

patients often experience anxiety about potential licence loss, which can complicate these discussions, with one participant stating: *"They get very anxious. Very worried they will fail and their license will be taken away from them, and there's a rapid ball of catastrophising that goes on."* Differences in licensing regulations between states and territories were also highlighted as a barrier to initiating these conversations, for example, eligibility criteria for medical assessments and licence renewal processes vary across jurisdictions, which can make guidance less straightforward.

Time constraints in standard consultations emerged as another key theme, limiting the ability to conduct comprehensive cognitive assessments or administer driving screening tools. One GP described the challenge: *"This is administrative work…. I don't want to be doing this in the consult room in the 12 minutes I get with a patient."* This demonstrates how competing demands during short consultations can push cognitive and driving assessments to the margins of clinical practice, which may contribute to some unsafe drivers being missed. Whilst some GPs did report using off-road screening tools, such as the Trail Making Test and GPCOG, they noted their limited predictive value for on-road driving performance, with one GP noting: *"All the things we do in the office may not have a good transferability for skills required on the road… we're using certain measures that may or may not predict what they may face on the road".* Referrals to occupational therapists or on-road driving assessments were common for higher-risk patients, although cost and access were identified as barriers that clinicians considered. As one GP suggested: *"an OT driving test… is a significant cost, which is a barrier, but I think if we have concerns, it's definitely a good option."*

Participants were generally supportive of the suggestion of new structured, evidence-based digital resources that could be integrated into their routine practice, provided they were easy to navigate, clinically relevant, and accompanied by clear guidance on how to interpret results. One GP emphasised the importance of clear instructions: *"I would need a very clear flowchart of where it fits in and what I would do with the result… I'm not entirely sure where it would fit within a comprehensive assessment."* Participants also discussed opportunities to align these new tools with their existing processes, such as the over-75 health check, to streamline their clinical assessments and reduce duplication. As one GP noted: *"You could roll it [the Multi-D] into the over-75 assessment and maybe that could absorb some of the cost… it's a good idea to time your driving assessment with your over-75 assessments because they do a cognitive assessment which is important."* Interactive online tools were also seen as potentially motivating for patients resistant to conversations about driving safety, as one GP suggested: *"…I wonder if it would be useful in trying to convince someone that they are not as good as they used to be… it doesn't have to mean they can't drive, it could just trigger an on-road assessment."*

Overall, GP feedback highlighted the need for practical, evidence-based online clinician resources that are adaptable to real-world constraints. Digital tools that provide clear and actionable guidance, integrate with existing clinical assessment pathways, and support

sensitive conversations with patients could improve clinician confidence and consistency in assessing older drivers, ultimately supporting safer and better-managed driving transitions.

Older driver findings:
Older drivers were invited to provide feedback on the Ageing Well on The Road website prior to its public launch. Interviews and focus groups explored their experiences in accessing information on driving safety, their motivations and barriers to engaging with online resources, and the features they value most in digital tools to support informed driving decisions as they age.

A key theme was that engagement with online tools is often driven by immediate needs or external prompts rather than proactive information seeking. One participant explained: *"You're not going to be prompted to go looking for information that you don't need at the moment"* (P3, M, 67), whilst another highlighted that most people only act when a requirement arises, such as a mandatory medical assessment, explaining: *"You come up against things that say 'hey you have to do something'… I don't think people tend to be looking for the information… it's a push technique not a pull"* (P6, M, 84). These findings suggest that online resources alone may have limited impact unless linked to timely prompts, such as licence renewals or medical reviews. However, it may also be beneficial for these prompts to occur earlier, before a medical review or driving issue arises, to encourage cognitive and emotional preparation for future driving cessation and facilitate a smoother transition when driving becomes unsafe or no longer possible.

Concerns around trust and the use of information in online screening tools were also prominent. Participants preferred advisory rather than prescriptive feedback. As one participant noted: "*I'd be concerned as to what they are going to do with the information that's provided… hopefully, they wouldn't use it against me"* (P3, M, 67). Scepticism about the accuracy of online assessments to test on-road driving safety was expressed as well, with one participant stating: *"I'm sceptical that it actually works in real life… a computer/questionnaire, [assessing] my ability to drive"* (P4, M, 77). Practical barriers to accessing driving-related information were mentioned too, such as differing state and territory regulations, as one participant noted: "Not all states will have the same procedures" (P5, M, 85), highlighting challenges in applying driving advice universally. Together, these points highlight the importance of trust, transparency, and contextual relevance in digital driving resources, particularly ensuring that users feel information is used appropriately and feedback is advisory rather than prescriptive. Whilst online tools should not determine driving fitness, they can play an important role in prompting individuals to seek formal assessment from healthcare professionals or licensing authorities when concerns arise, thereby supporting safety without undermining trust.

Despite these concerns, participants identified several features that would facilitate their use of online resources to access driving-related material. Key enablers included accessibility, ease of use, comprehensiveness, and the ability to provide them with useful

feedback in a supportive way. For example, one participant appreciated the potential of online tools such as the Multi-D to offer advisory feedback, saying: *"I wouldn't mind as long as it's a tool that's helping you to determine if you've got some issues or not… something that gives you feedback"* (P1, M, 73). Other participants emphasised the convenience and the immediacy of access of online websites, suggesting: "*Well, it's readily available and easy to access… I don't have to go to the book shop and look for it [information]"* (P7, M, 71), as well as the comprehensiveness of online information: *"It's very quick. It's very easy. It's very comprehensive… You'll get lots more answers"* (P4, M, 77). These quotes show that practical usability and thorough content are strong motivators for engagement.

Self-regulation and personal perceptions of driving safety was another recurring theme. Many participants relied on their own experience, friends and family feedback, or professional assessments to inform their decisions about driving . One participant described having proactive engagement with a driving assessment following medical advice, and said: *"I prepared for and did all the reading… realised that I can still drive properly and safely and confidently"* (P2, M, 74), demonstrating how external prompts, such as medical recommendations, can encourage constructive self-reflection. Others reported modifying their driving through self-regulating behaviours, such as avoiding night driving, based on personal judgement, with one participant reporting: *"My wife says that she isn't going to drive after dark… I know quite a number of people that don't drive after dark"* (P6, M, 84).

Overall, these interviews indicate that older drivers value trustworthy, contextually relevant, easy-to-use online resources that provide general advice and feedback rather than prescriptive outcomes. They are more likely to engage with resources when prompted by external requirements, personal health concerns, or an interest in maintaining their driving safety. These findings highlight the importance of designing digital tools that consider both motivational and practical barriers.

Taken together, the perspectives from clinicians and older drivers highlight both overlapping concerns, such as trust, accessibility, time or resource constraints, as well as differences in emphasis. Clinicians prioritised structured tools and workflow integration, whereas older drivers sought reassurance and advisory guidance.

Clinician feedback and evaluation of developed resources

This study aimed to evaluate the usability, accessibility, and perceived value of the Ageing Well on the Road website, the Multi-D, and the ORDSOM from clinician perspectives. Clinicians reviewed initial mock prototype versions of each tool and provided feedback on content, functionality, and potential integration into routine clinical practice. Participants also completed an anonymous survey ranking the tools. To contextualise this feedback, clinicians were asked to describe their current approaches to assessing older drivers' fitness

to drive, helping to identify how these tools could address existing gaps and improve clinical workflows. Participant feedback and insights will be used to further refine the prototypes and inform strategies for broader implementation in the future.

Sample characteristics:
Three clinicians participated in this study, including a geriatrician, a forensic specialist/GP, and an OT driving assessor. Collectively, the three participants had several decades of clinical experience. Two had practiced for more than 21 years each, and one for 5–10 years. All clinicians regularly assessed patients aged 65 years and older. Participants reported prior awareness of several off-road screening tools, including the Montreal Cognitive Assessment (MoCA), Maze Test, Snellgrove Maze Test, Trail Making Test, OT–DORA Battery, and DriveSafe–DriveAware, though their use varied.

Current practices:
Participants described diverse, often reactive approaches to assessing older driver fitness to drive, reflecting variation between clinical settings and the absence of a standardised assessment pathway. Clinicians reported relying on a mix of clinical judgement, cognitive screening instruments (e.g., MoCA, MMSE, Addenbrooke's), short functional tests such as the Trail Making and Maze tests, Drive Safe Drive Aware, Snell & Grove, as well as basic vision and physical screens. One participant highlighted their primary reliance on cognitive tools: *"So I'm a geriatrician. I use mostly cognitive assessment tools"* (P1), whilst another noted the most frequently used assessments in their practice: *"the Addenbrooke's… and the OT drive home maze test are the two really big ones"* (P2). A third participant emphasised the perceived gold standard, reflecting the value placed on direct observation: *"the gold standard of what I use… is an on-road driving assessment with the driving instructor"* (P3). These quotes illustrate the variability in assessment approaches and reliance on both off-road and on-road methods.

Patient note keeping and referral pathways also differed by discipline and clinical setting. One clinician described documenting advice in clinical notes and referring patients to the local fitness-to-drive team: *"Patient notes, I would document if I'm asking them not to drive… and I would refer them to the driver assessment team"* (P1). Another outlined a workflow that produces a peer-reviewed report for the licensing authority: *"the clinic writes my report, it gets peer reviewed… and then we send that to the RTA"* (P2). An OT noted adapting templates given from their training: *"I have paper templates that I received when I did my OT driving assessor training. So, I've taken those templates and modified those a little bit for how I like to keep my data and for my caseload"* (P3). These examples demonstrate how documentation practices and referral processes vary, often shaped by professional background and local systems, with no current standardised approach.

Common barriers across participants included limited time to conduct assessments, funding constraints, and accessibility issues for on-road testing. One clinician emphasised the impact of limited public transport for clients who can no longer drive: *"I think the lack of support*

services, if they can't drive, is a significant problem" (P1). Resource limitations and long waitlists were raised as barriers, with one participant noting that: *"Limited resources, like it kind of covers time and money because the standardised assessments that we have, you know, cost per usage and have their own limitations. Long waiting list means that people don't get seen as quick as they want to, and that's part of, you know, a bigger issue in terms of my workplace"* (P3). This highlights how both practical constraints (time and cost) and systemic factors (long waitlists, workplace pressures) can limit timely access to driving assessments. Clinicians also described the difficult trade-offs involved with revoking licences, with one noting the significant consequences: *"When you cancel someone's driver's licence, it shortens their life expectancy to a similar degree as cancer" (P2).* These quotes illustrate both systemic barriers and the emotional weight of clinical decisions in driving assessments.

Participants also raised practical usability concerns for some off-road screening tools, particularly for older adults with limited experience using tablets or touchscreens. One participant commented that some clients *"have difficulty accessing iPad-based software… it becomes a little bit of an issue"* (P3). Taken together, these responses indicate need for validated, accessible tools that can be integrated into existing workflows alongside clear guidance, decision-support and appropriate system-level resourcing.

Feedback on tools:

Ageing Well on the Road Website –

Participants valued the website as a centralised resource for both clinicians and clients, particularly for clinician-specific content and information spanning multiple jurisdictions. One participant described it as *"fantastic to have the information online"* (P1), whilst another noted *"it's really good to have the information online and I like the fact that it goes across states because that's quite tricky sometimes"* (P2). A third participant agreed, stating, *"I do really like it. It's nice to have all the information in one spot"* (P3). Clinicians highlighted the benefit of consolidating complex material in one place, with P2 observing: *"having that sort of stuff centralised would be really, really useful."* This reinforces the theme that centralised resources can improve efficiency and reduce the need to navigate multiple sources.

Participants also emphasised the importance of practical guidance, including licence condition restrictions and alternative transport options. The website was consistently described as easy to navigate, particularly for its target audience. One participant reflected: *"it's fairly easy to use as well. I know that's always gonna be something difficult with the older population that they might have difficulty navigating between the pages, but I think the thumbnails on the hyperlinks and stuff are as self-explanatory and straightforward as they can be for a website"* (P2). This comment highlights that the website's design features, such as clear links and visual cues, support usability for clinicians and older adults, addressing potential accessibility challenges for users with varying levels of digital literacy.

Multi-D –

Clinicians saw the tool as useful for rapid screening and triage, particularly in general practice. P1 suggested: *"anything extra like this that has been validated would be brilliant"*, noting it could help with reducing unnecessary referrals to OT driving assessors: *"I think it adds another layer to that complex situation of working out who goes first to the OT or who doesn't?".* P2 shared a similar view, adding: *"in our clinic, this would be a perfect addition… anything to validate and give GPs more ability to provide an objective assessment that doesn't take an hour like an Addenbrookes does".* These quotes illustrate that clinicians value validated, objective tools that can streamline decision-making and complement existing assessments.

Potential barriers for older adults unfamiliar with digital assessment tools was highlighted, such as using a joystick or keypad. P1 noted: *"I think it'll be useful for someone who knows how to use a keyboard and is comfortable with that. I think if it's an older driver who's not used to using that, then it might pose a new problem",* reflecting the need to consider usability for patients with limited experience using digital devices.

Participants also emphasised the tool's potential utility in facilitating discussions with clients and their families about driving safety. P2 explained it could be helpful: *"particularly for them to see and particularly their family members to see that this* [their driving]*, is a dangerous thing"* highlighting the tool's role in communication and shared decision-making. However, practical limitations were also noted. P2 mentioned that in general practice, time constraints and lack of rebates could limit use: *"part of the problem in the GP land is that there is no rebate for driver's licence medicals"*. P3 also noted the Multi-D could improve the quality of referrals by providing quantitative data to support clinical decisions: *"I think it would improve the quality of the referral because I would probably have a bit more understanding from the referral that they've tried to be the gatekeeper and the person has proceeded anyway… those are the saddest referrals because everybody can see it except to the person. But no one has any quantitative data to prove it".* These quotes together show that clinicians see both practical utility and systemic limitations, underscoring the importance of considering workflow and patient context in tool implementation.

ORDSOM –

Feedback indicated that the ORDSOM tool was promising for streamlining on-road assessment scoring and communication. P2 stated*: "this looks like it will be a faster thing and time is important as clinicians. So that would be good to have something that saves time"*, whilst P3 reinforced, suggesting it could "*take some of the admin time out of needing to go through notes, scan them, annotate them a little bit more because you know you can imagine my writing's rather messy and when, and I suppose that's it would improve workflow once. Once I was competent in using it".* These quotes illustrate that clinicians value tools that can reduce administrative burden and improve efficiency without compromising assessment quality.

In regards to navigation and ease of use of the tool, P1 and P2 commented that it *"looks really good",* and P3 said: "*I do think it looks nice and clean and easy to use".* P3 also emphasised that the tool supports decision-making without replacing professional expertise: "*make things much easier on road as well… makes that process easier for my brain to get as much accurate information as possible to make my decision. It doesn't remove the capacity of making the decision, which I personally see in other tools".* This highlights that clinicians value intuitive interfaces that assist rather than replace clinical judgement.

Suggestions for improvement included integration with existing clinical software, clear definition of scoring thresholds in a manual, and auto-save functionality to prevent data loss during on-road assessments. These points illustrate clinicians' focus on practical implementation considerations to ensure the tool is safe, reliable, and usable in real-world settings.

Survey responses reinforced the qualitative feedback, with participants rating the tools as accessible, relevant, and likely to improve confidence in assessing older driver fitness. The Multi-D tool was viewed as somewhat useful, with an easy-to-understand interface and likely to be adopted in practice. Clinicians noted it could support decision-making and referrals, though expressed the need for practice runs prior to the actual test for older adults who may be unfamiliar with digital tasks. The ORDSOM app was seen as useful to improve efficiency and consistency in on-road assessments, reducing administrative burden and supporting accurate data collection. Concerns included usability for older or cognitively impaired patients and potential data loss if GPS connectivity failed on-road. The Ageing Well on the Road website was rated very likely to be used, with its consolidated content across states and clear guidance seen as particularly valuable. Suggestions included linking it to clinician software such as Best Practice, and clarifying the intended audience for the clinician section. Overall, clinicians agreed that all three tools were relevant, accessible, and likely to improve confidence in assessing older driver fitness, whilst noting that usability for patients and integration into workflows would be critical for successful implementation.

Current FtD practices in Australia

This study involved a multi-disciplinary national survey of clinicians involved in assessing older adults' FtD, funded through a separate ARC Linkage grant. This study aimed to understand current clinical practices in assessing older driver FtD in Australia, the resources clinicians use, and factors influencing assessment accuracy and efficiency. For the purposes of this project, data from the two ACT-based clinicians (n=2) were included to provide relevant local insights.

Sample characteristics:
Two GPs from the ACT participated in our national survey. Both were male, aged 30 and 35, employed full time, with one having 5-10 years of practice experience and the other 10-20 years. Both reported having had adequate training in older driver safety and indicated that they assess fitness to drive in older adults approximately 5–9 times per week (i.e., 1–2 times per day).

General practitioner findings:
When asked about the proportion of their clients from regional or rural areas, respondents reported 24% and 45%, respectively. GPs reported sourcing resources to support older driver management from online websites, professional associates, brochures and printed materials, and workshops or seminars. Preferred platforms for accessing validated online screening tools included Microsoft desktop browsers, Apple iPads, and Android tablets. Both rated their current resources for learning about older driver safety as "extremely helpful," but suggested improvements such as centralising resources through a dedicated portal and integrating validated tools into electronic health record systems (EHR).

Factors identified as most important for improving assessment accuracy and efficiency included access to screening tools, training and professional development, support from colleagues or management, clear guidelines, client cooperation, sufficient appointment time, access to up-to-date research, and continuing education opportunities. One GP ranked training and professional development as most important, whilst the other ranked client cooperation highest.

These results highlight that, whilst the two ACT-based clinicians assess older driver fitness regularly and have access to a range of resources, there is potentially still room for improvement in the accessibility and integration of validated screening tools. Their feedback aligns with the project's aim to support clinicians by developing centralised, evidence-based resources that are easy to access, embed into routine practice, and ultimately enhance older driver safety. The emphasis they placed on training, professional development, and client cooperation reinforces the importance of providing both practical tools and education to improve the accuracy, efficiency, and consistency of older driver FtD assessments in the ACT. These insights also help contextualise the development of centralised digital resources, highlighting where accessibility, integration, and training are most needed.

DISCUSSION

The aim of this project was to help improve the safety and mobility of older drivers through capturing perspectives from both clinicians and older drivers in Australia to guide development, refinement, and practical application of evidence-informed, user-friendly

digital resources. The project explored older adults' motivations and resource needs when seeking information about driving safety, and examined clinicians' perspectives on supporting decision-making regarding FtD assessments for older adults. To achieve this, a series of interrelated studies were conducted under separate ethics approvals. By combining qualitative and quantitative feedback, this project generated a broad understanding of usability, accessibility, and relevance, informing refinements that can support safer driving practices and enhance clinician decision-making.

Findings indicate that older adults' engagement with information about driving safety is largely triggered by personal circumstances, health conditions, or external prompts such as family concerns or government requirements. Participants generally did not seek information proactively and were more likely to engage only when prompted by a specific need, such as a medical review or licence renewal process. This aligns with prior research on older adults' health-related decision-making (Fang et al., 2024; Shen et al., 2023) and highlights the importance of linking digital resources and screening tools to timely decision points to bridge the gap between awareness and action. However, whilst participants in this project preferred advisory rather than prescriptive feedback, it remains important that digital tools clearly direct users toward appropriate follow-up with health professionals where safety concerns are indicated, ensuring that advisory information does not inadvertently delay necessary action.

Clinicians reported persistent challenges when assessing older adults driving fitness. They described reactive approaches, often prompted by patient or family concerns or by mandatory reporting requirements. Limited consultation time and competing priorities limited the ability to conduct comprehensive assessments, whilst off-road cognitive and functional screening tools were inconsistently used and often perceived as limited in predictive value in relation to assessing on-road driving performance. On-road assessments however, although considered the "gold standard", were also constrained by cost, accessibility, and availability. These findings underscore the ongoing ethical and practical challenges that clinicians face when balancing patient safety with autonomy in FtD decisions.

Feedback on the tools suggest ways to address these challenges. Older drivers valued resources that were accessible, easy to use, comprehensive, and provided advisory feedback rather than prescriptive outcomes, aligning with literature suggesting older drivers prefer guidance that enables self-regulation in response to perceived limitations (Charlton et al., 2006). Older adults expressed concerns about trust, accuracy, and jurisdictional differences, emphasising the need for transparent, contextually relevant guidance. Clinicians appreciated centralised resources that consolidate complex information, provide evidence-based guidance, and support workflow efficiency. Survey responses reinforced these perceptions, showing that the tools were accessible, relevant, and likely to improve clinician confidence, with suggestions for integration with clinical software and additional guidance for digitally inexperienced and less tech-savvy users.

The Multi-D tool was seen as useful for rapid screening, triage, and supporting referral decisions, providing objective data to complement existing assessments, facilitate discussions with patients and families, and improve the quality of referrals. Potential barriers included older adults' digital literacy and time or cost constraints. The ORDSOM app was valued for streamlining on-road assessment scoring, reducing administrative burden, and improving the clarity and consistency of data collection. Clinicians emphasised intuitive design, clear scoring guidance, and integration with existing clinical software as key requirements. The Ageing Well on the Road website was praised for its consolidated content, accessibility, and jurisdiction-spanning guidance, supporting both clinicians and older drivers as a centralised information resource.

Taken together, these findings demonstrate that co-designed digital resources can support safer driving transitions, enhance FtD assessment consistency, support clinical decision-making, and facilitate sensitive discussions with patients and families. Trust, transparency, and contextual relevance were recurring themes, with clinicians noting challenges arising from differences in licensing regulations across states and territories and older drivers preferring advisory, supportive feedback. These insights emphasise the need for practical, evidence-based tools that are adaptable to real-world workflows to maximise uptake and impact.

Strengths of this project include the co-design approach, multi-modal data collection, and triangulation of qualitative and survey data to capture both clinician and older driver perspectives. Limitations include small sample sizes, particularly within the ACT, which restricts generalisability. There may also be under-representation of older adults with lower digital literacy or limited English proficiency, which could affect inclusion of culturally and linguistically diverse (CALD) populations. Recruiting clinicians was also challenging due to competing demands, limiting the diversity of perspectives. These factors should be considered in future evaluation and implementation of the tools, to explore broader implementation, effectiveness, and uptake across diverse populations and jurisdictions.

These findings may also have direct relevance to services such as the FtDMC at Canberra Hospital, which provides multidisciplinary assessments for drivers referred for medical review. By strengthening early screening, improving access to evidence-based tools, and supporting clinician confidence in primary care, these resources may initially increase referrals to specialist services as more at-risk drivers are identified. However, in the longer term, improving access and introducing validated, low-resource assessment options in primary care could help manage demand more effectively whilst ensuring timely, consistent, and equitable FtD decisions across the ACT.

Practically, this project highlights that digital resources and validated screening tools should provide timely prompts, support self-reflection, and integrate seamlessly into clinician workflows. Training and professional development remain important to ensure clinicians

use these tools confidently and consistently. By addressing both clinician and driver needs, these resources can enhance older driver safety whilst supporting autonomy, confidence, and independence. Finally, the project largely aligns with the ACT Road Safety Strategy by promoting safe mobility amongst older adults, supporting informed decision-making, and providing resources that facilitate early identification of driving risks. The co-design approach ensures that future refinements remain user-focused, practical, and embedded in real-world contexts, maximising impact on older driver safety, clinician practice, and family decision-making.

RECOMMENDATIONS

Integration into clinical practice:

- Incorporate the *Ageing Well on the Road* website, *Multi-D* screening tool, and *ORDSOM* into routine clinical workflows in the ACT, particularly within GP over-75 health checks, occupational therapy assessments, and other primary care settings such as the FtDMC where relevant.
- Provide clinicians with clear guidance and education on when and how to use these tools when available, such as decision-making flowcharts and integration with electronic health records to improve consistency and confidence in FtD assessments.
- Develop training modules to enhance clinician knowledge and competence with new digital tools and online resources.

Policy recommendations:

- Encourage ACT road safety practitioners to formally adopt validated digital tools as part of standardised older driver assessment protocols, and ensure adequate education on how to properly use and interpret these tools.
- Consider implementation of digital driving screening tools, such as the Multi-D, to support equitable access to off-road screening assessments, particularly for older adults in rural or remote regions where on-road driving assessments are less accessible.

Tool development:

- Conduct formal validation studies of the final Multi-D tool to establish predictive accuracy for on-road driving test outcomes.
- Further funding to finalise the ORDSOM app in order to implement in real-life clinical practice.

Future research:

- Investigate the gap between digital tool competence and driving competence - determine how many older adults may be safe drivers but are unable to engage with online screening tools, and how this affects driving risk identification in the Multi-D.
- Evaluate the impact of tool implementation on clinical decision-making, patient outcomes, and mobility safety over time.

PROJECT OUTCOMES

- Evaluated and refined three digital tools to support older driver safety, focusing on clinician and older driver's feedback:
    - Ageing Well on the Road website: provides evidence-based guidance on safe driving, mobility planning, and driving transitions. Grant funding enabled user testing to ensure content and design were relevant and accessible. https://ageingwellontheroad.com.au
    - Multi-Domain Off-Road Screening Tool (Multi-D): an online assessment of cognitive and sensory functions to identify drivers at risk. Grant funding supported prototype evaluation with clinicians to test usability and integration into practice.
    - On-Road Driving Safety Observation Measure (ORDSOM): an app-based scoring tool for occupational therapists. The grant enabled feedback sessions with ACT practitioners to refine scoring and reporting features.
- The $50,000 ACT grant covered research team time to gather feedback and refine these tools in partnership with an ACT-based driving service provider.
- No new tools were produced under this grant. However, findings will inform their final design, implementation, and future integration into ACT and national road safety resources.
- Older adults preferred advisory, easy-to-use digital tools and were most engaged when prompted by medical reviews, licence renewal, or family discussions.
- Clinicians valued centralised, evidence-based resources that fit within routine practice and improve confidence in fitness-to-drive assessments.
- Barriers to adequate FtD assessments included time constraints, digital literacy, and workflow integration, highlighting the need for further training and system support.
- Overall, the tools show strong potential to enhance clinical decision-making, promote safer driving, and support older adults' independence.
- Recommendations include future validation of the updated Multi-D tool, integration of tools into clinical workflows, and development of clinician training modules.
- This project aimed to support the ACT Road Safety Strategy by promoting earlier identification of at-risk drivers, encouraging shared responsibility between clinicians,

older adults, and their families, as well as fostering more open, proactive conversations about driving safety.

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APPENDICIES

Appendix 1. Review of current older driver websites

Website name	Provider type	URL	State	Main topic	Content	Format	Potential features for website
NSW Government - Driving, Boating and Transport	Government	https://www.nsw.gov.au/driving-boating-and-transport/driver-and-rider-licences/older-drivers-and-riders	NSW	Driver and rider licensing for older adults (70+)	- Licence renewal and modification processes for older drivers - Assessments required by licence type and age - Expectations for assessments - Guidance on retiring from driving - Information for friends and family concerned about an older adult's driving - Related health and disability conditions (e.g., eyesight, dementia)	- Accessibility feature (ReadSpeaker webReader) - Printable PDFs (e.g., "A Guide to Older Driver Licensing") - Shareable via social media (Facebook, LinkedIn, Twitter, email) - Hyperlinks to related topics - Checklist for driver readiness - Search tool for locating older driver assessors	- Content on retiring from driving - List and locator tool for older driver assessors/instructors - Accessibility enhancements (e.g., ReadSpeaker webReader) - Central linking to all state older driver handbooks
NSW Government – On the road 65Plus	Government	https://www.transport.nsw.gov.au/roadsafety/older-road-users	NSW	Road safety and mobility for older adults (65+)	- Overview of aging-related conditions affecting driving (vision, hearing, memory, flexibility, medications) - Dementia and driving: impacts, signs, and legal requirements - Signs of declining driving ability	- Clickable headings for easy navigation - Expandable pop-down boxes - Hyperlinks throughout - Decision aids (from University of Wollongong) - Handbooks available in 11 languages	- Information on recognising signs of declining ability - Safe driving advice embedded throughout - Practical retirement-from-driving advice and transport alternatives - Hover-over expansions

					- Safe driving tips (before and during trips) - Guidance on choosing a safe vehicle - Alternative transport options (walking, public transport, taxis, etc.) - Links to Centre for Road Safety resources and road rule videos	- Video animations of road rules - Statistics and links to external organisations	for keywords - Use of video animations to explain complex rules
Access Canberra – ACT driver licence information	Government	https://www.accesscanberra.act.gov.au/driving-transport-and-parking/licences	ACT	Driver licensing requirements and medical conditions for ACT residents	- Brief section on older driver licence requirements - Responsibilities of drivers with medical conditions (e.g., cognitive impairment) - Overview of occupational therapy (OT) driving assessments and what they evaluate (cognition, motor function, reaction time, road rules) - Information on licence conditions, suspensions, and cancellations - Details on medical assessments - Alternative transport resources	- Hyperlinks to forms, internal pages, and external resources	- Clarifies responsibility for self-reporting or reporting others unfit to drive - Explains the purpose and components of driving assessments - Describes conditional licences as an option for continued, restricted driving

ACT Older Drivers Handbook	Government – Council on the Ageing (COTA)	https://files.accesscanberra.act.gov.au/legacy/4715/ACT%20Older%20Drivers%20Handbook.pdf	ACT	Driving, ageing, health, and independence for adults aged 65+	- Promotes safe mobility choices (driving, walking, public transport) - Age-related effects on cognition, sensory and motor skills - Health conditions that affect driving (e.g. diabetes, eyesight, heart disease) - Licensing and driving assessments in ACT - Dementia and driving - Alcohol and medication impacts - Choosing and maintaining vehicles with ADAS - Driving in challenging conditions - Post-crash steps - Life beyond driving and transport alternatives - Support for concerned family/friends	- Colourful, accessible PDF handbook (online or print) - Checklists, illustrations, content page, references - External links and contact info - Less formal and more user-friendly than other government resources	- Covers non-driver mobility (pedestrian/public transport tips) - Guidance for driving with specific conditions - Practical driving tips for challenging scenarios - Steps to take post-collision - List of relevant organisations for support - Medication impacts explained clearly
Seniors Road Safety – NT	Government	https://roadsafety.nt.gov.au/safety-topics/seniors	NT	Promoting road safety for seniors within broader NT road safety strategy	- NT licensing requirements and assessment process for older drivers - Mobility scooter regulations - Tips for reducing road deaths and injuries among seniors - Road rules, penalties, and responsibilities	- Range of downloadable resources: brochures, handbooks, fact sheets, posters (some in multiple languages) - Activity sheets, FAQs - Videos, animations, and audio clips - Crash statistics (NT-specific and national)	- NT-specific crash statistics and comparisons with national data - Public awareness around penalties and legal consequences - Emphasis on not only crash prevention but also reducing harm from

					- Some content broadly focused (e.g., drugs/alcohol, roadworks, passenger safety) and not specific to older drivers	- External links to additional resources	crashes - Opportunity to tailor resources more directly to older adults (currently more general)
Towards Zero Together – Older Drivers	Government	https://towardszerotogether.sa.gov.au/safe_road_users/older_drivers	SA	Safer people, vehicles, speeds, and roads, with limited focus on older drivers	- Limited direct content on ageing and driving - Information on how medications affect driving - Brief content on elderly pedestrian safety - Links to the “Moving Right Along” booklet covering: driving safely for longer, medical conditions and medications, legal obligations, driver assessments, and reducing or giving up driving	- "Moving Right Along" booklet for older drivers and their support network - Fact sheet with older road user stats - Email subscription option - News section (last updated mid-2022) - Hyperlinks to other publications and resources	- Information on how common medical conditions (beyond medication use) can affect driving - Option to receive updates on new content via email - Highlighting and promoting the “Moving Right Along” booklet as a central resource - Opportunity to expand and update news and research sections more regularly
My Licence – Safe Driving Tips for Older Drivers	Government	https://www.mylicence.sa.gov.au/safe-driving-tips/older-drivers	SA	Driving safety, licensing, and older driver responsibilities	- Safe driving tips tailored for older adults - Responsibilities related to fitness to drive - Relevant licensing and medical assessments - List of health conditions affecting driving - Retirement from driving and alternative transport - Information for concerned family/friends	- Links to social media - Current safety campaign banners - Interactive quizzes - Handbooks - Conversation planner for discussing driving concerns - Short videos (Dementia and Driving Project) - PDFs and external resource links	- Banners for latest updates or resources - Interactive conversation tools for family/friends - Embedded videos supporting decision-making (e.g. Dementia and Driving Project) - Strong support for third parties helping older drivers

					- Link to "Moving Right Along" handbook		
On The Right Track – Older Drivers	Government	https://www.dit.sa.gov.au/ontherighttrack/driving_safely/look_after_yourself/older_drivers	SA	Aboriginal road safety and older driver licensing	- Guidance for older individuals who feel they may no longer be safe to drive - Links to other SA resources - Licensing and driver responsibilities - Safe driving advice: medications, fatigue, stress - Respect for other road users - Basic vehicle maintenance - Driving conditions (e.g., poor weather, overtaking) - Crash and emergency response steps	- Visual elements including Aboriginal artwork and avatars - Click-through driving tips - Downloadable PDFs - Links to external websites - Contact form for cultural representation - Email subscription - Search bar	- Practical advice on managing stress and fatigue while driving - Emphasis on how unsafe driving affects others - Step-by-step response for vehicle issues (e.g., brake failure) - Interactive, culturally sensitive design and language inclusion options
Transport Accident Commission – Older People	Government	https://www.tac.vic.gov.au/road-safety/road-users/older-people	VIC	Road safety for older road users (drivers and pedestrians)	- Signs that an older person's driving may be declining - Safe driving tips for older drivers - Pedestrian safety advice - Information on stopping driving - How medications affect driving ability - Table of medications that impair driving, with usage, type, and names - Guidance for those concerned about an older person's driving	- Icons and images - Facts and checklists - Tables and brochures - Available in multiple languages - Links to related content - Contact info and subscription option	- Clearly outlined signs of driving decline and what to do - Table-format medication information: type, name, purpose, and impact - Multi-language support for accessibility - Printable resources for clinicians and family members

VicRoads – Health and driving	Government	https://transport.vic.gov.au/registration-and-licensing/licences/medical-conditions-and-reviews/how-medical-reviews-work	VIC	Health, ageing, and driving safely	- Ageing and how it affects driving - Responsibilities of older drivers - Tips for reducing risk - Choosing a safe car and modifying it - Driving with medical conditions or disabilities - Reporting health conditions and unsafe driving - Effects of specific conditions (e.g., dementia, heart disease) - Monitoring health (sleep, fitness, alcohol, etc.) - Vision and driving - Disability and licensing - Vehicle modifications - Stopping driving: signs, assessments, medical reviews	- Ageing and safe driving handbook (includes a self-assessment guide) - Fact sheets and handbooks (some in other languages) - Videos (e.g., on visual impairments) - Tables and checklists - Contact and support info - Personal stories - Internal/external links - FAQs and enquiry form	- Tools for self-monitoring (e.g., checklists) - Health-focused driving safety education (sleep, fitness, alcohol) - Personal stories and quotes from older drivers - Videos visualising impairments - Easy access to VicRoads for support via message box
Victoria Police – Older drivers	Government	https://www.police.vic.gov.au/older-drivers	VIC	Staying safe on the road as an older driver	- Signs of declining road safety that someone over the age of 65 may have - Ways to reduce the chance of an accident and to keep driving for longer - Fact sheets on older pedestrians, car parks, fitness to drive, distraction, and retiring from driving	- Lists/checklists - Quarterly articles/fact sheets downloadable as PDFs	- Specific information on navigating common scenarios like car parks or driving with passengers - Regularly released articles/fact sheets for seniors

Government of Western Australia – Road Safety Commission - Seniors	Government	https://www.wa.gov.au/organisation/road-safety-commission/seniors	WA	The voice of road safety in WA with the aim to decrease road trauma	- Why road safety decreases as one ages (medication, vision, and flexibility) - Licensing requirements for seniors - Alternative transportation - Road rules - General information on dangerous driving behaviours and avoiding them	- Recently updated - Recent announcements and news - Streetwise: scenarios + quizzes - Statistics - Posters, fact sheets, resources - Tables - Social media links - Community Connect portal - External links within the website	- Displaying road scenarios via video/images with rule explanations and penalties (quiz-style) - Social media integration - Online forum for seniors and road safety
Queensland Government - Seniors	Government	https://www.qld.gov.au/seniors	QLD	Content relating to senior Queenslanders	- Requirements for drivers over the age of 75 (particularly regarding medical certificates) - Notification of medical conditions - How ageing affects driving – vision, movement, and information processing, with some driving safety tips - Brief two sentences on car modifications for older drivers - Surrendering your licence - General info on driving safely (e.g., weather, country roads, trucks) - Support services for those	- Search bar - Printable - Links to resources (internal and external) - Updated mid-2022 - Lists - Tables (e.g., driver rest areas) - Downloadable PDFs	- Car modifications tailored for older drivers with changing physical/cognitive needs - Easy-print icon/button - Maps/tables showing rest areas and travel services

					who have lost driving independence		
Tasmanian Government Transport Services – Health and driving	Government	https://www.transport.tas.gov.au/licensing/health_and_driving	TAS	Health (medical conditions, disabilities, treatments, and ageing) and the effect on driving and licensing	- Responsibilities with driving as you age - *Tasmanian Older Drivers Handbook* – licensing, self-evaluating driving ability, medical conditions and driving, retiring from driving - Fitness to drive and legal responsibilities to report medical conditions/undertake assessments - What medical conditions affect driving – how they affect it, symptoms, and precautions - What to do if concerned about someone else's driving - Vehicle modifications for disabilities	- FAQs in a pop-down box format - Key links to documents (PDF/Word) and internal webpages - Handbooks and brochures	- Frequently asked questions that expand on click to reveal answers (accordion format)
Austroads – Assessing Fitness to Drive	National body (Austroads & National Transport Commission) / Sixth edition 2022	https://austroads.gov.au/drivers-and-vehicles/assessing-fitness-to-drive	National	National driver medical standards	- Geared toward health professionals, but includes driver information - Medical conditions that affect driving - Driver responsibilities regarding medical conditions - Age-related changes and driving management - Licensing, fitness to drive,	- Online, PDF, and Word versions - Search bar - FAQs - News section (last updated 2022) - Email subscription - Internal/external links (including state/territory resources) - Fact sheets	- Information for health professionals about assessing older drivers - What older drivers should expect when being assessed by a GP or other health professional

					and health professional assessments		
RoadSafe Westgate Community Road Safety Council	Community-based; info sourced from Vic Police, VicRoads, instructors	https://roadsafewestgate.org.au/older-road-users-safety/	VIC	Keeping older drivers on the road longer while safe	- Information on presentations/events relevant to the Westgate community - Risks of being an older driver, but also highlights the positives	- Pictures (stock and community images) - Calendar for latest posts - Enquiry form	- Emphasis on the positives/good qualities of older drivers - Calendar feature for news or events
ADHERe	Developed with input from health professionals, older drivers, families, transport experts. Review planned in 2026	https://adhere.org.au/olderdrivers/	NSW	Aged Dementia Health Education and Research	- A decision aid for deciding whether to continue, reduce, or stop driving - Tips for driving safely longer or modifying driving – Licensing requirements - Alternative transport options - Vehicle safety/driving risks - Skills needed for driving and warning signs of decline - Medical conditions that impact driving	- Videos - Interactive decision aid (online, PDF, printable) - External links - Quotes/stories from older drivers - Checklists/lists - Quizzes - Customizable worksheets with downloadable responses - Stock images - Statistics	- Behavioural tips for managing declining driving ability (e.g., avoid night driving) - Self-assessment tools or worksheets that allow users to input and download their answers
COTA	Varies depending on the State/Territory ; Mainly sourced from government websites	https://cota.org.au/	National	Promoting the rights and interests of older Australians	- Scenarios illustrating when driving safety may decline - Tips for maintaining safe driving and driving within capability - Living without a licence and maintaining independence - Road rules, including navigating intersections and road scenarios/conditions - Vehicle checks	- Search bar - Each state/territory has its own specific website - Newsletters - Checklists - Media releases and submissions to inquiries - Comment sections on some pages - Links to relevant external websites	- Use of scenarios to demonstrate what declining driving ability looks like -Separate website for each state/territory

						- Brochures - Pictures/diagrams - Handbooks (e.g., Guide to Driving on WA Roads)	
National Seniors	Possibly sourced from studies, universities, research institutes, and government websites; some not sourced at all	https://nationalseniors.com.au/	National	NFP for Australians over 50	- Driving safety - How ageing affects driving - ADAS (from the UNSW-NSA report) - Car maintenance and vehicle safety - Provides roadside assistance	- Search bar - Links to social media pages - Shareable news articles - Statistics - Fact sheets - Newsletters - Links to external resources and websites	- Information on roadside assistance or other services for drivers experiencing car trouble
Dementia Australia	Direct information from people with dementia, carers, and dementia service providers; government website; other organisations like NRMA or Alzheimer's Australia NSW	https://www.dementia.org.au/living-dementia/staying-connected/driving-and-dementia	National	Dementia and driving	- Targeted towards individuals with dementia, but also towards family members - Also has separate pages for each state and territory - Licensing requirements - Signs that dementia is affecting someone's driving - Conversations regarding safety concerns and retiring from driving - Driving alternatives	- Targeted towards individuals with dementia, but also towards family members - Also has separate pages for each state and territory - Licensing requirements - Signs that dementia is affecting someone's driving - Conversations regarding safety concerns and retiring from driving - Driving alternatives	- Targeted towards individuals with dementia, but also towards family members - Also has separate pages for each state and territory - Licensing requirements - Signs that dementia is affecting someone's driving - Conversations regarding safety concerns and retiring from driving - Driving alternatives

Apia Good Life	Government websites; some information not sourced; some inputs from experts e.g., an exercise physiologist	https://www.apia.com.au/apia-good-life.html	National	Insurance for over 50s; Good Life provides articles and offers	- Information on driving safety in the form of articles - How ageing can affect driving (hearing, vision, response times) - Signs that an older person may be unsafe on the road - How to ensure your older family member/friend is driving safely - How to maintain health to ensure safety on the road - Legal responsibilities (assessments, reviews, certificates) when driving over a certain age by state	- Quarterly newsletter - Search bar - PDF guides - News articles, sometimes with inputs from experts e.g. an exercise physiologist - Internal and external links	- Provide information with inputs and quotes directly from experts
NRMA	Information from government, input from other organisations, NRMA surveys and reports, some information unreferenced	https://www.mynrma.com.au/	NSW and ACT	Advocacy for road users	- Driving assessments and senior driver training - Licence requirements - General road rules, distracted driving, not specifically targeting seniors	- Brochures - Search bar - Social media links	- Information on the purpose and process of driving assessments, including evaluation criteria - Guidance on finding driving programs, lessons, assessors, and training options
Budget Direct	Government, news articles, and websites. Disclaimer that sources may be	https://www.budgetdirect.com.au/	National	Seniors (car insurance customers)	- Licensing of older drivers (including conditional licences and reporting medical conditions) - Guidance on when an elderly family member or	- Search bar - Referenced articles - Internal links	- Includes **references** to peer-reviewed journal articles, which are not commonly found on other senior driving websites

	inaccurate/out dated; articles are not dated and likely not updated.				friend may be unfit to drive, and how to have that conversation		
Australian Seniors	Government sources, statistics, direct quotes from experts, organisations like the Australian Road Safety Foundation. Some articles not updated regularly	https://www.seniors.com.au/	National	Over 50s insurance	- Licence regulations by state - Advice on how to assess if a loved one is unsafe to drive - Information on **driving technologies** (e.g., ADAS) for seniors - Impact **of ageing on driving** (vision, hearing, reaction times, medications, etc.). - Tips on **safe driving and vehicle maintenance** for seniors	- Search bar - Blogs/news articles - Shareable content - FAQs - Social media links - Internal and external links - Statistics - Infographics - Lists (e.g., top ten driving tips)	- **ADAS technologies:** Details on obtaining and using ADAS, including associated costs. - Focus on maintaining **driving independence** while ensuring safety for seniors.
RACT	Not well-sourced, refers to Tasmanian government resources	https://www.ract.com.au/	TAS	Insurance for Tasmanians	- Staying Mobile Hub for senior safety on the road - Road rules - Safe driving tips - Health and driving conditions - Tips for driving wellness - Prolonging fitness to drive - Vehicle safety features and assistive technologies - Driver training refreshers - Dementia and driving - Vehicle maintenance	- Search bar - Stock images - Quizzes (road rules, safe driving) - Video series (vehicle safety) - Articles - External and internal resource links - Brochures/fact sheets	- 'Hub' for senior safety on the road - Focus on 'driving wellness' (healthy driving) - Video series format instead of individual videos

Senior Driver Assessments	Not sourced, appears to use some information from governmental sources	https://seniordriverassessments.com.au/	QLD	Provides senior driver assessments	- Legal requirements for elderly drivers in QLD - Driving requirements in other states - Driving fitness assessments and their benefits - How aging affects driving ability - Driving safety tips - Signs that an elderly parent is unsafe on the road	- Blog - Lists/checklists	- Emphasis on the importance and benefits of driving fitness assessments for individuals and the community

Appendix 2. Sample characteristics of older driver participants from: iRECS 6396: Consumer feedback and evaluation of digital tools.

Characteristic	Total N = 8
Age (years): *M* (SD)	75 (6.61)
Age range	67 - 85
Sex at birth	
Female	1
Male	7
Current gender identity	
Woman or female	1
Man, or male	7
Highest year level of school completed	
Year 12	6
Year 10	2
Qualifications completed or are in the process of completing (select all that apply)	
Trade certificate/apprenticeship	2
Technician's certificate/advanced certificate	0
Other certificate not already mentioned	1
Associate diploma	2
Undergraduate diploma	0
Bachelor's degree	1
Postgraduate diploma/certificate	2
Higher degree	4
Current relationship status	
Married	7
Single	1
Who do you currently live with?	
Spouse or partner	7
I live alone	1
First language	
English	8
Employment status	
Employed part-time	1
Not in the labour force	7
Do you currently drive?	
Yes	8
Do you have restrictions/conditions on license (e.g., area, or day time only)?	

Yes	1
No	7
If selected "Yes" – What restrictions/conditions do you have on your license?	
"Must wear spectacles, requires annual medical review."	1
On average, how many days per week do you drive?	
4	1
5	1
6	3
7	3
On average, how many kilometres per week do you drive?	
0 to 10 km/wk	0
11 to 30 km/wk	0
31 to 60 km/wk	1
61 to 100 km/wk	2
101 to 150 km/wk	3
150+ km/wk	2
How many more years do you expect you will keep driving?	
Mean (SD)	16.6 (6.84)
Range	8-30
Have you ever had a medical review of your fitness to drive by a doctor?	
Yes	4
No	4
How do you rate your current level of knowledge about the licensing requirements after the age of 75 years?	
Very high	2
Somewhat high	1
Moderate	2
Somewhat low	1
Very low	2
How do you rate your current level of knowledge about age-related changes that may impact driving safety?	
Very high	2
Somewhat high	2
Moderate	3
Somewhat low	1
Very low	0
How do you rate your current level of knowledge about ways to manage your driving safety as you age?	
Very high	2
Somewhat high	4

Moderate	1
Somewhat low	1
Very low	0
What sources of information have you used to find out about licensing requirements and maintaining driving safety as you age? (Select all that apply)	
Online	4
Roads and Transport Office	2
Doctor	4
Other health professional	2
Seniors Organisations	1
Friends	4
Family members	5
Other – (Motorsport Australia)	1
None	1
How satisfied are you with the QUALITY of information on licensing, ageing, and driving safety that is currently available to you?	
Very satisfied	1
Satisfied	2
Neutral	4
Dissatisfied	1
Very dissatisfied	0
How would you rate the QUANTITY of information on licensing, ageing, and driving safety that is currently available to you?	
Very satisfied	0
Satisfied	2
Neutral	5
Dissatisfied	1
Very dissatisfied	0
What is your PREFERRED source(s) of information about health and driving? (Select all that apply)	
Online	6
Roads and Transport Office	5
Doctor	2
Other health professional	1
Seniors Organisations	1
Friends	1
Family members	2
Other: "Would like written information included in licence renewal notice each year after 68th birthday" "Motorsport Australia"	1 1