Speed management – best practices

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John White
Head, Joint OECD/ECMT Transport Research Centre

Speed management in OECD/ECMT

- On policy side, ECMT Ministers Resolution on speeding in 1996 included proposals for general speed limits:
  - 50 km/h in urban areas; 120 km/h on motorways
- On research side, the JTRC Working Group on Speed Management has a draft of its report, which currently being peer reviewed in US, Europe, Australia
  - Chair: Jacques Nouvier, CERTU (France)
  - 17 countries participating, including USA, Canada
- Speed - a key focus of our safety policy and research activities

Speed: the major road safety problem

- Speed is the Number 1 road safety problem
  - confirmed in recent responses from 35 OECD/ECMT countries
- Speed is a causal factor in up to 40 % of all fatal collisions.
- Excessive speed (above the speed limit) and also inappropriate speed (for the prevailing conditions) are the major concerns.
- High speeds increase crash risks and in any crashes, increase collision forces and injury consequences; young drivers, vulnerable road users are most at risk.

Effect of speed on collisions/fatalities

Andersson & Xilouris 1997

In urban areas, a reduction in mean speed of 10 km/hr could reduce fatalities by almost 40%

Speed and stopping distances: a crucial road safety issue

At 30 km/hr, a driver can stop in 13 metres:
  - Pedestrian injury = 0
At 50 km/hr, the stopping distance is doubled:
  - Pedestrian injury = severe

Other impacts of higher speeds

- Increased environmental impacts
  - Local pollution rises (which affects public health)
  - Greenhouse gas emissions (CO₂) → global warming
  - Consumption of non-renewable energy increases
- Adverse impact on communities, quality of life
  - Increased traffic noise impacts-neighbouring areas
  - Activities, pedestrians, cyclists also impacted
- These wider impacts are important to gaining political support for reducing vehicle speeds
Key factors in speed management

- Self-explaining and forgiving roads
  - Road design consistent with road function
  - Road marking and signing also clear
- Safe and credible speed limits
  - Speed limits set with regard to safety e.g., 30 km/hr in pedestrian areas; 50 km/hr generally in urban areas
  - Consistent speed limits across road networks
- Speed enforcement
  - Visible police presence important
  - Active speed enforcement efforts
- New vehicle technologies (e.g., ISA) will help in future

Speed enforcement is critical

- Effective enforcement is essential, needing
  - Highly visible manual enforcement
  - Backed up by automatic enforcement
- Positive outcomes can be achieved, e.g.,
  - New automated enforcement, combined with increased police visibility (France)
  - Lowering of speed limit exceedence tolerance in Victoria, Australia
- Possible to reduce speeding and fatalities relatively quickly

Public information and support

- Effective speed management requires public support
- Drivers often don’t perceive full risks of speeding
- Public information campaigns are important in explaining/showing them the risks
- Reasons for enforcement also need explaining
  - Public scepticism about revenue raising
  - Also new generations of drivers involved
- Consistent penalties are important for acceptance

Meeting objections to speed management

- Concerns about adverse impacts of lower speeds often not very well informed e.g.,
  - Travel times. While time losses are perceived as significant; actual time losses in urban areas are generally minor
  - Traffic flows. In urban areas, traffic flows depend primarily on intersection capacity, not travel speed between them
  - Economic impacts. Any economic losses of lower speeds offset by fuel savings/reduced fuel costs at lower speeds e.g., reducing from 70 to 60 kph means 20% less fuel

Conclusions

- Speed management will reduce road fatalities/injuries
  - As well as other adverse vehicle impacts (e.g., environmental)
- Political support exists for reducing vehicle speeds
  - E.g., ECMT Ministers resolution 1996; recent (November 2005) UN General Assembly resolution
- Package of measures to be adapted to each country
  - Key factors include: self-explaining roads; safe and credible speed limits; visible manual and automated enforcement; vehicle technology
- Implementation issues have to be addressed
  - Drivers often do not perceive full risks of speeding. Public information and public support is therefore required