



Transforming the practical driving test

Theory, design, and progress





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How best to prepare young people to be safe and responsible drivers for now and for the future

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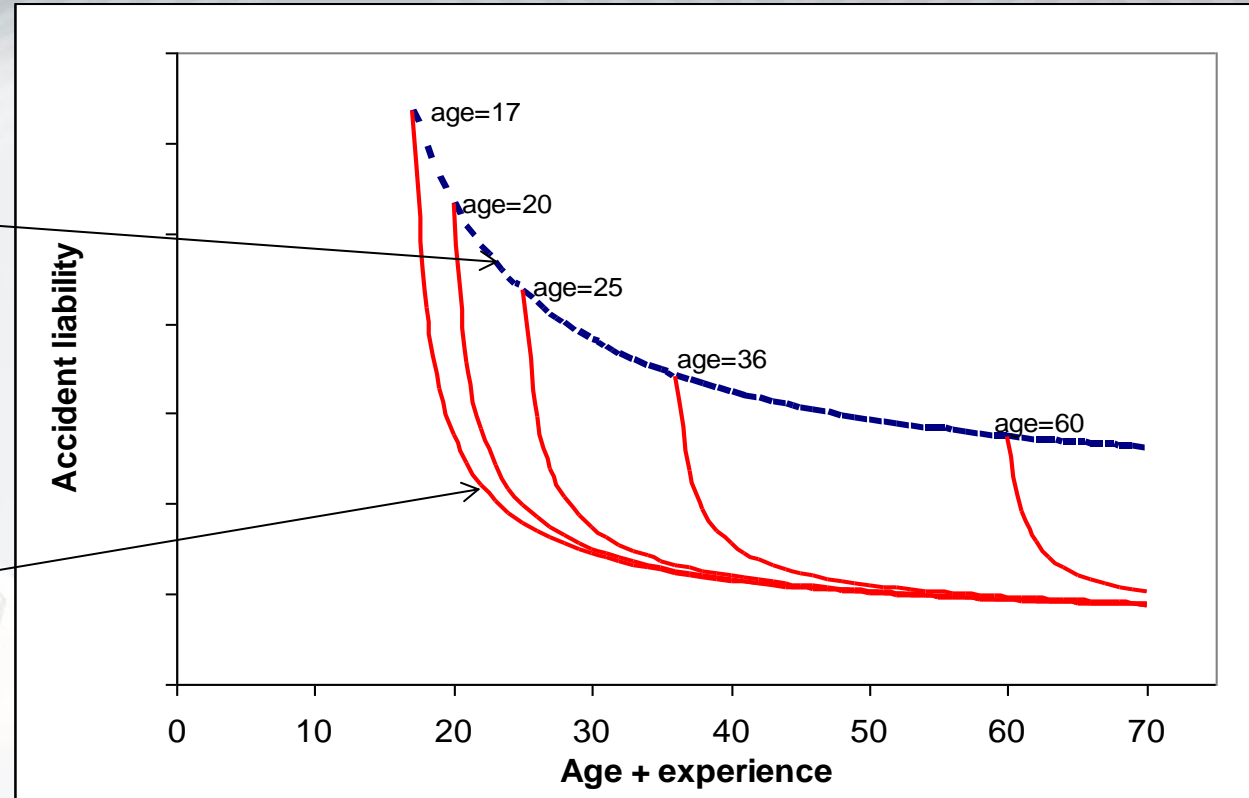
Young and novice drivers

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Blue line: Accident liability in first year of driving by age

Red lines: Accident liability in first and subsequent years as driver ages AND gains on-road experience





Young and novice drivers...

- ...are at heightened risk of crashing due to factors associated with:
 - Youth
 - Behavioural factors (risk, sensation seeking, impulsiveness...)
 - Lifestyle factors (e.g. alcohol, late night driving, peer pressure...)
 - Inexperience
 - Hazard perception skill
 - Experience of specific road types and traffic situations



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Ways in which testing may link with safety

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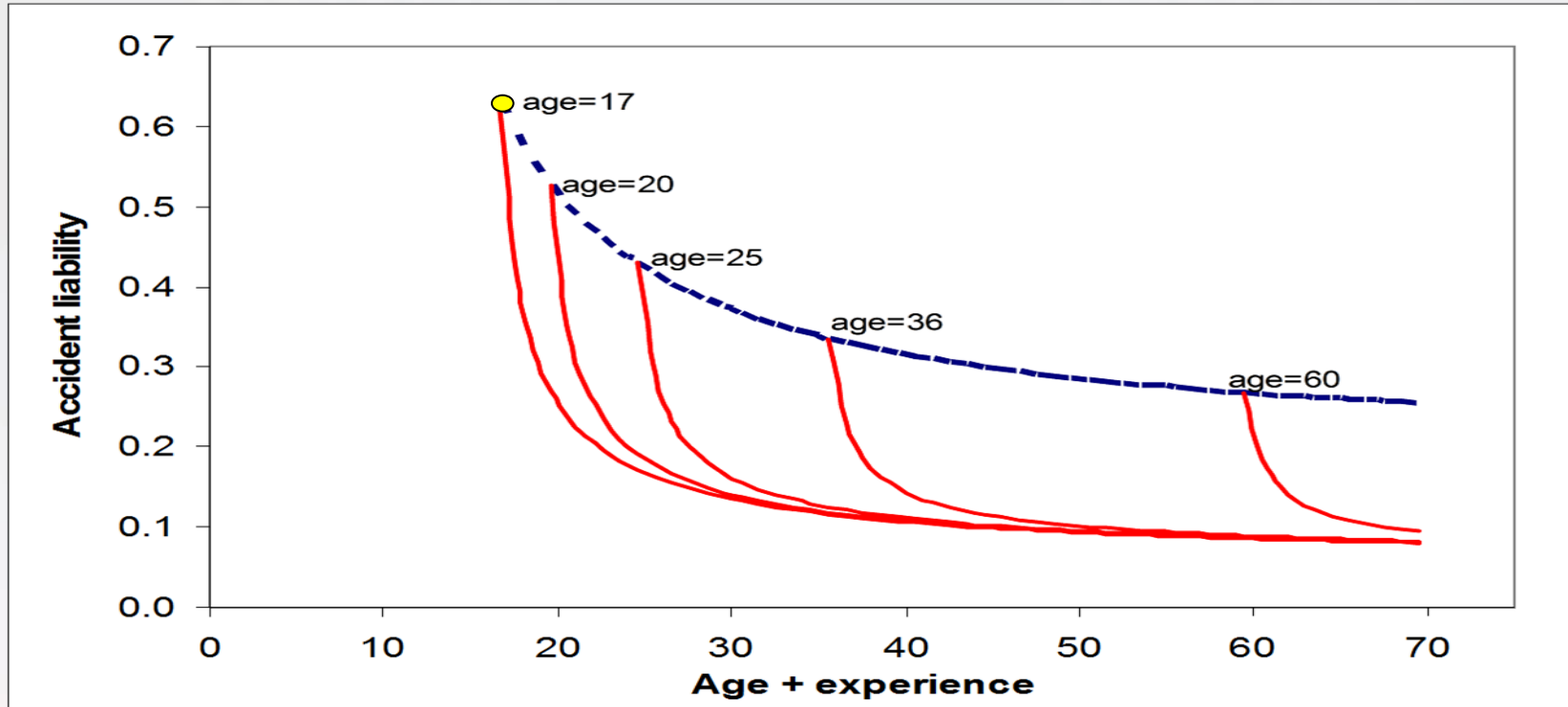
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The practical driving test

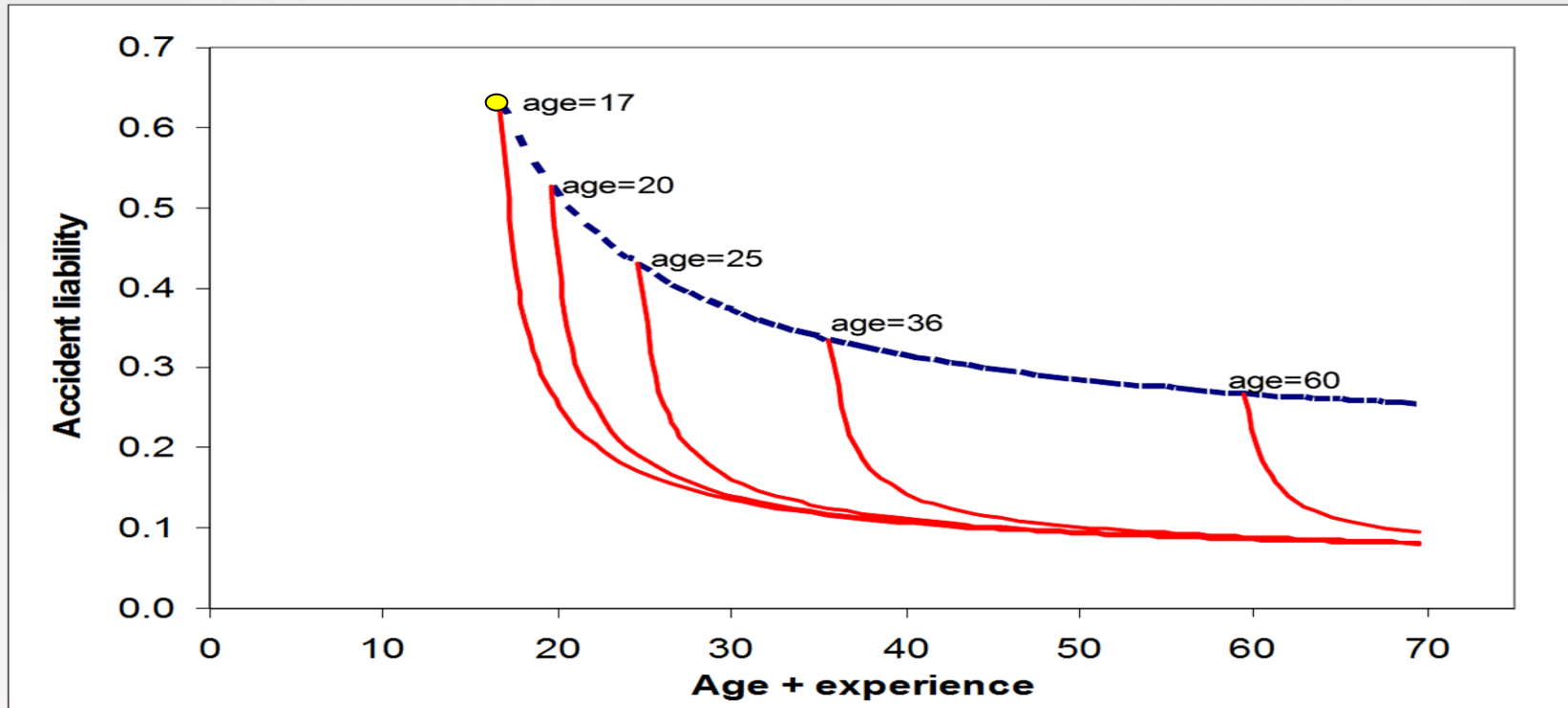
- We can think of the driving test as having an impact on safety in the following ways (these are all inter-related):
 - Delaying access to driving (impact on age)
 - Testing skills required to drive safely (impact on inexperience)
 - Prompting wider supervised practice/experience pre-test (impact on inexperience)

Delaying access





Skills / practice





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Previous evidence





Testing relevant skills

- Once mileage, age, and driving in the dark are controlled, there is a relationship between number of driving faults on the GB practical driving test, and accident involvement in the first six months of driving

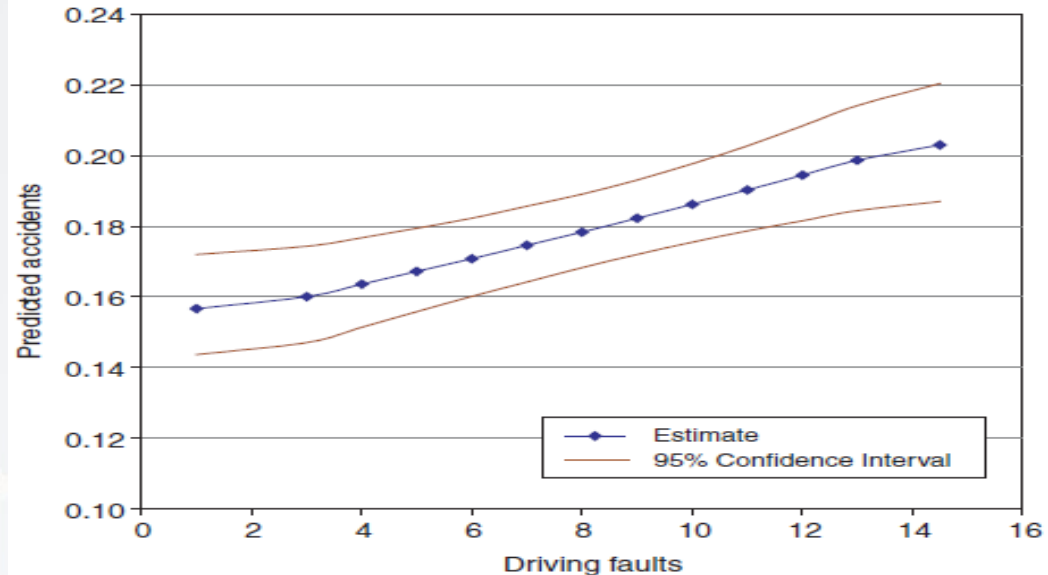


Figure 9 Predicted number of accidents in the first six months for males aged 21 who drive 4000 miles, and drive 'often or sometimes' in the dark

Testing relevant skills

- First-time passers of the GB practical driving test are safer than those who require more than one attempt, once age, miles driven, and experience are controlled

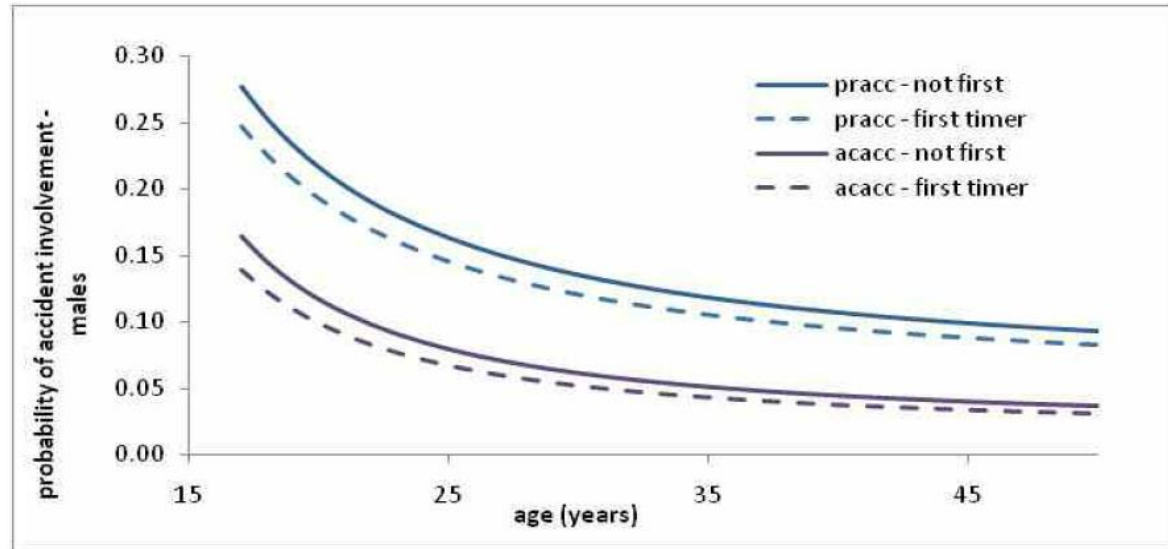


Figure 6.2: Estimated first-year accident involvement for people driving 10,000 miles pa and with six months of driving experience (male drivers)



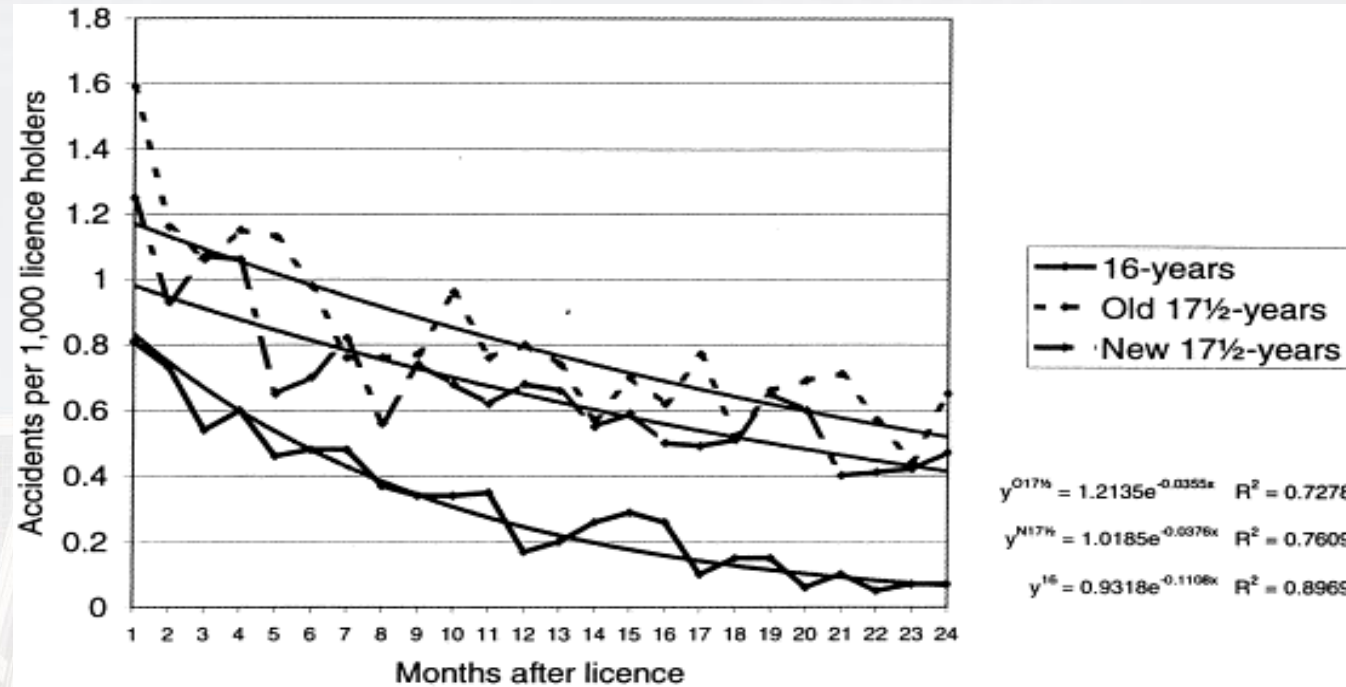
Testing skills - summary

- Some evidence for a link between performance on GB test and later accident risk
- No information on precise mechanism
 - Only allowing those with higher performance skills through?
 - Are those who make fewer faults/pass first time more attentive/less likely to take risks?



Promoting practice

- We know that more supervised practice before becoming licensed is protective



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Promoting practice

- Drivers who have some experience pre-test in busy town centres, and in rain, 'survived longer' before their first accident

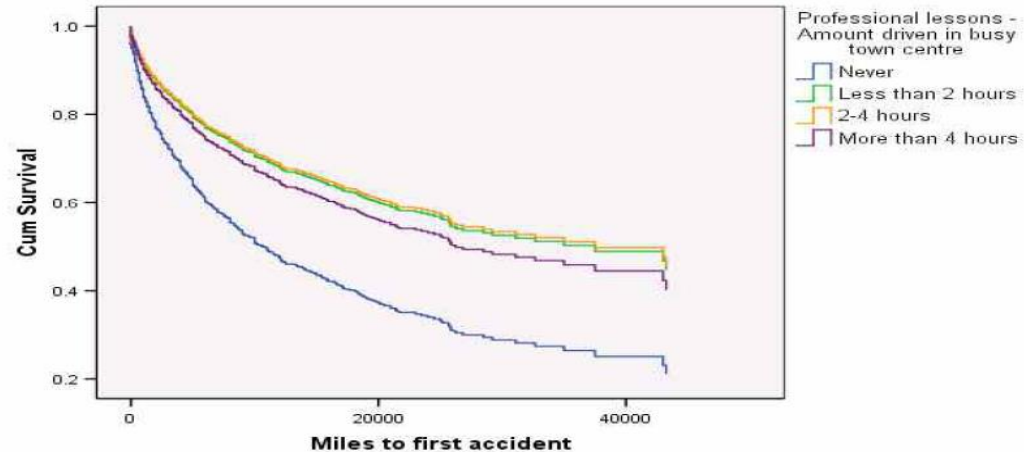


Figure 6: Survival functions (in miles) for drivers at average values for fitted covariates and for hours driven in busy town centres with a professional instructor



Promoting practice

- The missing link:
 - Can a practical test promote greater or more variable on-road practice, and through this mechanism increase safety?



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The current trial

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The new test





The new test

- ~~Turning at a corner~~
- ~~Turning at a bay~~

- Pulling up on right, reversing, then continuing
- Reversing into or out of a parking bay

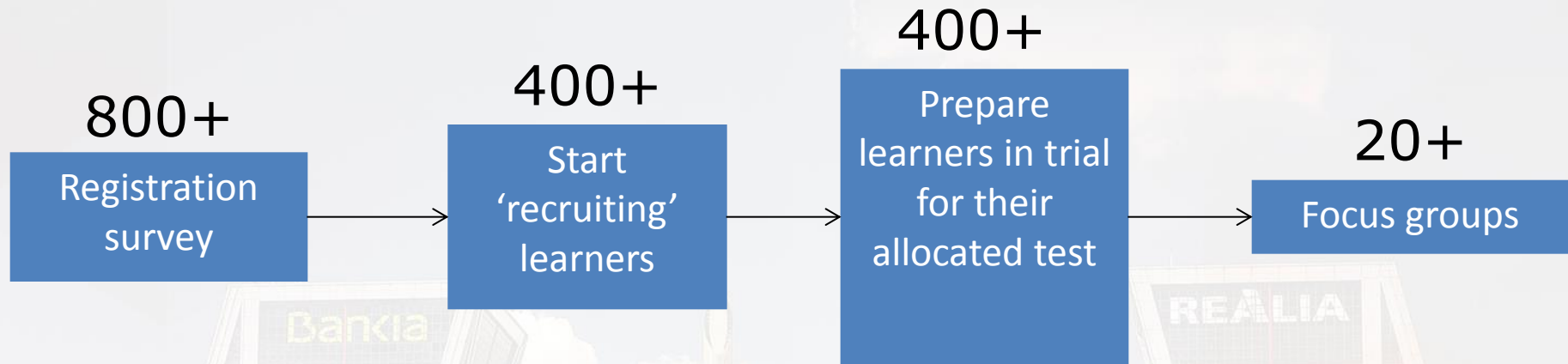


Research questions

- Does the new test change the way in which learners prepare, by promoting greater or more varied on-road practice?
- Does it affect safety outcomes such as behaviours, driving style, and collisions?

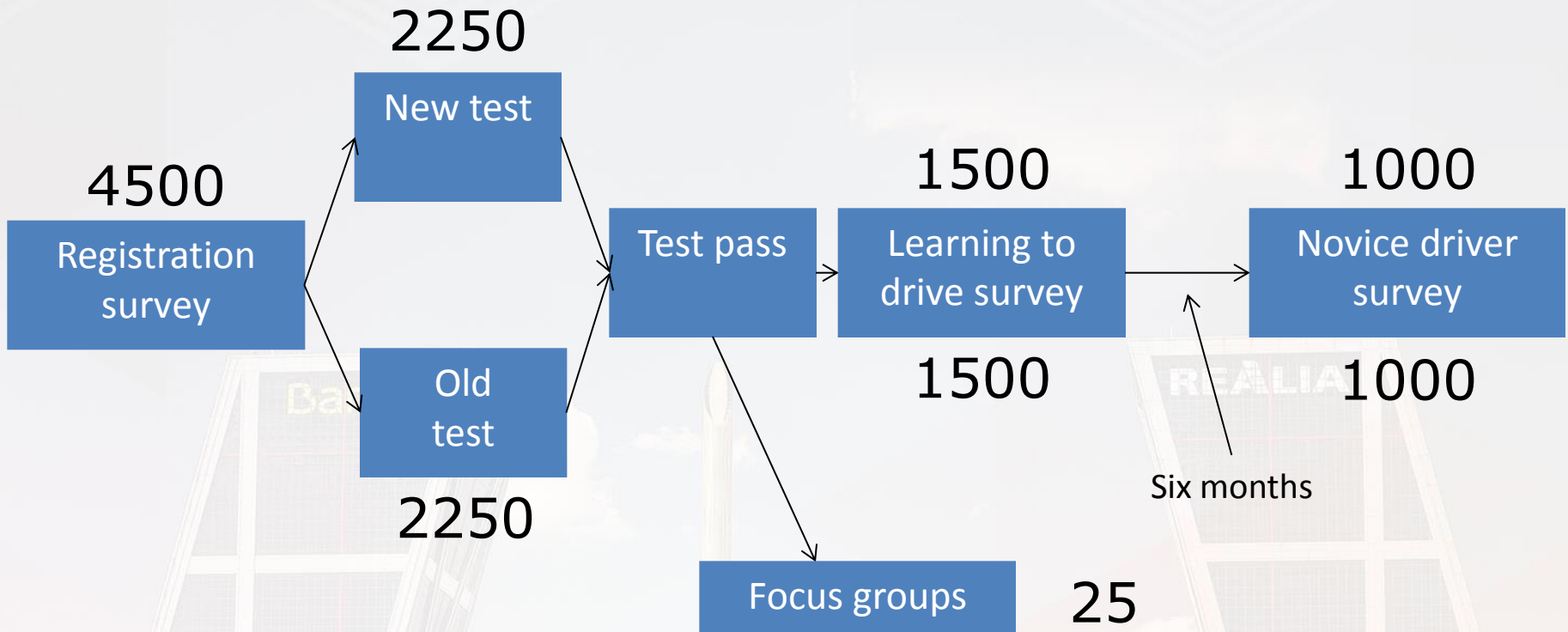


Design - ADIs





Design - Learners





Findings - matching

- Groups are matched on age, gender, access to a vehicle,, and sensation seeking
- Thus we can be confident that randomisation is working



Findings - interviews

- ADIs, learners and supervising drivers described the new test as being better aligned to post-test driving...

“I think the other test is a bit outdated, the new one would be a more relevant way for people to learn...it’s just a bit more streetwise really” (Revised test passer)



Findings - interviews

- ADIs, learners and supervising drivers described the new test as being better aligned to post-test driving...

“It sounds as if they’re trying to make it relevant to how the roads are today. It sounds as if they are trying to update some of the manoeuvres and techniques to make it more relevant and safe for today, which is a good thing.” (Supervising driver)



Findings – pass rate

- No difference in pass rate

Table 10: Test results by group

Test	# of passes	# of failures	# of attempts	Pass rate
Existing	679	602	1,281	53.0%
Revised	709	649	1,358	52.2%

- New test does have significantly more driving faults (5.85 versus 5.51)

Findings – learning to drive

- Time spent driving with an ADI following instructions from a Sat Nav is higher in group preparing for new test

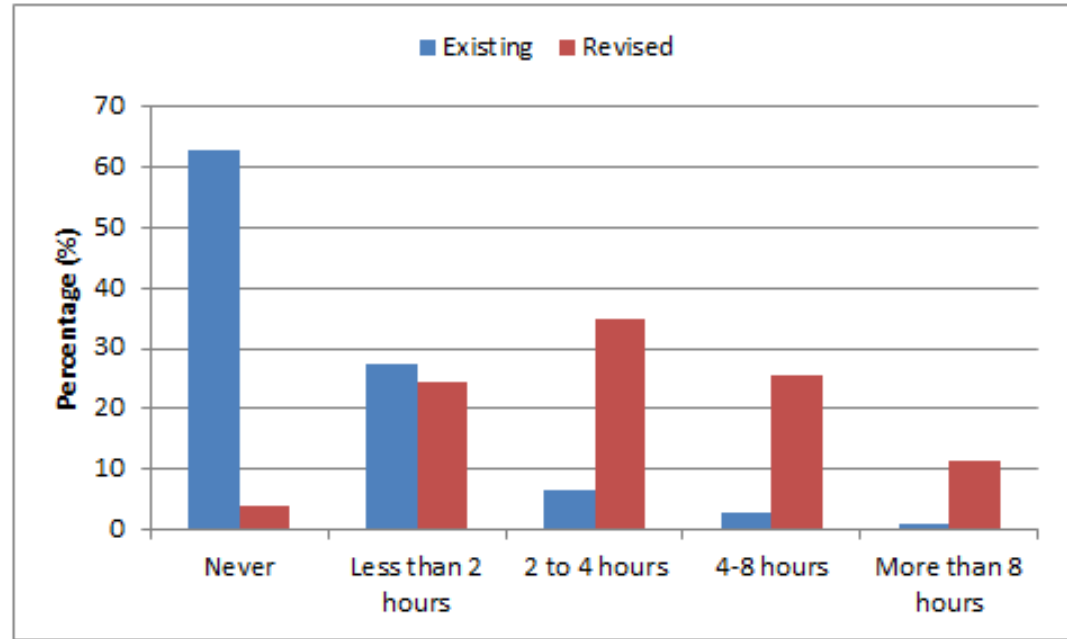


Figure 7: Distribution of the proportion (%) of responses driving with ADI while following instructions from a Sat-Nav by test type

Findings – learning to drive

- Time spent driving with an ADI on fast dual carriageways is higher in those preparing for new test

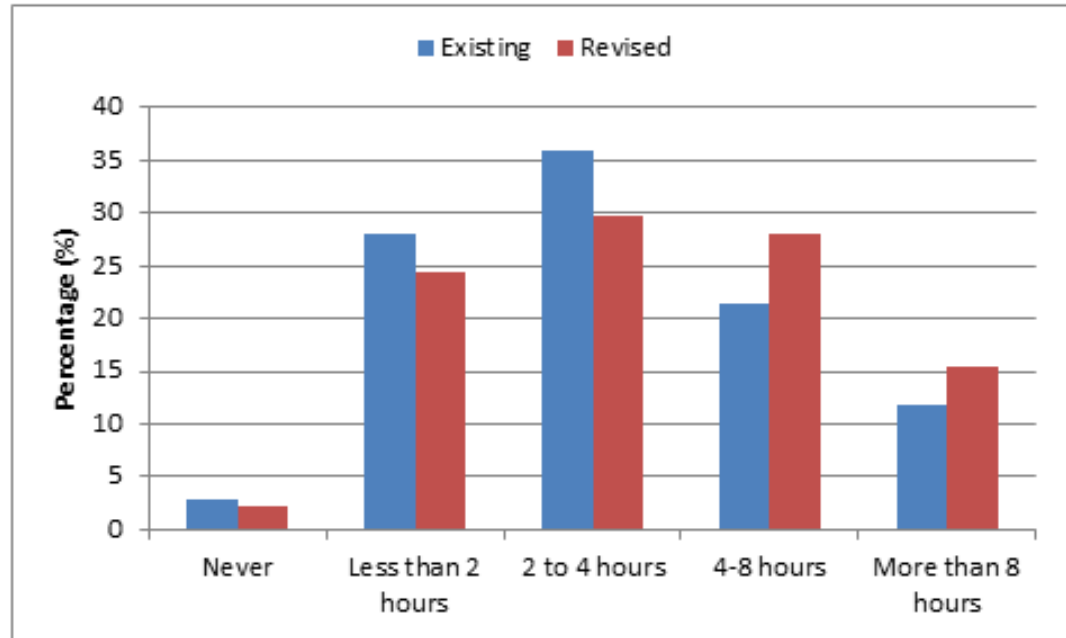


Figure 5: Distribution of the proportion of responses to time spent with an instructor on fast dual carriageways by test group

Findings – driving style

- Those who have passed the new test were more confident they could safely use a Sat Nav post-test (but not other devices/distractions)

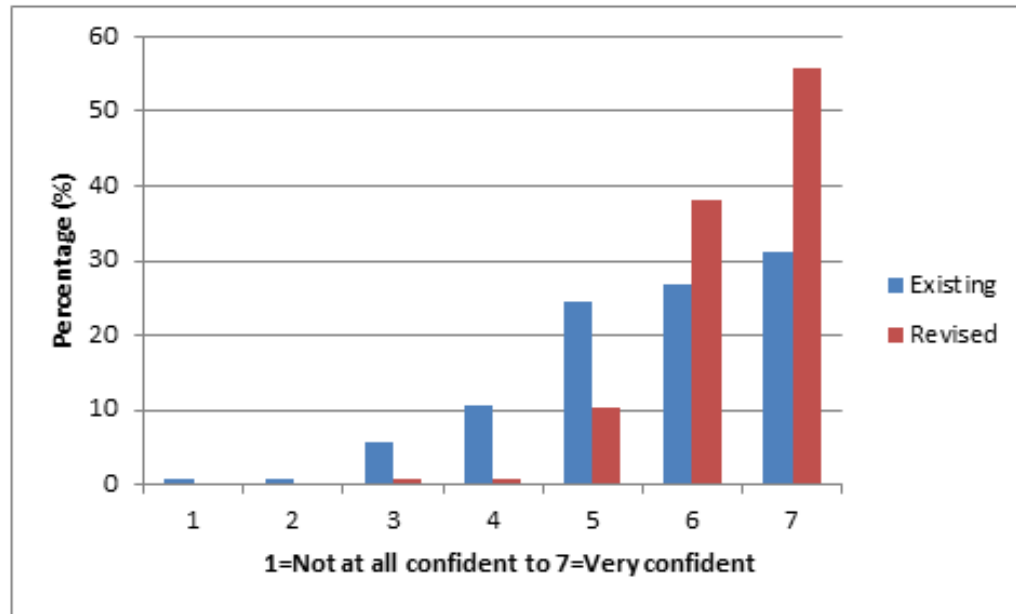


Figure 11: Distribution of the proportion of responses in confidence in the ability to drive safely while following instructions from a sat-nav by test type



Findings – driving style

- Those passing the old test have a self-reported driving style that is significantly more decisive, experienced, confident and fast
- (This is a good thing)



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Summary

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Summary

- When considering ways in which the practical test can influence safety we need to consider:
 - Age effects
 - Inexperience effects
- The practical test can:
 - Delay access (this is self-evident)
 - Test relevant skills (we know this from previous work)



Summary

- Current trial has shown that the new test is associated with:
 - More time following Sat Nav when learning to drive
 - More time driving on fast dual carriageways when learning to drive
 - Greater confidence in using a Sat Nav safely post-test (but no greater confidence in being safe with other distractions)
 - A driving style that is less decisive, experienced, confident and fast
- Trial completes early 2017 (six-month survey results)