**OVERVIEW**

- Background to the Youth Driver Development Program
- Overview of the evaluation methodology
- Main findings of the evaluation
- Discussion of the findings and limitations of the study
- Recommendations for future program evaluators
YOUTH DRIVER DEVELOPMENT PROGRAM

• Established 1998, operates primarily in the Sth. West region around Bunbury

• Targets high school students (Years 10 and 11) in pre-learner and learner period; ages 15-16 years

• ~N=2,100 students completed the program 1998-2006

• Develop ‘safer’ on-road behaviours through attitudinal change

‘Usual’ program:

- 1 theory, 4 practical modules delivered over 20 school hours
- On and off road and classroom activities
- Delivered by professional driver training organisation

Variety of training and education topics, eg.:

- Road rules; vehicle control skills; high speed driving;
- Hazard perception; insight training to understand limitations
- Effects of alcohol, speed, fatigue, driver distractions
- Seat belt use; risk taking and youthful motivation
YOUTH DRIVER DEVELOPMENT PROGRAM

- Program costs are ‘subsidised’ at $175
- State government funding totaling $275,000 (June 2008)
- Other financial and ‘in-kind’ support from the community
- Strong financial, political, and community commitment to and support for the program despite the absence of demonstrated program efficacy

YDDP EVALUATION

Null Hypothesis for the evaluation

The is no significant difference between YDDP drivers (the exposed ‘cohort’) and a comparable group of non-YDDP drivers (non-exposed ‘controls’) in their involvement 12 months post-licensing for:

- Police recorded crashes
- Police issued Traffic Infringement Notices
- Court appearances for traffic offences (ie., convictions)
- Driver licence cancellations and suspensions
METHODOLOGY

STUDY DESIGN AND DRIVERS

• Retrospective ‘cohort’ study with frequency matched ‘control’ (comparison) group

• Frequency matched on driver sex, age at licensure, and year of licensure

• ‘Cohort’ drivers taken from a listing of program participants 1998-2005 (June)

• ‘Control’ drivers drawn from those licensed in the Bunbury and surrounding areas
### Driver Characteristics

<table>
<thead>
<tr>
<th>Sex</th>
<th>YDDP Cohort (n=1,095)</th>
<th>‘Controls’ (n=2,189)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>549 50.1</td>
<td>1097 50.1</td>
</tr>
<tr>
<td>Female</td>
<td>546 49.9</td>
<td>1092 49.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age at licensing</th>
<th>YDDP Cohort</th>
<th>‘Controls’</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 years</td>
<td>842 76.9</td>
<td>1967 89.9</td>
</tr>
<tr>
<td>18+ years</td>
<td>253 23.1</td>
<td>222 10.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of licensing</th>
<th>YDDP Cohort</th>
<th>‘Controls’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-2001 (pre-GDTL)</td>
<td>300 27.4</td>
<td>627 28.6</td>
</tr>
<tr>
<td>2002-2005 (June) (GDTL)</td>
<td>795 72.6</td>
<td>1562 71.4</td>
</tr>
</tbody>
</table>

### Driving Outcomes at 12-Months

- **Crash involvement**
  - Use MRWA police recorded crash dataset

- **Traffic Infringement Notices**
  - WA Police Business Intelligence Office records of infringement notices issues

- **Court presentations for traffic offences**
  - WA Police Business Intelligence Office records of presentations before the WA courts

- **Driver licence suspensions and cancellations**
  - Licensing WA/WA Police records
RESULTS

POLICE RECORDED CRASHES

• 9.4% control drivers v’s 11.3% cohort drivers crashed

• Most crashed drivers (94.6% and 94.3%) involved in one crash

• Conditional fixed effects logistic regression for:
  - All drivers: OR 1.25; 95%CI 0.99-1.59; P 0.059 (NS)
  - Males: OR 1.40; 95%CI 1.01-1.95; P 0.03
  - Licence 18+ years: OR 1.40; 95%CI 1.01-1.95; P 0.039
  - Licensed 2002-2005: OR 1.49; 95%CI 1.13-1.97; P 0.005

Adjusted OR less than 1.00 indicate lower odds of crashing for YDDP drivers compared with control drivers
TRAFFIC INFRINGEMENT NOTICES

- 35.4% control drivers v’s 33.3% cohort drivers incurred one or more TINS

- Conditional fixed effects negative binomial regression for:
  - All drivers: IRR 0.88; 95%CI 0.78-1.02.; P 0.054 (NS)
  - Males: IRR 0.84; 95%CI 0.72-0.98; P 0.027
  - Licence 17 years: IRR 0.85; 95%CI 0.75-0.98; P 0.024

Adjusted IRR less than 1.00 indicate lower incidence of TINS for YDDP drivers compared with control drivers

COURT PRESENTED TRAFFIC OFFENCES

- 4.4% control drivers v’s 3.5% cohort drivers appeared before the courts for one or more offences

- 33.8% control driver offences drink-driving; 45% cohort driver offences careless driving

- Conditional fixed effects negative binomial regression for:
  - All drivers: IRR 0.70; 95%CI 0.44-1.03.; P 0.07 (NS)
  - Females: IRR 0.31; 95%CI 0.10-0.92; P 0.035
  - Licence 17 years: IRR 0.37; 95%CI 0.21-0.65; P 0.001

Adjusted IRR less than 1.00 indicate lower incidence of TINS for YDDP drivers compared with control drivers
LICENCE CANCELLATION or SUSPENSION

- 4.5% control drivers v’s 3.2% cohort drivers had their licence cancelled or suspended

- Conditional fixed effects logistic regression for:
  - All drivers: OR 0.62; 95%CI 0.41-0.92; \( P = 0.02 \)
  - Licence 17 years: OR 0.34; 95%CI 0.19-0.61; \( P = 0.00 \)
  - Licensed 1998-2001: OR 0.27; 95%CI 0.07-0.92; \( P = 0.038 \)

Adjusted OR less than 1.00 indicate lower odds of licence cancellation/suspension for YDDP drivers compared with control drivers

DISCUSSION
WHAT DO THE RESULTS SUGGEST?

- Reject the Null Hypothesis of no difference between all program cohort and control drivers for one driving outcome only: licence cancellation/suspensions
- Excluding crashes, evidence to suggest a differential impact of the program on participants evaluated
- Participants licensed at 17 years evidenced lower incidence of TINS; court presented offences, and odds of licence cancellation/suspension
  - Males licensed under the GDTL 2002-2005
  - Females licensed 1998-2005, excluding TINS

HOW VALID ARE THESE FINDINGS?

- Design of the study:
  - No randomization of participants to conditions, hence possible bias in the groups on variables that might interact with the program and/or influence driving outcomes
- Loss to follow-up
  - Evaluated only 52% of YDDP participants, 1998-2005
  - How representative are these drivers of the entire population of program participants?
HOW VALID ARE THESE FINDINGS?

• Correct identification and classification of program participants:
  - Difficulty in linking YDDP participant information with licensing records held by WA Police

• Correct follow-up period and information post licence:
  - Some difficulty in establishing the correct date of initial licensure for cohort and control drivers

WOULD OTHERS BENEFIT FROM THE PROGRAM?

• Can the observed findings be generalised to other groups of program participants, in different settings?

• No attempt to investigate which elements of the program should be retained, revised or deleted to improve driving outcomes for future participants
RECOMMENDATIONS FOR FUTURE PROGRAM EVALUATORS

• Accurate recording of participant details
• Appropriate Informed Consent documentation for data release
• Appropriate documentation of program content
• Agreed understanding of the behavioural descriptors of intended program aims and outcomes
• Prospective, not retrospective, planning for the evaluation; ‘build in’ evaluation planning

QUESTIONS?