

CHANGING MEMBERSHIP: KEEPING SENIORS MOBILE MEMBERS

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Defining the issues

To present findings relating to:

- Older drivers as a road safety risk
- Proven (and other) countermeasures likely to extend safe driving
- Alternative mobility options



Older drivers as a road safety risk:

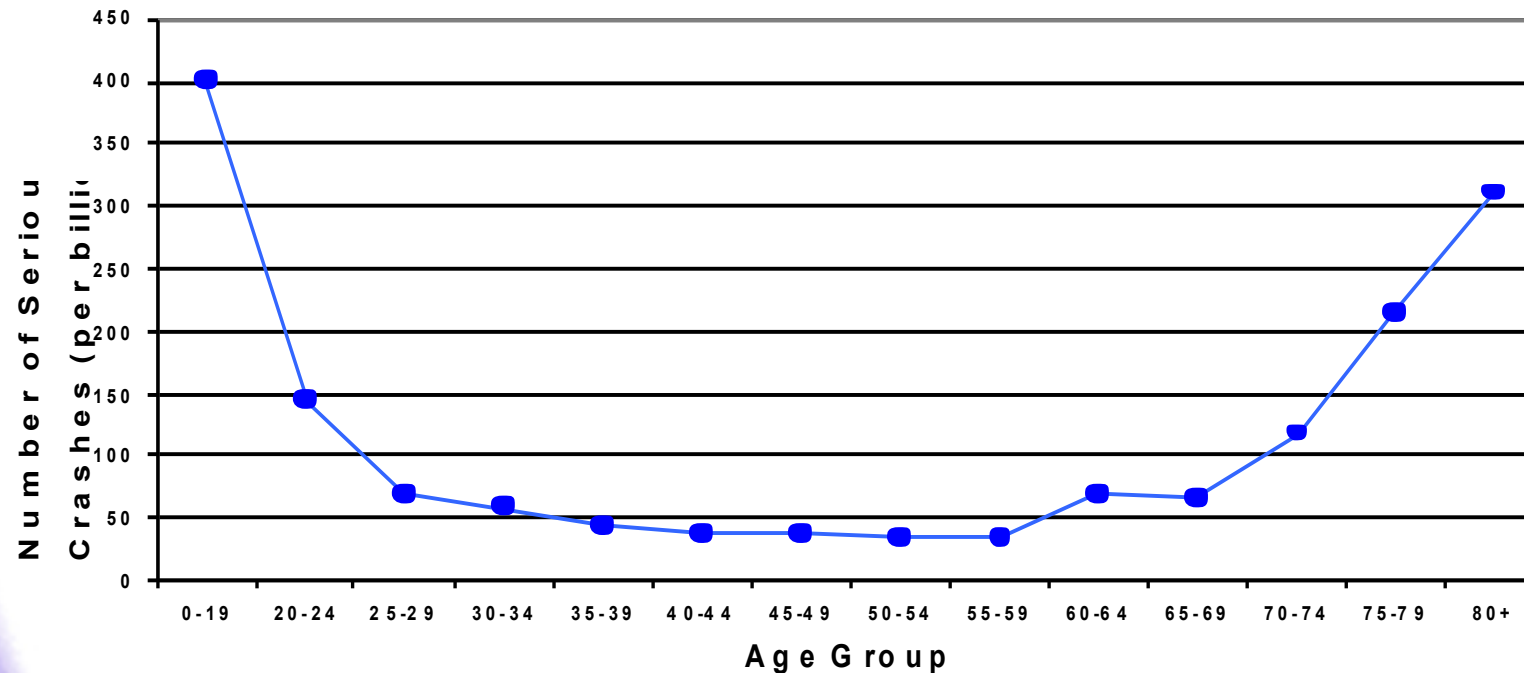
summary of the crash data



INTERPRETATION... 1/

Older drivers as a group are at least as
'fit to drive' as anyone else.

The evidence against...



Age of driver and fatal and serious injury crashes per distance travelled, Australia, 1996

But reflects crash involvement, not fitness to drive:
note crash responsibility = c2x

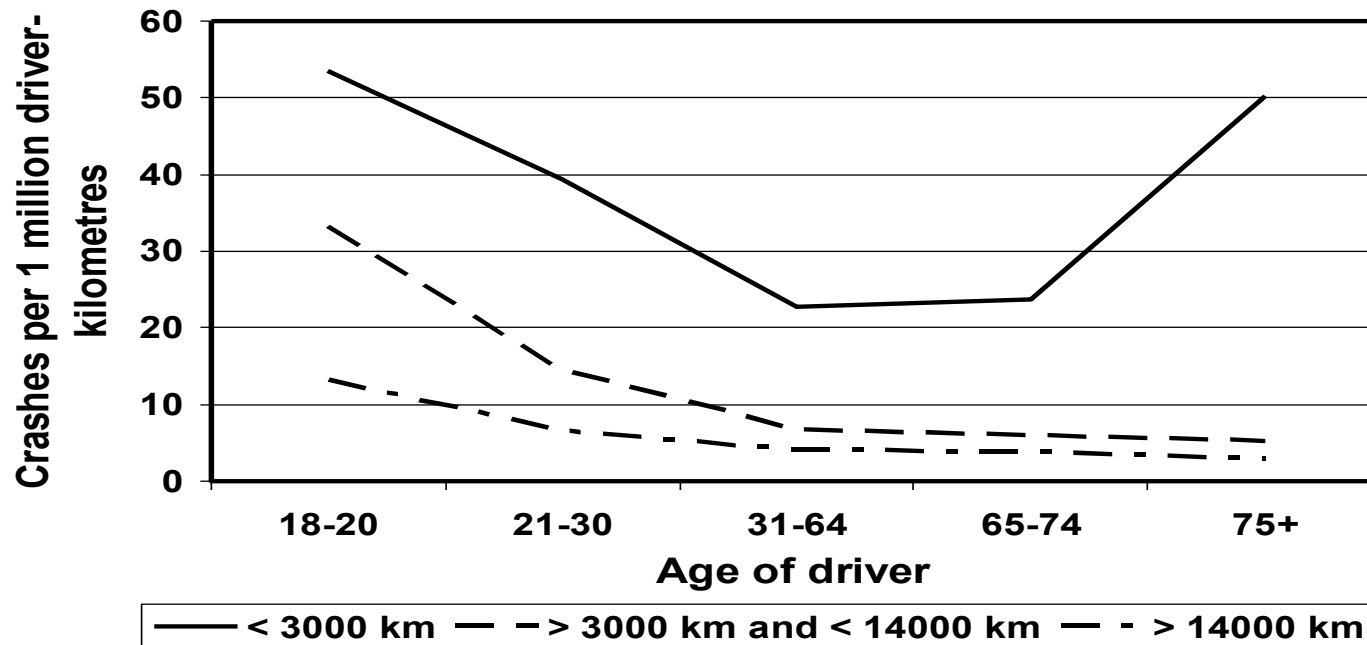


INTERPRETATION ... 2/

Of those older drivers contributing to the serious crash data:

- most because of frailty
- some because of 'low mileage bias' - especially urban driving
- a minority because of reduced fitness to drive

The low mileage bias



Tentatively, c15% of older drivers are low mileage.

Many ifs and buts but

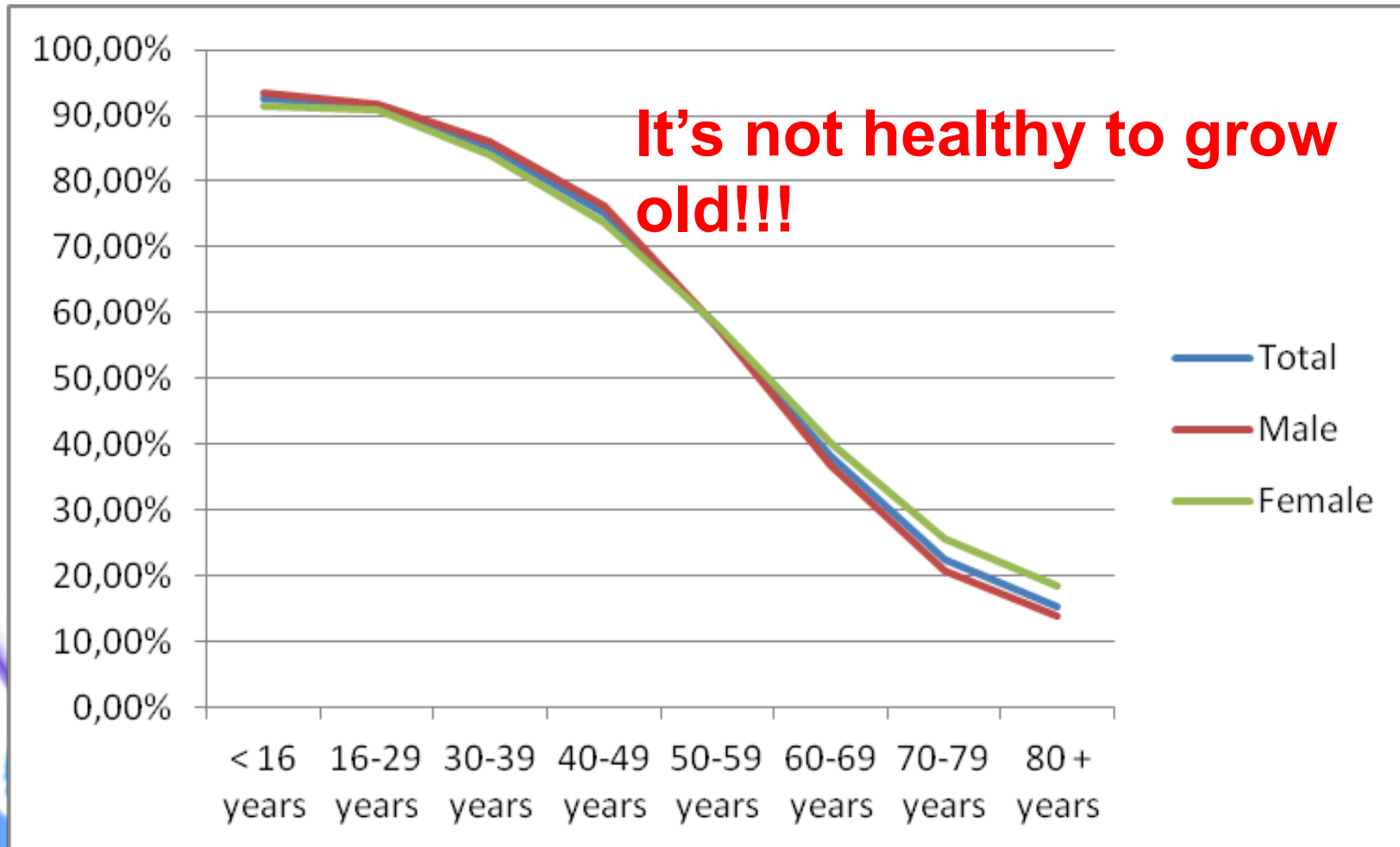


Older drivers as a road safety
risk :

summary of the health data



Driver ageing and changes in overall health (% healthy)



INTERPRETATION ... 3/



Some older drivers because of medical conditions/
consequent functional impairments_pose an
unacceptable crash risk

However:

- most medical conditions have only a very modest relationship with crash risk
- functional decrement does not in itself inevitably mean reduced fitness to drive:

* driving wellness v fitness (Hennessey and Janke, 2005)

* self regulation (many)

INTERPRETATION ... 4/



- A key task confronting licensing and other authorities is to identify drivers who for medical or other reasons, pose an unacceptable crash risk

BUT

- this is best done without discriminating against the majority other, safe drivers who chance to be old



A countermeasure unlikely to extend safe driving

“the (standard age-based) driver licensing process cannot predict performance for individuals” (Waller 1988, p.84)

INTERPRETATION ... 5/



Age-triggered ‘across-the-board’ assessment programs of the type run by many licensing authorities generally fail to discern between ‘safe’ and ‘unsafe’ older drivers with anything like demonstrable, acceptable accuracy*

This is true whether the programs consist of medical assessments and/or on-road driving tests

* One major exception: in-person renewal for those aged 85 years (Grabowski et al., 2004).



The evidence ...

Overseas

Levy et al. (1995)

Lange and McKnight (1996)

Hakamies-Blomqvist et al. (1996)

Rock (1998)

Grabowski et al. (2004) *

Siren and Meng (2012)

In Australia,

Torpey (1986)

Langford et al. (2004b)

Langford et al. (2004a)

Langford et al. (2008)

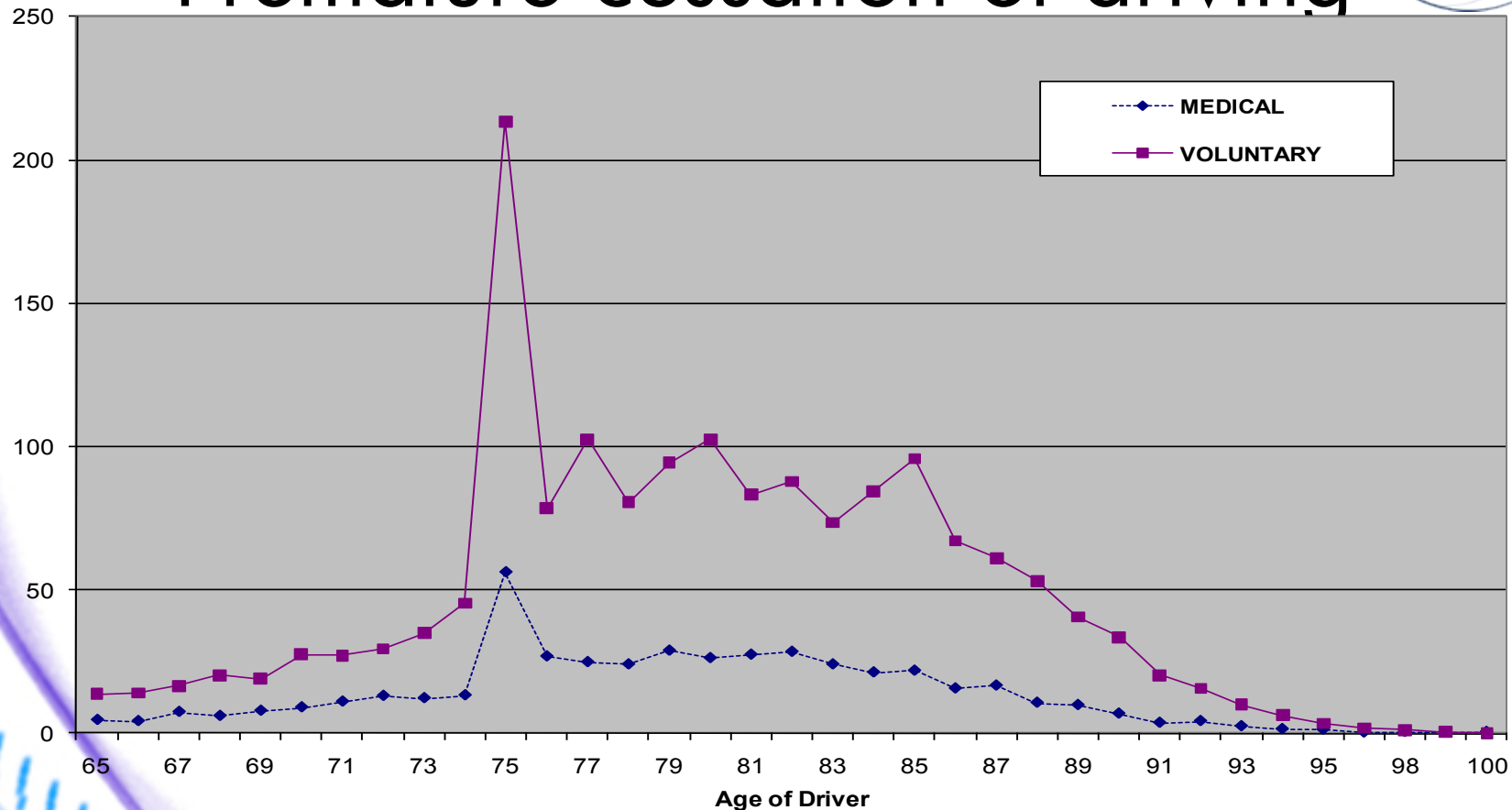
INTERPRETATION ... 6/



Age-based assessment programs also:

- may be decreasing the overall quality of older drivers on the road
- by prompting premature surrender of licence, may be associated with immobility and reduced quality of life
- are discriminatory

Premature cessation of driving



Average annual number of medical and voluntary losses of licence, Queensland, 2004–2008

Proven (and other)
countermeasures likely to extend
safe driving



General countermeasures



Particularly if implemented within a Safe System framework:

- safer roads
 - design: especially intersections
 - speed management
- safer vehicles
 - crash avoidance) note Volvo's claims,
 - crash worthiness) driverless cars

Across-the-board countermeasures which could reasonably be expected to benefit ALL drivers

INTERPRETATION ... 7/



Five leading promising or proven countermeasures targeting older drivers:

- innovative licensing models
- Medical Advisory Boards
- licensing restrictions
- on-road driver training
- off-road driver education

Innovative licensing models

Developmental work in Australia, US –especially California



Generally:

- only those considered at risk referred to licensing authorities to determine fitness to drive
- referral sources multiple (family, police, doctors, self ...)
- multi-level assessment, increasing in sophistication
- outcomes:
 - unable to continue to drive safely -> licence cancelled
 - reduced safety in some conditions -> restricted licence
 - has a temporary condition -> licence suspended
 - able to continue to drive safely -> full licence.

Largely unevaluated

Medical Advisory Boards



‘AAA Basic Best Practices for Medical Advisory Boards’:

- every jurisdiction should have a MAB
- to consist of range of medical and non-medical personnel, others to be conscripted as required by individual cases
- to review only individuals giving preliminary indications of unsafe driving ... typically, complex cases only
- with authority to recommend a range of licence outcomes, from cancellation, suspension, restriction, periodic re-examination
- also to develop practical medical guidelines for licensing purposes

Largely unevaluated – exception Meuser et al., (2009),
Missouri



Licence restrictions

Restrictions operate at one of three levels:

- improving individual fitness to drive (eg spectacles)
- making the vehicle safer (eg steering wheel knobs)
- reducing exposure to risky scenarios (eg nighttime driving)

Some evaluation findings:

- ‘after’ crash rates fell substantially from ‘before’ crash rates thus indicating an increase in individual safety
- mainly, restricted drivers remained at heightened crash risk relative to drivers with no licence restrictions
- but in one study from the five reviewed, restricted drivers were safer than matched, unrestricted drivers



On-road driver training

- Driver training generally has a poor record in terms of safety outcomes – but most programs target novice drivers
- It is at least possible that programs aimed at older drivers may be more effective
- all five evaluations of practical driver training programs showed improvements in at least some driving skills

Off-road driver education



Education programs aim at:

- increased knowledge about general association between ageing and functional fitness, safe driving (eg AARP's 55-Alive/Mature driving program)

OR

- increased self-awareness of driving fitness and knowledge of compensatory driving practices (eg AAA *Roadwise Review*, UMTRI *Driving Decisions Notebook*)

I will leave it to Bob in his presentation to outline the benefits of driver education

Alternative mobility options



INTERPRETATION ... 8/



The issue of acceptable alternative transport options is very much context-bound:

- walking and cycling - Europe v USA, Australia
- public transport use, particularly UK v USA
- provision and use of public transport - urban v rural

But as reasonably common ground:

- the private car is the preferred and most convenient transport option
- the private car is arguably the safest transport mode for most older people
- the capacity to use other transport reduces before driving capacity reduces

Some leading options



- Small powered vehicles not requiring a licence – scooters, golf carts etc. Flexibility v safety
- Improved conventional public transport – especially for users with physical limitations: information, access etc
- ‘Flexi-route’ services – including advance bookings, door-to-door service, more frequent stops, smaller vehicles
- Community transport systems run by volunteer agencies, local councils ... perhaps even auto clubs(?)
- Subsidised taxi services – but there are difficulties

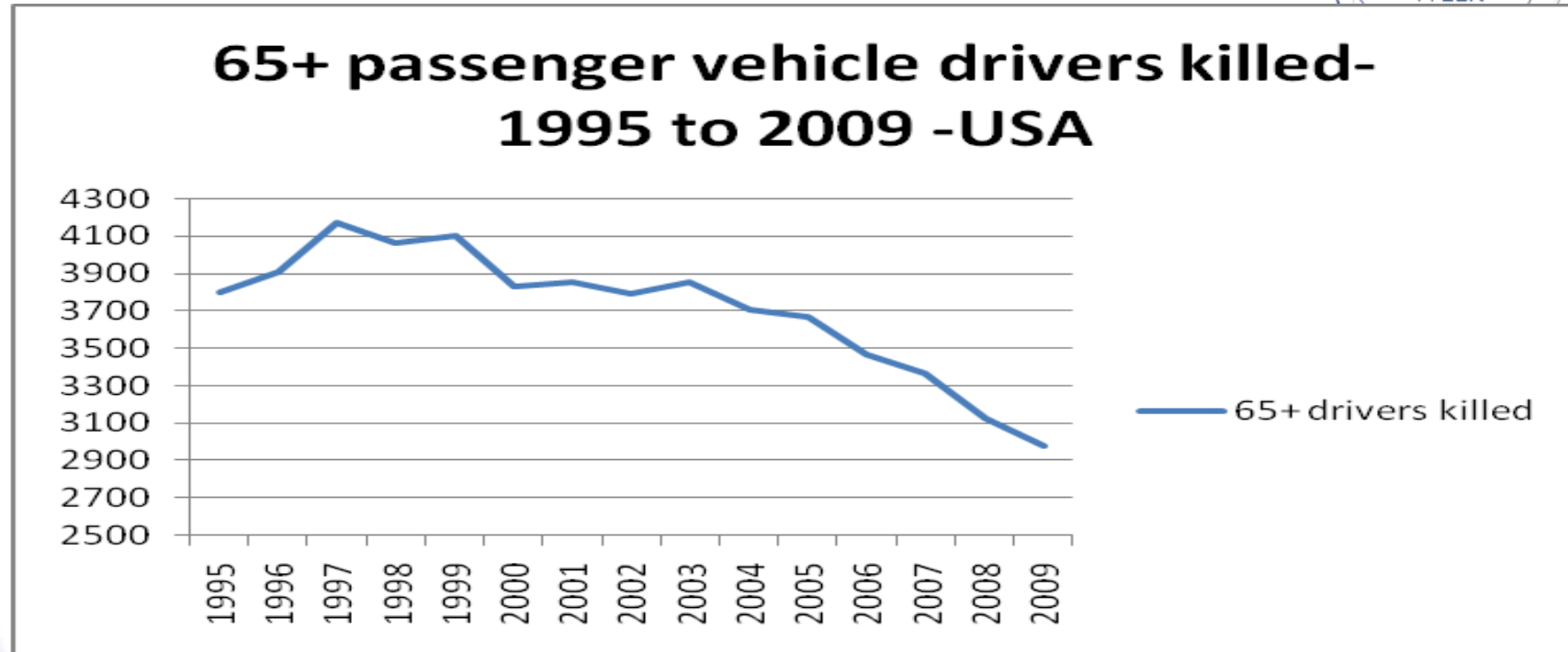
And first and perhaps foremost, the oldest daughter!!!!

Some immediate implications for auto clubs



- protect against discriminatory (and inaccurate) licensing assessments – while encouraging strategies to promote continued safe mobility
- encourage (and provide?) valid assessment strategies to identify unacceptably at-risk drivers
- provide training and education programs
- consider providing alternative transport options

A final note: the 'older driver problem' may well be exaggerated



“Regardless of the exposure measure — whether miles driven, licensed drivers or population - the fatal crash involvement rates for drivers aged 70 years or older declined, and declined at a faster pace than the rates for drivers 35-54 years. The degree of decline among older drivers increased with age so that the most substantial declines were experienced among drivers 75–79 and 80 or older.

Cheung et al., (2008 p.90)

Where to next for auto clubs?

