Parliament of Victoria Road Safety Committee Public Hearing

Inquiry into Pedestrian Safety in Car Parks

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Pedestrian-vehicular injury in car parks in Victoria

- At least 115 hospitalisations over the last six years due to pedestrians being struck by vehicles in car parks
- Seniors aged 65 and over accounted for 45% of cases
- Two-thirds (63%) of injured pedestrians were female
- Fracture was the most common injury type (53%)
- Most affected body regions were lower limbs (50%) and head/face/neck (22%)
- Plus a further 74 (less severe) cases during the same time-frame treated in an emergency department only

Non-vehicular injury in car parks in Victoria

In addition to pedestrian-vehicular crashes, there were 842 hospitalisations in the last six years from injury in car parks due to other causes:

- 55% slips, trips and falls
- 16% vehicular crashes (not involving pedestrians)
- 11% assaults
- 9% self-harm incidents
- 9% other causes

Plus at least an additional 825 similar cases treated in an emergency department for less severe injuries.
Injuries overall, ....

- at least 1,856 cases of injury requiring medical attention were identified that occurred in Victorian car parks between 2002 and 2007

- these figures are likely to underestimate the true number of car park injuries due to data limitations
Pedestrian Crash Risk Factors in Car Parks

- pedestrians and vehicles sharing the same space
- driver attention-sharing and distraction while searching for the ‘elusive, highly-prized’ parking space
- complex surroundings involving many vehicles manoeuvring
- restricted sight lines due to large vehicles (4WDs and vans), structural columns and restrictions while reversing
- reduced visibility in indoor car parks due to limited daylight and changing light intensity
- low conspicuity of children due to their small stature
- limited agility and perceptual function of older pedestrians
- excessive travel speeds, having regard to the above
Pedestrian Injury Risk Factors in Car Parks

- instability and frailty of older pedestrians
- excessive impact speeds

References
- Anderson et al. (1997)
- Ministry of Transport and Communications (1997)
Summary of Elements of Good Design Practice

• **Physical separation** wherever feasible:
  - vertical separation sometimes possible
  - clearly defined vehicle and pedestrian paths
  - innovative designs, e.g., single access lanes with adjacent buffer strips

• **Low travel speeds** to reduce conflicts, stopping distances and injury risk:
  - clear, enforceable and enforced speed limits
  - avoid even low speed impacts involving older pedestrians
  - walking pace (i.e., ~5 km/h) in aisles, where pedestrians and vehicles mix
  - 30 km/h max. along car park access roads
  - traffic-calming infrastructure to ensure low vehicle travel speeds

• **Even, high quality surfaces and lighting** (especially in