

ROAD SAFETY PROGRAMS OF MPI AND INTERNATIONAL GOOD PRACTICE

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Manitoba Public Insurance
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**ROAD SAFETY
IS NO ACCIDENT**

CANADIAN
Traffic Safety
INSTITUTE INC.

Purpose of Report

- **Outline national and international good practice**
- **Review existing road safety and auto crime programs undertaken by MPI**
- **Review existing approach to evaluating road safety and auto crime at MPI**
- **Review effectiveness by which MPI integrates its existing programs with other stakeholders**

Key messages

- using an integrated safe system approach there is realistic potential over time to reduce claims costs;
- the ability of MPI to optimize its road safety expenditures appears to be impeded by the absence of a road safety strategy
- within the context of an auto insurer, it is important to critically evaluate the costs and return on investment of individual programs;
- there is little information to demonstrate that individual programs or the portfolio as a whole are optimally designed

Patterns and trends

(Refer to Table 1 in report)

Patterns and trends

Young drivers – 16-19 continue to have the highest rates of involvement in collisions and in 2011 increased almost 19% compared with 2010

Patterns and trends

City of Winnipeg has 58% of all collisions – 15% of fatal

Rural area has 23% of all collisions – 66% of fatal

Patterns and trends

Winter months worst (Jan, Feb, Dec)

Wednesday thru **Friday worst days**

Between 3pm and 6pm

Patterns and trends

In 2011, 39% of people killed and 13% people seriously injured were not wearing or using available safety equipment

Patterns and trends

Contributing factors in fatal or seriously injured crashes

- **Speed – 34%**
- **Distracted driving – 27%**
- **Impaired driving – 25%**
- **Lost control/Drive off the road – 13%**

Priorities

Speed

Distracted driving

Impaired driving

Occupant restraints

Young drivers

Rural roads

Comparison to other provinces

(Refer to Table 3 in report)

Decade of Action

Goal is to reduce road traffic deaths and injuries around the world through:

- **road safety management**
- **infrastructure**
- **safe vehicles**
- **road user behaviour**
- **post collision care**



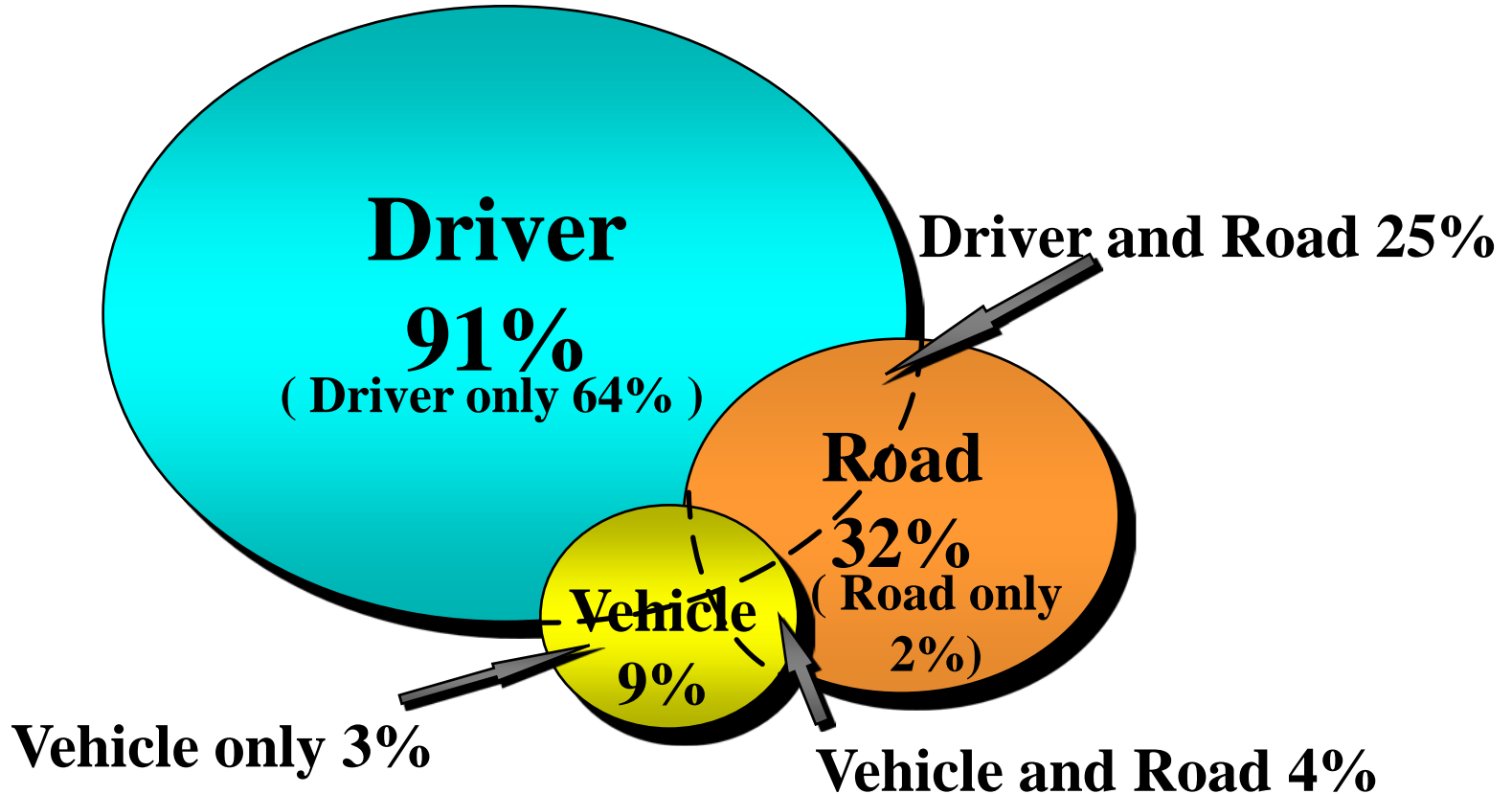
Lessons learned from International Good Practice Countries

- **Governance/leadership**
- **Integrated**
- **Partnerships**
- **Targeted (includes M&E)**
- **Sustainable**

Multi-disciplinary

VEHICLE	ROAD	ROAD USERS	RESEARCH	OTHER
Vehicle safety specialists Vehicle equipment specialists	Engineers Planners Traffic technologists Bicycle/Ped.	Nurses Medical staff Injury Prevention Health Promotion Social Marketing Auto Insurance Behavioral psychologists Driver educators Police Officers	Graduate students Engineering Criminology Psychology/Human factors Public policy Health Sciences	Communica- tions Advocates Victim services

Vehicle, Road and Driver Crash Cause Interactions



Safe System Approach Background

- **Based on Sweden's Vision Zero**
- **Sustainable Safety in the Netherlands**
- **Australia's Safe System approach**

Safe System Approach

- Recognizes limits of the human body
- Systematic approach brings benefits
- Recognizes that crashes are going to happen (*even with focus on prevention*)
- Aims to minimize severity of injury
- People should not die because of system failings

Safe System – Human Tolerances to Physical Forces

Vehicle impact speeds - Fatality thresholds

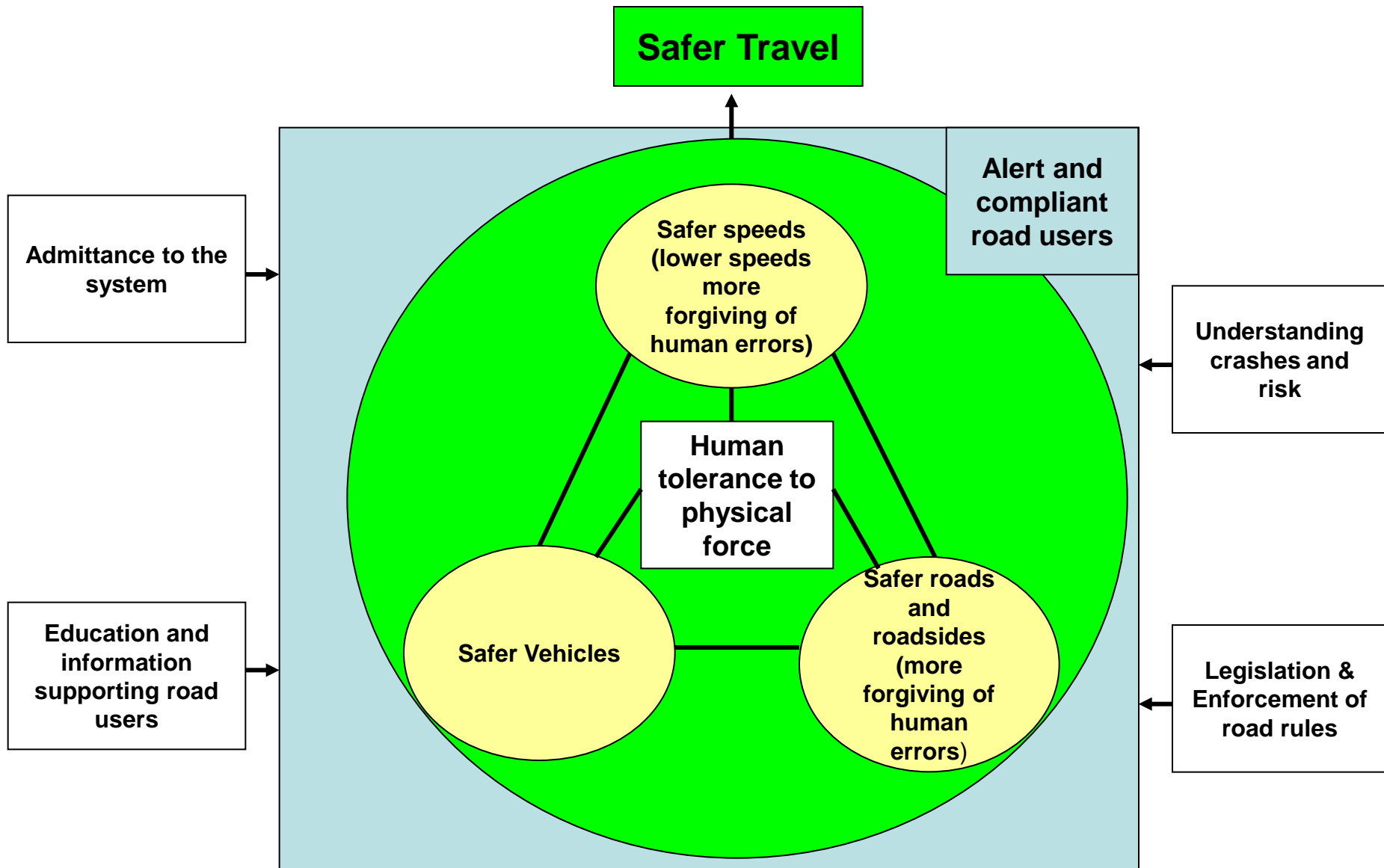
≤ 30 km/h – vehicle occupants in side impact crashes with poles and trees

≤ 40 km/h - pedestrians, cyclists, motorcyclists

≤ 50 km/h - vehicle occupants in side impact crashes with other vehicles

≤ 70÷80 km/h - vehicle occupants in head on crashes

Safe System



Who are system designers?

planners engineers policy makers
educators enforcement officers
vehicle importers suppliers
utility providers insurers



Safe System Elements

Better Understanding Crashes and Risks

- Crash reviews
 - At the local level, reporting to local regional panels
 - Central panel review of categories of crashes & common themes
- Stakeholder involvement
- Intensive crash data analysis
- Improved understanding of road user safety issues



Safe System Elements

Legislation

Institutional

- Establishment & resourcing
- Role allocation (policy, managerial, executive, research)
- Co-ordination
- Monitoring & evaluation

Standard-setting

- Infrastructure (& road furniture)
- Vehicle owners
- Drivers
- Vehicles

Regulation

- Training
- Inspection & Certification
- Registration
- Rules of the Road
- Enforcement & penalization
- Audit

Safe System Elements

Enforcement

- **Public perception is critical to deterrence**
- **General deterrence to promote fear of detection**
 - **Police presence – marked & unmarked cars**
 - **Technology (safety cameras) anywhere & anytime**
- **Specific deterrence to target high risk behaviours**
- **Supported by publicity**

Safe System Elements

Admittance to the system – Licensing

- Inexperienced drivers
 - Graduated licensing opportunities
- Physically/mentally impaired drivers
 - Effective assessment processes
 - Restricted licence options
 - Alternative transport options



Safe System Elements

Education & Information for road users – Cultural Change

- Understanding barriers to new countermeasure implementation
- Mass Media advertising for specific campaigns – alcohol/speed/drugs
- Specific information eg. brochures included with vehicle registration renewals



Safer Roads & Roadside:



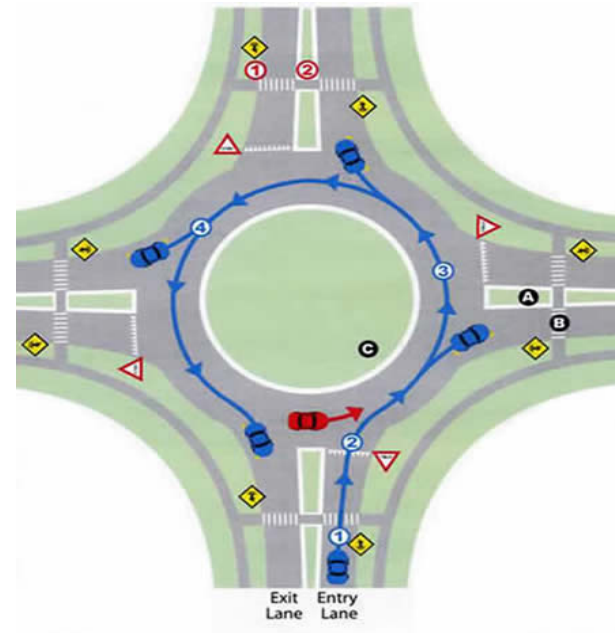
Safer Roads & Roadsides

Intersection crashes (*side impact between vehicles*)

Identify higher crash rate intersections for serious casualty crashes – overall network in urban areas

Select countermeasures

- Roundabouts
- Signals & upgrades
- Higher friction surfacing



Intersection crashes

Role of vehicle safety & travel speed

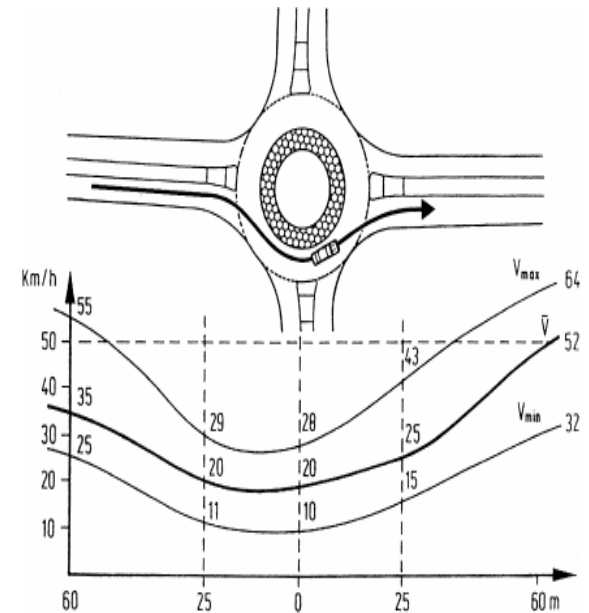
Increase provision of head protecting curtain airbags in fleet

Increase provision of whiplash protection in seating

Lower travel speeds

- Enforcement measures
- Speed limits

(review in higher risk locations)



Head-on crashes



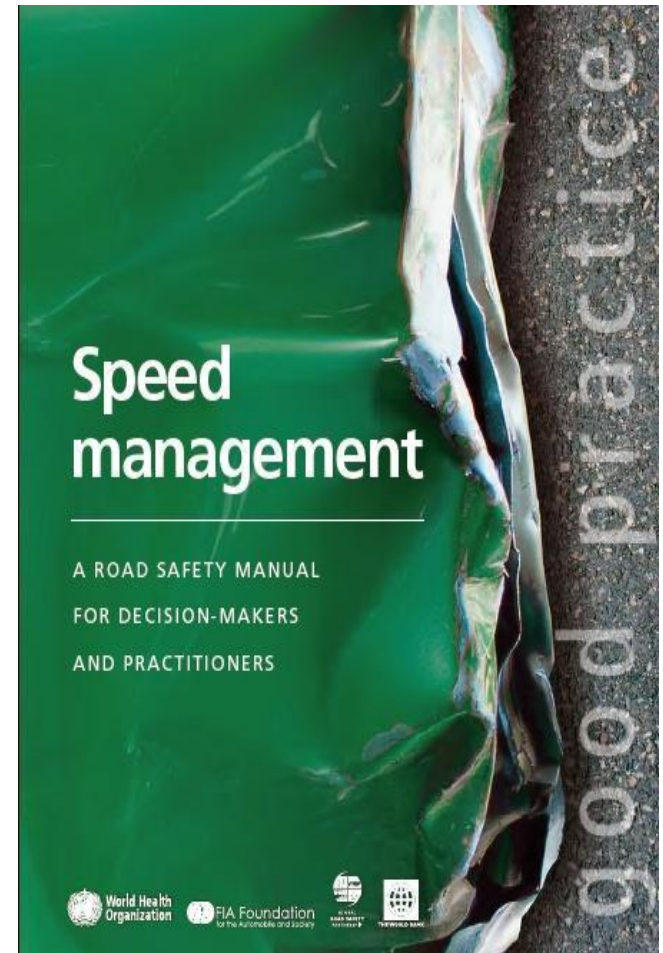
Major crash types

- Run-off-road (100 km/h zones)
- Intersection – side impacts with other vehicles (60,70,80 km/h zones, urban areas)
- Head on (100 km/h zones)
- Pedestrians - (60 & 70 km/h zones, urban areas)



Safer travel speeds

- Speed humps & rumble strips
- Pedestrian refuge island
- Pedestrian crossing areas
- Mini-roundabouts



Safer travel speeds

Runter Vom Gas!



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Safe roads- *that are predictable & forgiving of mistake*

Safe speeds- *travel speeds suit the function & level of road safety*

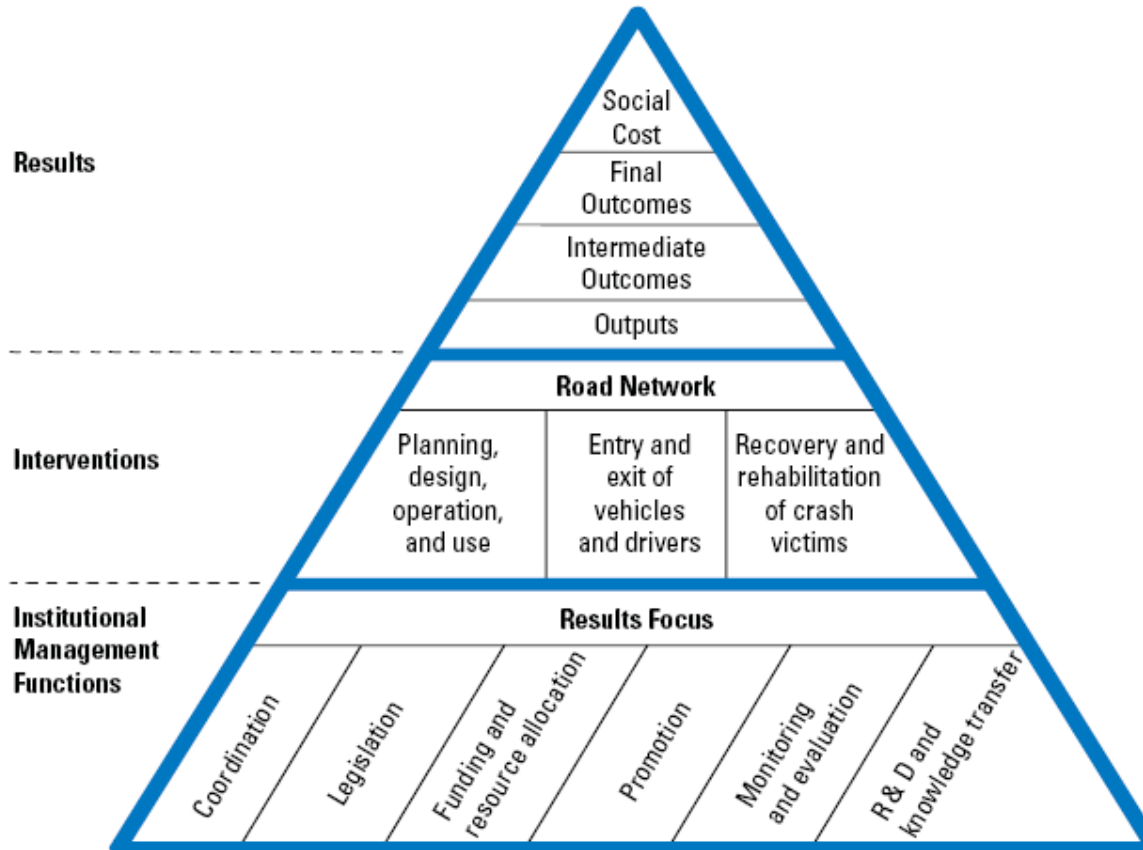
Safe vehicles- *that prevent crashes & protect road users*

Safe road use- *road users that are skilled & competent, alert & unimpaired. They comply with road rules, take steps to improve safety*



Road Safety Management Capacity

A comprehensive Road Safety Management approach

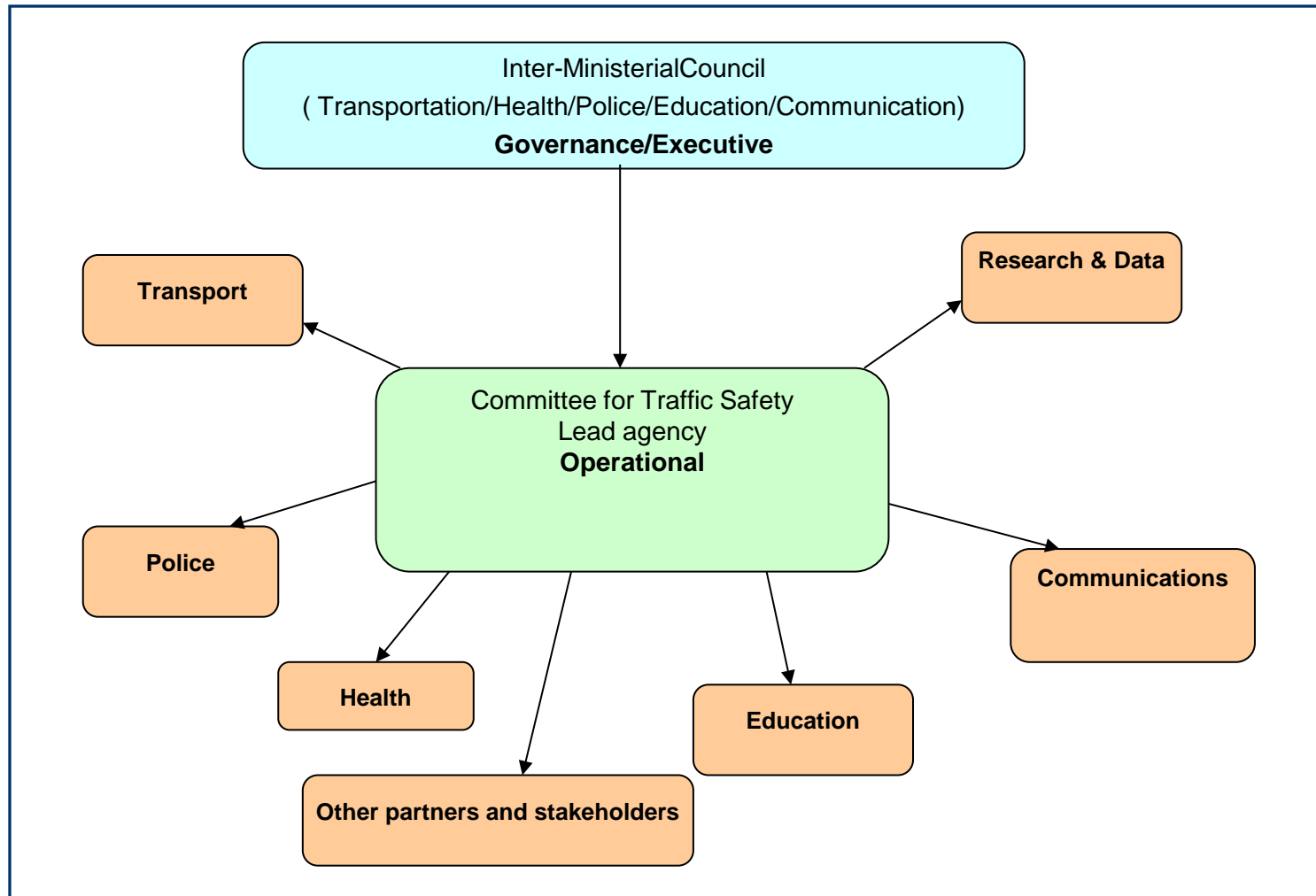


Focus on.....(1)

Lead agency

- Identifying lead agency
- Coordination and management

COORDINATION AND MANAGEMENT



Focus on.....(2)

Results

- **Vision**
- **Targets**
- **Collision data**
- **Costs of crashes**
- **Performance indicators**
- **Identifying road user risks**

Results focus – Vision and Targets

Establish a *common vision* for road safety

Establish ambitious, achievable and empirically derived *road safety targets*

Results focus – Collision data

An appropriate *provincial system* of data collection, storage, retrieval and analysis which leads to *better identification* of the safety situation and from which *focused and appropriate remedial measures* can be devised

Results focus – Collision data analysis

- *identify* traffic safety issues and *devise countermeasures*
- *implement* and *adjust* coordinated strategies
- undertake *cost/benefit analyses*
- *prioritize* high collision locations and corridors
- develop *coordinated education and enforcement* campaigns
- develop *safety performance functions*
- *monitor and evaluate* the effectiveness of improvements

Results focus – Costs of crashes

- **Use information to quantify costs and benefits of interventions**
- **Determine social costs of crashes**
- **Determine MPI costs for fatal, injury and PDO**

Results focus – Performance Indicators

Develop *safety performance indicators* which should include:

Outcome measures – usually collision numbers or rates

Intermediate measures – safety-related behaviours and attitudes which are expected to influence the likelihood of being involved in a collision (e.g. seat belt wearing rates, speeds)

Process (effort) measures – the type and amount of resources being expended to address road safety issues (e.g. speed camera hours, amount of advertising, number of blackspots treated)

Results focus – Identify road user risks

Using the improved data base,
develop a program to *identify high
risk road users* and their
behaviours

Focus on.....(3)

Institutional Management Functions

- **Legislation**
- **Promotion/Media**
- **Funding and resources**
- **Monitoring and evaluation**
- **Research and development**
- **Knowledge transfer**

Institutional management Legislation

To provide *current and relevant* legislation in addition to an *efficient judicial system* to process and penalize offenders.

Institutional management Promotion

Improvement of road safety through more *effective publicity and advocacy campaigns*

Government announcements expressing their *vital support* for programs that reduce the severity and frequency of traffic crashes

Institutional management Funding and Resources

Adequate and sustainable funding
resources to enable the development,
management, implementation and
monitoring of ***safety interventions***
necessary to ***achieve the targets***

Institutional management Monitoring and Evaluation

Monitoring and evaluation should:

- be able to *measure progress* and *current status*
- allow *feedback* and *encouragement* to the organizations involved
- identify *under-performance*
- identify *emerging problems*
- monitor a *range of indicators*
- must be able to *predict likely future adverse trends*, as far in advance as possible.

Institutional management Research and Development

Research strategy that

- *promotes partnerships for collaborative road safety research*
- *tracks, adapts and utilizes relevant research and good practices*
- ensuring that the content of the road safety strategy is in line with international good practice.

Institutional management Knowledge Transfer

A systematic and ongoing transfer and application of knowledge that contributes to the efficient and effectiveness of the outcomes of the road safety strategy

Focus on.....(4)

Interventions

- Road network
- Vehicles and vehicle safety devices
- Road Users
- Traffic enforcement
- Road User Education
- Road Safety Campaigns

Interventions Road Network (Infrastructure)

To provide a *safe and reliable*
transportation network across the
province with *consistent practices*

Interventions Road Network

- **Road Safety Audits and Safety in the Planning Process**
- **Blackspots and Network Screening**
- **Intersection design and roundabouts**
- **Roadside Hazard Management**
- **Traffic Operations and Management (Signs and markings)**
- **Speed Reduction Measures (Traffic Calming)**

Interventions Safer Vehicles

Ensure that vehicles sold are in line with international new car assessment standards.

Improved road safety through *periodic inspection* of registered vehicles and techniques to *prevent defective* and *unsafe vehicles* from using public roads.

Interventions

Vehicle Safety Devices

Undertake *coordinated campaigns*
(enforcement with public awareness) on the
***use of safety devices*, such as seat belts and**
child safety seats.

Interventions Road Users

Consistent and improved training and education of drivers through more rigorous screening (and monitoring) of:

- **Learner /novice drivers**
- **New Canadian drivers**
- **High risk drivers**
- **Commercial and long distance drivers**

Interventions

Emergency Assistance

***An effective and consistent* provincial ability to provide emergency medical treatment to casualties at the scene of road crashes**

***A well-trained and specialized trauma management team* in hospitals**

Followed by the availability of a variety of rehabilitation services

Interventions Police Enforcement

More *efficient, consistent and effective*

traffic police enforcement by the use of

better enforcement tactics, effective

allocation of police personnel

in line with international good practice

Interventions

Road Safety Education

Improve children's capability of
coping with the dangers of traffic
by teaching and training them safer
road user behaviours and survival skills

- **Elementary**
- **Secondary**

Interventions

Road Safety Campaigns

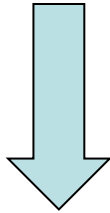
Coordinated campaigns should:

- ***influence road user culture and attitudes towards road safety;***
- ***raise awareness of what constitutes safer behaviour; and***
- ***remind road users when their behaviour is unsafe***

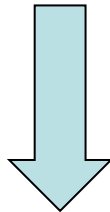
The role of Auto Insurance companies in road safety

Simple equation

Fewer collisions



Fewer claims



Lower premiums

The role of Auto Insurance companies in road safety

In Canada:

SAAQ

MPI

Have a variety of
roles in road safety
in their province

SGI

ICBC

The role of Auto Insurance companies in road safety

TAC – Australia – Key priorities

- Educating the public
- Uses their data to assist in identifying key risk factors
- Works with other partners ensuring a coordinated approach
- Sets targets for strategy framework
- Learns from and adapts to new evidence from other jurisdictions
- Invests in initiatives that reduce the burden of trauma

MPI programs

Focuses on these key major issues:

- **Speed**
- **Occupant safety**
- **Impaired driving**
- **Vulnerable Road Users**
- **Driver Education**
- **Auto Crime**

MPI budget for road safety

Program category	Amount	% budget
Driver Education	\$4,346,000	37.5%
Auto Crime	\$2,963,000	25.6%
RS Advertising & Sponsorships	\$2,150,000	18.6%
RS Programs	\$1,543,000	13.3%
Road Watch	\$403,000	3.5%
Surveys/program evaluation	\$182,000	1.6%

High School Driver Education

- **Approximately 38% of MPI's budget is used to administer this program**
- **Program is open to all students and about 12,000 students take the course annually**
- **Over the past decades there have been numerous studies on the content and effectiveness of this program**

High School Driver Education

Key question:

(That seems to be unanswered)

“Do those young people that have taken the HSDE program perform better (fewer collisions/violations) than those who haven’t?”

Enforcement programs

Occupant Restraints

Impaired driving

Speeding

Distracted driving

(ROADWATCH)

Enforcement programs

(ROADWATCH)

Main objective is to reduce impaired driving by increasing the perceived risk of apprehension

Education & Awareness programs/campaigns

Limitations of the current evaluation

- Measures awareness and reach
- Does not measure “before” and “after” behaviour!

Education & Awareness programs/campaigns

Media Campaigns and Advertising can be costly!

A more effective approach is to develop a strategic communications plan (which should be in line with the Traffic Safety Plan Calendar) and take account the specific target audiences for each message and the medium to be used.

MPI programs summary...1

- **There is a lack of evidence that any of them have made a difference (other than Auto Crime)**
- **Programs are not strategic and lack coordination**
- **Little evidence of any ongoing monitoring and evaluation**

MPI programs summary...2

- **The focused enforcement tactics seem to fall short of good practice**
- **There seems to be a lack of a regular (annual) review of its investment in road safety**
- **Even though the MPI produces a huge amount of useful information through its website and quality brochures and guidelines – it is probably not enough to create sustained behaviour change.**

MPI Program recommendations

Two program areas that should be reviewed in greater detail:

- **Collisions on rural roads**
- **Collisions involving
Aboriginal/First Nations**

Rural roads

- Collisions on rural roads:
**23% of all collisions but
66% of all fatalities**
- Further analysis required
- Good approach – Corridor-wide program

Aboriginal/First Nations

- **175,000 (on/off reserve and Metis)**
- **60% under age of 30**
- **May require special attention (focus)**

MPI Public Consultation

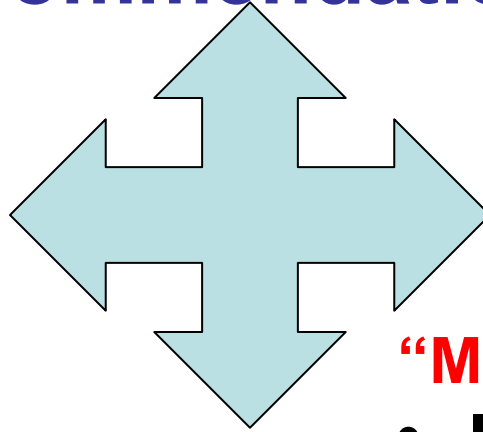
Concluded:

“Clearly, there is support for a new and different role for Manitoba Public Insurance.”

Recommendations

Continue “as-is”

- No progress
- Rising claims costs
- Higher premiums



“Make a difference”

- Increase investment in evidence-based RS programs
- Be more strategic
- Take a leadership role in RS in the province