Road safety monitoring and evaluation process

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Outline of presentation

First we will look at some road safety performance data, tracked over time, to illustrate its usefulness.

We will then link monitoring and evaluation to the safety management system and identify some elements of good practice.

And finally we will discuss the opportunity provided to improve monitoring and evaluation systems in the context of a ‘2nd Generation’ project.
Victoria, Australia (cont’d)

Victorian Fatalities Rolling 12 Month Totals - Jan 2002 to Nov 2004

- **TAC Wipe Off 5 Speed Campaign** Aug 2001
- **50 km/h urban default** Jan 2001
- **Increased covert operation & reduced speed enforcement threshold** Feb 2002
- **Reduced limits in high activity areas** Aug 2003
- **First Alcohol Interlock** May 2003
- **Random Roadside Drug Testing** Dec 2004
- **Safer Infrastructure program** June 2004

**Key Dates:**
- Jan 2001: TAC Wipe Off 5 Speed Campaign
- Aug 2001: 50 km/h urban default
- Feb 2002: Increased covert operation & reduced speed enforcement threshold
- Aug 2003: Reduced limits in high activity areas
- May 2003: First Alcohol Interlock
- Dec 2004: Random Roadside Drug Testing
- June 2004: Safer Infrastructure program
Deaths per 100,000 people

Victorian road fatalities and rates per 100,000 of population
1970 - 2004

Rate per 100,000 of Population
Fatalities
Deaths per 100 million vehicle kms. traveled & per 10,000 vehicles

Victorian fatality rates

Rates

- blue: fatalities per 100 million vehicle kms travelled
- red: fatalities per 10,000 registered vehicles
New Zealand

Road deaths

First National Road Safety Plan
First S(A)P: targeted enforcement resources

CBT and speed cameras

Intensive advertising and enforcement

Vehicle impoundment

Deaths per 10,000 vehicles

Deaths

Road deaths

Highway Patrol

Deaths


1.5

1.8

2.1

2.4

2.7

3.0

3.3

3.6

Deaths per 10,000 vehicles

1.5

1.8

2.1

2.4

2.7

3.0

3.3

3.6
Deaths & injuries per 100 million vehicle kilometres travelled

Deaths & Injuries per 100 million VKT

Year

Deaths

Injuries

Deaths & injuries per 100 million vehicle kilometres travelled
Crash risk by driver age group

**Driver fatalities per 100 million km**

- **1989/90**
- **1997/98**

**Age of driver**

- 15-19
- 20-24
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60-64
- 65-69
- 70-74
- 75-79
Deaths (1970 = 1)
Road Safety Management System

Results

Interventions

Institutional management functions

Management functions

Seven vital institutional management functions can be identified:

– Results focus
– Coordination
– Legislation
– Funding and resource allocation
– Promotion
– Monitoring and evaluation
– Research and knowledge transfer
Monitoring and evaluation concerns the systematic and ongoing measurement of interventions in terms of road safety outputs and outcomes to achieve the desired focus on results.

The effective monitoring and evaluation of road safety performance requires appropriate management structures, systems and procedures for the collection, processing and publication of reliable data.
Key system attributes

Good practice monitoring & evaluation systems are:

- Objective
- Comprehensive
- Sustained
- Integrated

These systems underpin the closely related research and development function and contribute to the process of continuous improvement in results.
**Data sources**

Exposure data from vehicle and driver registries, traffic surveys and travel surveys.

Crash and related fatality and injury data from Police systems, hospital and ambulance systems, insurance systems, coroners systems, household surveys, etc.

Vehicle standards data from vehicle inspection and crash testing systems.
Data sources (cont’d)

Road standards data from road infrastructure management and safety rating systems.

Safety compliance data from systematic surveys (speeds, belts, helmets, alcohol etc).

Safety attitudes data from systematic surveys (tracking policy issues, advertising campaigns etc).
Monitoring and Evaluation Framework

Source: Road Safety Strategy 2010, National Road Safety Committee, Wellington, New Zealand, October 2000
Outputs and outcomes

Outputs represent physical deliverables, for instance the number of infringement notices.

Intermediate outcomes are not desired for themselves but for what they entail – better final outcomes.

Final outcomes consist of social costs, fatalities and serious injuries. They are what the country seeks to avoid.
Speeding infringements issued (x2000) in the preceding 12 months

National Highway Patrol
**Intermediate outcomes**

Percentage of vehicles exceeding 110 km/h

Speeding infringements issued (x2000) in the preceding 12 months

National Highway Patrol
Final outcomes

Speeding infringements issued (x2000) in the preceding 12 months

Percentage of vehicles exceeding 110 km/h

Fatal crashes on the open road in the preceding 12 months

National Highway Patrol
Drivers’ breath alcohol levels

% over legal limit

Year


00:00 to 02:00
hours

22:00 to 24:00
Hours

overall
Male drunk drivers in crashes
Advertising is not desired for itself but for its effect.

The ‘adstock’ model is a tool to monitor advertising recall.

Bars show amount of advertising delivered.
Crash Rate
Crashes per Billion Veh Km
- 180 +
- 100 to 180
- 60 to 100
- 15 to 60
- 0 to 15
- 0 or 1 crashes
Cost Density

$000 per km of Road

- 700 +
- 400 to 700
- 200 to 400
- 100 to 200
- 0 to 100
- 0 or 1 crashes
Priority initiatives

Comprehensive reporting of fatal and injury crashes, including quality control measures, especially in terms of matching Police data with health sector data.

Measurement of intermediate outcomes (e.g. speeds, belt wearing, helmet wearing, alcohol involvement).

These priorities could usefully be addressed in the context of a large-scale ‘2nd Generation’ project.
Discussion