



THE UNIVERSITY  
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# Driver mobile phone use: Results from an observational survey

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# Introduction

Mobile phone use while driving can be a distraction.

- It can lead to changes in reaction time, visual perception and discrimination, gaze and eye movements, vehicle control (e.g. Caird et al, 2008; Collet et al, 2010; Horrey & Wickens, 2006)
- Talking on a mobile phone while driving increases crash risk by 2-4 times (hand-held and hands-free) (Backer-Grondahl & Sagberg, 2011; McEvoy et al, 2005)



# Previous studies

- Prevalence of hand-held phone use while driving in jurisdictions with phone bans (on-road observational studies)
  - Perth 1.5% (Horberry et al. 2001)
  - Melbourne 3.4% (Young et al, 2010)
  - Wellington, New Zealand 1.3-1.9% (Drury et al, 2012)
  - Birmingham, United Kingdom 1.6% (Hussain et al, 2006)
  - British Columbia, Canada 0.9% (Nasvadi, 2010)
  - United States:
    - Connecticut 2.1%, New York 3.7%, District of Columbia 3.9-4.2% (McCartt et al, 2010),
    - California 2.7% (Cooper et al, 2012)

# Observational hand-held mobile phone use survey

## Aims

- Provide indication of the current level of hand-held phone use while driving in SA
- Obtain information on characteristics of users
- Assist in developing and monitoring effectiveness of mobile phone campaigns and enforcement

# Method

- Mobile phone survey was part of a restraint use survey conducted in March 2009
- 61 locations in metropolitan Adelaide, 5 rural areas
- Observation times
  - Weekdays: 7am-10am, 3pm-6pm
  - Weekends: Saturday 10am-2pm, Sunday 11am-2pm
- Vehicles - cars and car derivatives (e.g. utes, vans, 4wd).
- Traffic lights
  - observed vehicles when stopped for red light
- Stop/give way signs
  - observed vehicles when slow down



# Method – Data collected

- Vehicle
  - Vehicle type (taxi/not taxi)
  - any plates displayed (L' s or P' s)
  - no. of vehicle occupants
- Vehicle occupants
  - seating position
  - gender of adult
  - estimated age of child
  - child restraint type
  - restraint worn/not worn
- Driver hand-held phone use



# Results: Hand-held phone use by region, 2009

Location	No of drivers	No. using hand-held phone	% using hand-held phone (95% CI)
Adelaide	2533	19	0.75 (0.48-1.17)
Whyalla	1727	11	0.64 (0.36-1.14)
Riverland	1748	6	0.34 (0.16-0.75)
Mount Gambier	2002	11	0.55 (0.31-0.98)
Murray Bridge	2296	10	0.44 (0.24-0.80)
Clare	1218	7	0.57 (0.28-1.18)
Total	11,524	64	0.56 (0.44-0.71)

# Hand-held phone use by driver, site and vehicle characteristics

Characteristic		No of drivers	No. using hand-held phone	% using hand-held phone (95% CI)
Driver sex	Male	6404	41	0.64 (0.47-0.87)
	Female	5120	23	0.45 (0.30-0.67)
Location	Metropolitan Adelaide	2533	19	0.75 (0.48-1.17)
	Rural	8991	45	0.50 (0.37-0.67)
Time of day	7:00am-10:00am	4124	22	0.53 (0.35-0.81)
	10:00am-2:00pm	1586	9	0.57 (0.30-1.07)
	3:00pm-6:00pm	5814	33	0.57 (0.40-0.80)
Day of week	Week day	9938	55	0.55 (0.43-0.72)
	Weekend	1586	9	0.57 (0.30-1.07)
Driver seatbelt use	Worn	11283	61	0.54 (0.42-0.69)
	Not worn	219	2	0.91 (0.25-3.27)
Plates displayed	Learner	55	-	-
	Provisional	534	3	0.56 (0.19-1.64)
	No plates	10877	61	0.56 (0.44-0.72)
Number of vehicle occupants**	Single	7644	57	0.75 (0.58-0.96)
	Multiple	3880	7	0.18 (0.09-0.37)
Type of vehicle	Taxi	76	-	-
	Not a taxi	11392	64	0.56 (0.44-0.72)

\* $p < .05$ , \*\* $p < .01$



# Discussion

- 0.56% of drivers used a hand-held phone (low!)
- Comparison to other surveys (0.9%-4.2%)
  - Adelaide 0.75%, Melbourne 3.4% (Young et al, 2010)
- Level of enforcement?
- Severity of penalties?

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Jurisdiction	Observed using hand-held phones (%)	Hand-held phone tickets per head of population (%)	Penalties for first offence (2009)
South Australia, Australia	0.56	0.64	\$209 expiation fine, 3 demerit points.
Victoria, Australia	3.40	1.02	\$153 expiation fine, 3 demerit points. Fine increased to \$227 in May 2009.

# Discussion

- Drivers 4 times more likely to use a hand-held phone when travelling alone.



# Limitations

- Observations represent only times and locations surveyed
- Time conversing on phone only a small part of a trip
- Only examined talking on phones - doesn't cover all behaviour contravening SA phone laws (e.g. texting)



# Conclusions

- Generally a high level of compliance in SA.
- Recommend regular mobile phone use surveys to monitors trends over time.





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