Today on New Zealand roads

- A person dies every 20 hours 40 minutes.
- A person is injured every 35 minutes.
- Someone is admitted to hospital every 72 minutes.
- A pedestrian is injured or killed every 8 hours 45 minutes.
- A cyclist will be injured or killed every 10 hours 40 minutes.
- A motorcyclist will be injured or killed every 8 hours 55 minutes.

There will be a crash somewhere in New Zealand every 13 minutes.
Crash Investigation and Road Safety

Learning from the real world
Policing our roads is all about...

Saving lives
Reducing injury
Road Safety Trends

- New Zealanders are more likely to die violently from a road crash than any other cause.
- Every day, 3000 people die from road crashes worldwide – every year 1.2 million.
- Road crashes are the single largest cause of unintentional death in the first five decades of life.
- You are ten times more likely to die on the roads than in any other way.
Some comparisons

- In 1973, 843 died on the roads.
- As recently as 1987 the death toll was 795.
- The drop in the road toll is in spite of huge increases in population, car ownership and travel.
- If we were still killing each other at the same rate today as in 1973, the road toll would be about 1750 per year.
Crash attendance and investigation

- New Zealand Police are required to attend and report on traffic crashes in New Zealand
- Police report all crashes by way of a Traffic Crash Report (TCR)
- SCU provides a further report on fatal and serious crashes
- Those TCR’s and SCU reports are entered into the CAS database
Enter 'crash time' and 'officer arrival time' or 'didn't attend'.

Note that the driver is not a passenger.

Distance and direction from side of road is critical.

Show results of alcohol test, if known; otherwise, indicate 'tested'.

Get clear descriptive statements.

Show paths of vehicles.

Give clues to location.

Traffic Crash Reports
Reporting Crashes

- Crash occurs
- TCR completed and forwarded to NZTA
- Crash type coded and entered in CAS
- Information used to inform policy, engineering decisions, investment, tactics
- CAS
- Police
- Engineers
- TLA
- MoT
- Statisticians
- Research
Crash Analysis System

Police reported injury crashes
By wet / dry
# Police Site Reports

**Site Name:** 7672 - Te Aro

<table>
<thead>
<tr>
<th>Total Injury Crashes:</th>
<th>303</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Non-Injury Crashes:</td>
<td>1056</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crash Movement</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overtaking Crashes</td>
<td>163</td>
<td>12</td>
</tr>
<tr>
<td>Straight Road Lost Control/Head On</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>Bend - Lost Control/Head On</td>
<td>88</td>
<td>6</td>
</tr>
<tr>
<td>Rear End/Obstruction</td>
<td>595</td>
<td>44</td>
</tr>
<tr>
<td>Crossing/Turning</td>
<td>302</td>
<td>22</td>
</tr>
<tr>
<td>Pedestrian Crashes</td>
<td>166</td>
<td>12</td>
</tr>
<tr>
<td>Miscellaneous Crashes</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1359</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Single Party</th>
<th>Multiple Party</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection</td>
<td>53</td>
<td>733</td>
<td>786</td>
</tr>
<tr>
<td>MidBlock</td>
<td>28</td>
<td>537</td>
<td>565</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>1270</td>
<td>1351</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Local road</th>
<th>State Highway</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban road</td>
<td>928</td>
<td>430</td>
<td>1358</td>
</tr>
<tr>
<td>Open road</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>928</td>
<td>431</td>
<td>1359</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environment</th>
<th>Light/Overcast</th>
<th>Dark/Twilight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry</td>
<td>761</td>
<td>388</td>
<td>1149</td>
</tr>
<tr>
<td>Wet</td>
<td>101</td>
<td>108</td>
<td>209</td>
</tr>
<tr>
<td>Icy</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>862</td>
<td>497</td>
<td>1359</td>
</tr>
</tbody>
</table>

| Deaths                     | 2          |
| Serious Injuries           | 68         |
| Minor Injuries             | 293        |

<table>
<thead>
<tr>
<th>Injury Crash</th>
<th>No.Inj.Crashes</th>
<th>% Inj.Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Too fast</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Failed Giveway/Stop</td>
<td>73</td>
<td>24</td>
</tr>
<tr>
<td>Failed Keep Left</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Overtaking</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Incorrect Lane/posn</td>
<td>27</td>
<td>9</td>
</tr>
<tr>
<td>Poor handling</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>Poor Observation</td>
<td>130</td>
<td>43</td>
</tr>
<tr>
<td>Poor judgement</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Fatigue</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Disabled/old/ill</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Pedestrian factors</td>
<td>119</td>
<td>39</td>
</tr>
<tr>
<td>Vehicle factors</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>490</td>
<td>161%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day/Period</th>
<th>0000- 0300- 0600- 0900- 1200- 1500- 1800- 2100- Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>5 4 20 19 37 42 27 2 156</td>
</tr>
<tr>
<td>Tue</td>
<td>7 1 16 38 32 40 23 13 170</td>
</tr>
<tr>
<td>Wed</td>
<td>5 7 19 30 38 53 25 22 199</td>
</tr>
<tr>
<td>Thu</td>
<td>9 4 19 24 49 42 29 14 190</td>
</tr>
<tr>
<td>Fri</td>
<td>4 4 23 32 38 53 42 49 245</td>
</tr>
<tr>
<td>Sat</td>
<td>35 24 11 27 41 37 24 25 224</td>
</tr>
<tr>
<td>Sun</td>
<td>24 22 15 27 28 27 17 11 171</td>
</tr>
<tr>
<td>Total</td>
<td>89 66 123 197 263 294 187 136 1355</td>
</tr>
</tbody>
</table>
How does CAS drive policing activity?

C.R.A.S.H. books

- Since 2001 analysis of CAS data
- Risk profiles allocated to 20 km sectors using qualitative analysis
- Sector analysis used for deployment to risk
- Sectors linear (highways), area or point (mainly urban)
- Infringement notices also sectored
- Supplied to partner agencies – used to target risk
- Front end pictorial, back end highly detailed
- Not just a “black spot” treatment
- Behavioral vs. locational approach
C.R.A.S.H Map

Southern Police District
Prioritised Highway Sectors
2001-2005

RoadPolicing
Risk Analysis

Look for:
- Speed
- Fatigue
- Fail to keep left
- Restraints

Times:
- 0900-1600, 1800-2200
- Night-time
- Friday
- All seasons

Conditions:
- Wet and dry roads during day and night

Locations:
- Clifton Rd intersection
- At Black Bridge Rd
- Robertson Rd to Kuriwao Siding Rd
- Moa Hill Rd to Clifton Rd (moderate bend)

Causes:
- Farm animals straying
- Lost control to left & turning right

Crash History (5 yrs)
- 0 Fatal
- 29 Minor Injury
- 4 Serious
- 17 Non-injury

Intelligence:
Crashes involving graduated license holders are over-represented in this sector. Farmland in this area also causes problems with stock on the road. The sector experiences a high volume of HMV-involved crashes. Speed enforcement in the 6-10kph and 11-15kph band is essential in this stretch of road, and speed approaching corners needs to be addressed. High visibility patrolling and fail to keep left enforcement is also essential in reducing injury crashes in this sector.
Tasking and Coordination

- Police have moved on to a tasking and coordination deployment model
  - Risk profiles are developed at National, District and Area level
    - A wide view based on a range of information – CAS, other agency intelligence (ACC, NZTA etc), enforcement data, local knowledge.
  - Feeds into local area deployment taskings for frontline staff
Combined risk maps
Safer Journeys - Road Safety Strategy to 2020

A SAFE ROAD SYSTEM INCREASINGLY FREE OF DEATH AND SERIOUS INJURY

Road Policing
Safe Roads and Roadsides

• What is a safe road or roadside?
• Self enforcing or self descriptive
• Skid resistance
• Roadside furniture (and protection)
• Obstruction free roadsides (run off zones)
Safe Speeds

- Stopping / reaction distances
- Sight distances
- Gap recognition issues
- How has speed played a part in this crash
- Speed calculations
Safe Vehicles

- Vehicle safety systems
  - Active (ABS ESC)
  - Passive (SRS)
- Injury severity/injury mechanism
- Pre-existing vehicle faults
- Vehicle structural integrity
- Tyre suitability
Speed?
5mm tread 150 km/h

1.5mm tread 150 km/h
Safe Road Use

- Driver behaviour
  - What did/didn’t the driver do?
- Crash trends in the area
- Offending trends in the area
- Road user composition
  - Vehicle type disparity
Moving forward

- Police crash reporting feeds into the *information package* that drives strategic approaches.
- Sharing detailed crash information is vital.
- Police are developing a serious crash debrief process that involves relevant agencies working together to pull apart real crashes to determine behaviour patterns, crash cause and trends. – Do you see yourselves as part of this process?
Thank you