

IPENZ Transportation Conference

Compliance and Acceptance of Safer Speeds

March 2014

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Overview

- Study Objectives
- Literature Findings
- Speed Compliance with Reduced Speed limits
 - Hamilton Suburban 40kph areas
 - SH2 90kph Safer Speed zone
- Acceptance Survey – web
- Key Findings



Study Objectives and Stages

- A key element of the Safer Journeys national road safety strategy is safer speeds (lower speeds) – one of the four elements
- The initial purpose of the study was to assess the effectiveness of education, enforcement and perceptual changes to the road and road environment in achieving compliance with, and acceptance of, lowered speed limits in both rural and urban environments across New Zealand.
- However the study mainly focused on the effectiveness of speed limit signage, engineering measures and to a lesser degree enforcement on speed limit compliance. Drivers were also asked about their acceptance of lower speeds in an on-line survey.



Study Stages

- Stage 1 – Literature Review (Monash)
- Stage 2 – Speed Compliance at Existing NZ Sites
- Stage 3 – On-line Acceptance Survey
- Stage 4 – Speed Compliance Case Studies
- **Presentation will focus more on Acceptance of Safer Speeds**



Literature Review

- There is minimal research internationally on the compliance and acceptance of lowering speed limits.
- European (Sweden and Netherlands) research indicates greater acceptance of lower speed limits in urban residential streets, rather than on higher speed roads.
- Australian research indicates that there is some acceptance of lower speed limits on some rural roads - gravel roads and some sealed 2-lane rural roads.

Literature Review

- A study of 80km/h rural roads in the Netherlands demonstrated the importance of ensuring road characteristics are a better match for driver's perception of appropriate speed limits.
- Road curvature and sight distance are strongly correlated with speed perception (and perceived risk!).
- The researchers concluded that although there would never be a speed limit on a particular road section that would be credible for all drivers, there would be a speed limit that would be more credible for everyone....

Literature Review

- Studies by the Swedish Road Administration showed that, while people often disagreed with lower speed limits, a significant proportion of respondents did travel more slowly subsequent to the changes

Compliance – Before and After Case Studies

- Hamilton City Area Wide Treatments (40)
- Mount Maunganui Shopping Area (30)
- Otago Peninsula (70 on gravel and seal)
- State Highway 2 (from SH1 to SH25) (90)

Hamilton City Area Wide Treatments

- Works to install the 40 km/h speed limit were completed in late 2011 in nine demonstration suburban neighborhoods around Hamilton.
- This followed installation of engineering treatments on many streets to get speeds down to a level where a 40km/h speed limit was appropriate



Figure 2 – Demonstration (blue areas) and proposed (red areas) 40km/h areas (background image courtesy of Google Earth)

SH2 Safer Speeds Area

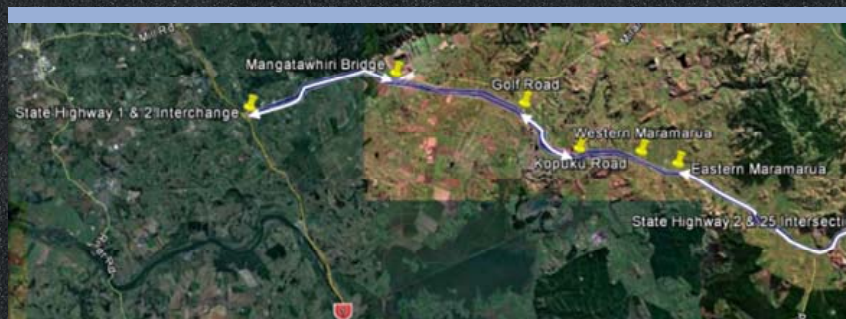
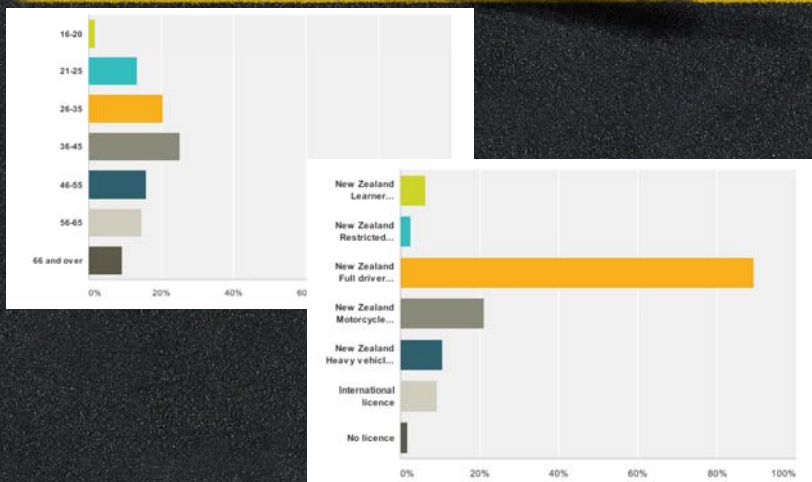
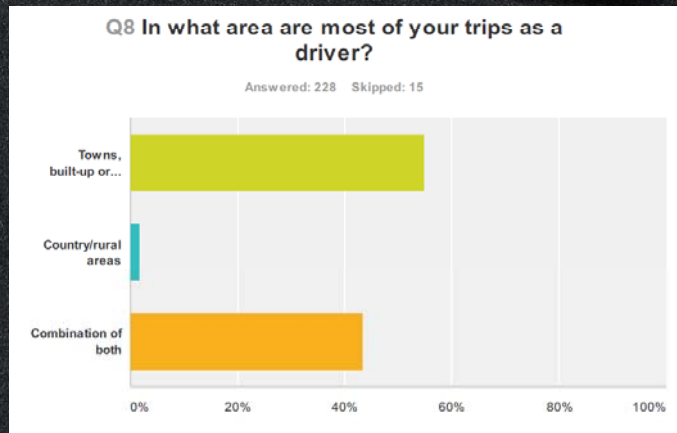


Figure 7 – Section of State Highway 2 with 90km/h safer speed limits

Acceptance of Safer Speed (New)

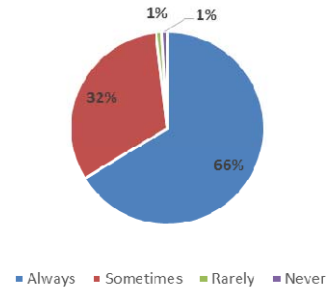


Acceptance of Safer Speeds

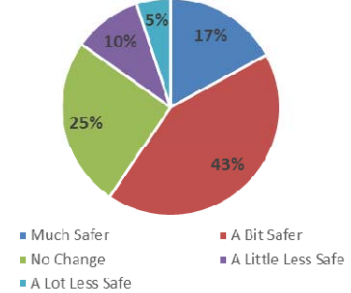


Acceptance of Safer Speeds

When you drive does safety influence your choice of speed

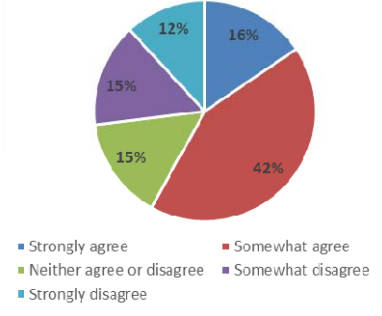


If all drivers drove a little slower, then the roads would be

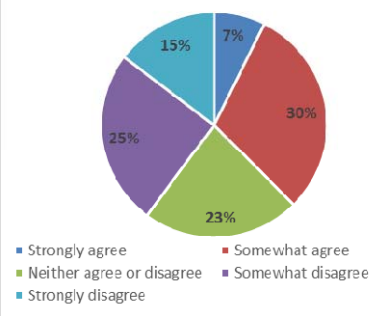


Acceptance of Safer Speeds

If drivers slow down, then fewer crashes will happen

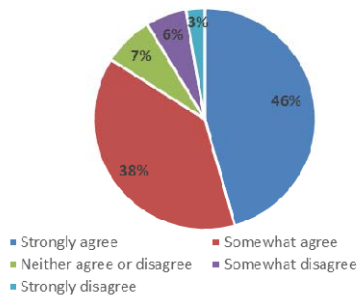


Lowering speed limits would reduce the number of crashes on our roads

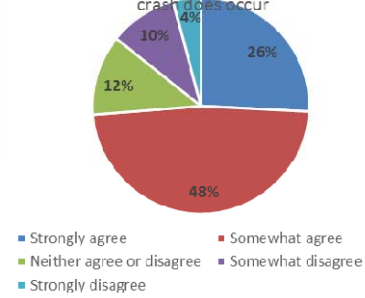


Acceptance of Safer Speeds

If drivers slow down, then people will be less seriously injured in a crash



Lowering speed limits would result in people being less seriously injured if a crash does occur

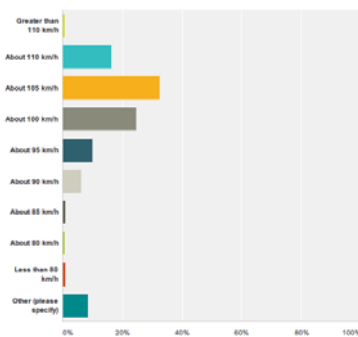


Acceptance of Safer Speeds - Rural

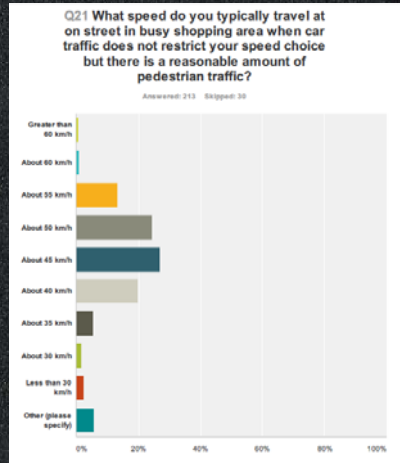
- Consider a two lane undivided rural roads
- a standard width sealed road, not the big highways
- there are no speed limit signs but the default speed limit is 100km/h
- Few supported lowering speed to 90kph

Q18 What speed do you typically travel at on this type of road with a 100km/h limit when there is no traffic congestion?

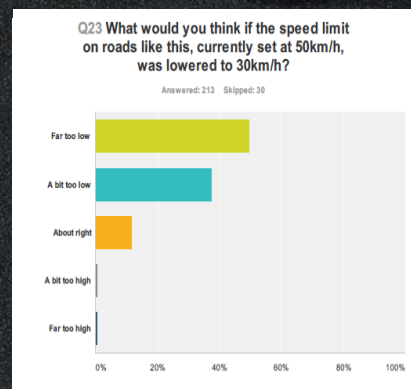
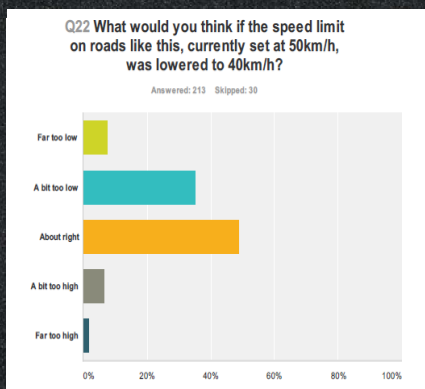
Answered: 216 Skipped: 27



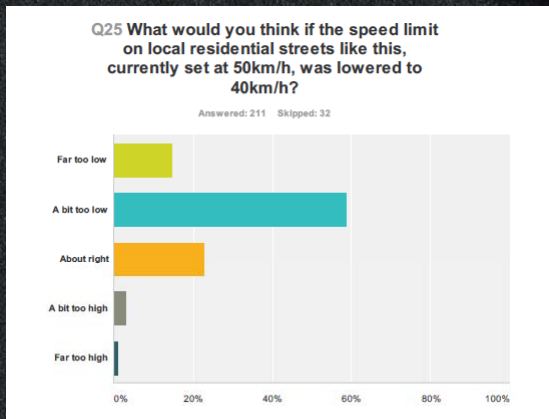
Acceptance of Safer Speeds - Urban



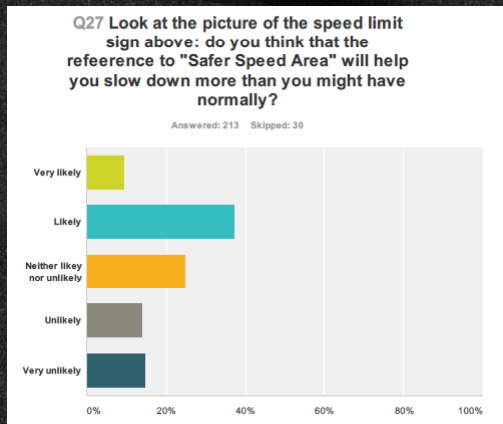
Acceptance with Safer Speeds - Urban



Acceptance of Safer Speeds - Urban



Acceptance of Safer Speeds

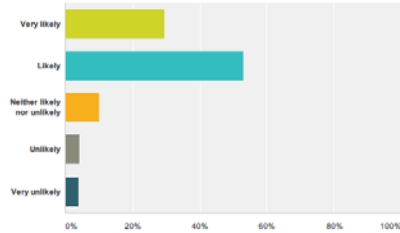


Acceptance with Safer Speeds



Q28 Now consider another type of speed limit sign where, under the speed limit, is an explanation of why you should slow down - such as "high crash zone", "children crossing" or "busy shopping street". Do you think that these speed signs with the extra wording will help you to slow down more than you might have normally?

Answered: 214 Skipped: 29



Next Steps – 3 Case Studies

- Assessment of active speed enforcement of SH2 safer speeds (90kph) area
- After surveys for Otago Peninsula and effect of speed trailer
- After studies of Hamilton 80kph rural speed limit on Gordonton Road corridor without engineering

Questions



Key Findings

- There is minimal research internationally on the compliance and acceptance on lowering speed limits compared with standard speed limits.
- European research indicates greater acceptance of lower speed limits in urban residential streets, rather than on higher speed roads – limited support for this in NZ
- Australian research indicates that there is some acceptance of lower speed limits on some rural roads, including gravel roads and some sealed 2-lane rural roads
- A study of 80km/h rural roads in the Netherlands demonstrated the importance of ensuring road characteristics are a better match for driver's perception of appropriate speed limits.

Key Findings

- The compliance data collected from across New Zealand shows that there is a limited effect of applying speed signage and markings on their own.
- The notable exception is the SH2 Safer Speed Area where speeds reduced by 3 to 6 km/h.
- This is thought to be due to high levels of passive and active enforcement, press coverage of the high crash rate and regular campaigns using billboards and targeted education of professional truck drivers.

Questions

