

FACTSHEET: CHILD DRIVEWAY RUNOVER INJURIES



A typical child injured in a driveway incident is a toddler, aged about two years old, of Māori or Pacific ethnicity, living in an area of high socio-economic deprivation, and residing in high household occupancy dwellings. Children are often severely injured as a result of driveway run over injuries, and while not always fatal, the injuries are often associated with long lasting disability and impairment. The driver is usually a close family member. The devastating impact of these events upon families cannot be overstated.

Injury definition

For the purposes of this factsheet, a driveway run over injury has been defined as an injury caused by contact with a moving motor vehicle occurring on a driveway. A driveway is defined as any passageway* providing vehicle access between the road and the adjoining property.

*A passageway is any area accessible by vehicle and includes sealed surfaces (such as concrete, paving or tarmac) and unsealed surfaces (such as grass, gravel or metal).

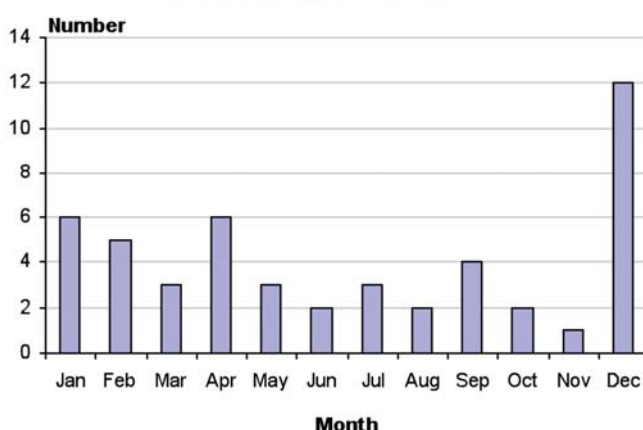
Data Source

Information for this factsheet has been drawn from two main sources: Fatality information has been drawn from cases reported in the media via newspaper reports over the period 2000-2010.¹ Non-fatal information has been obtained from the Starship Children's Hospital Trauma Database for the period May 2006 to April 2010.² Child driveway run over cases were identified and extracted from both data sources, using the injury definition stated in this factsheet.

Non-Fatal Injuries³: (Starship Children's Hospital Trauma Data, May 2006 – April 2010)

- Forty nine children largely from the greater Auckland region were identified as being struck or run over by a motor vehicle on a private driveway. This equates to an average of 12 children being admitted to Starship hospital
- per year.
- The 0–4 years age group were over-represented for this injury cause, comprising 88 percent (n=43) of all cases identified. The median age was 1 year old.
- Both Tamariki Māori and Pacific Peoples children are over-represented in this injury cause. Tamariki Māori accounted for over half (51%) of all driveway run-over injuries, while Pacific Peoples accounted for almost a quarter (22.4%) of the cases identified.
- Almost half (47%, n=23) of all child driveway run over injuries occurred during the summer months (December- February).
- December had the highest number of child driveway run over cases, with twelve (24%).

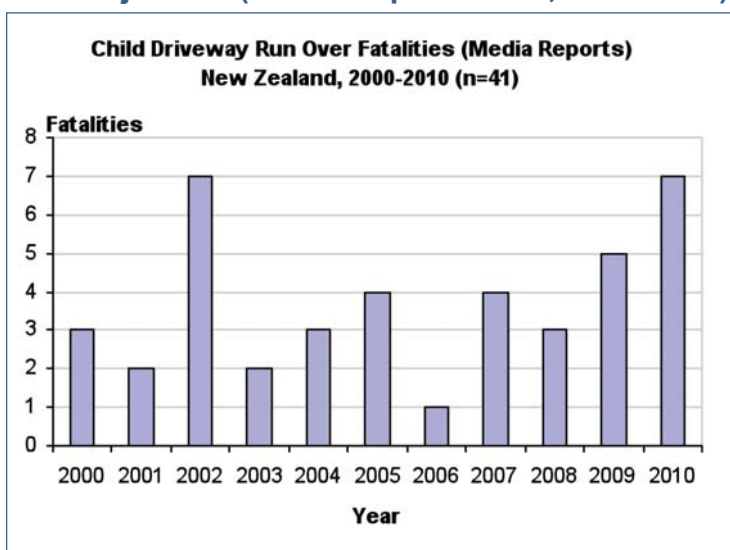
Frequency of Child Driveway Runover Hospitalisations by Month, Admitted to Starship Children's Hospital, Auckland May 2006-April 2010



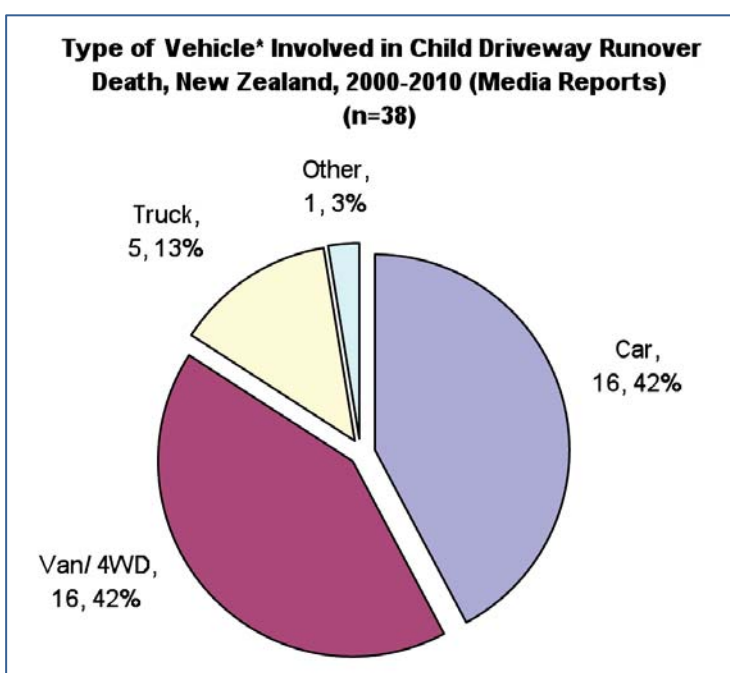
Age and Ethnicity (n=49)

Age Group	n	%
0-4 Years	43	87.8%
5-9 Years	6	12.2%
10-14 Years	0	0.0%
Ethnicity		
Māori	25	51.0%
Pacific Peoples	11	22.4%
European	10	20.4%
Other		6.1%

Fatal Injuries⁴: (Media Reports Data, 2000-2010)



Note: Data has been obtained through reports in the media. This information should be used with caution



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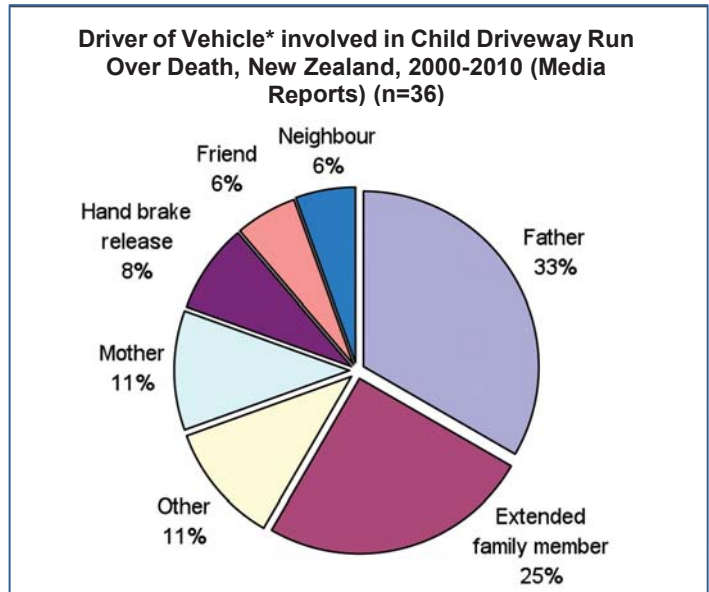
* Analysis of cases where vehicle type was known.

- Forty one children were identified as being fatally struck or run over by a motor vehicle on a private driveway. This equates to an average of approximately four child deaths per year.
- Child driveway deaths were highest in 2002 and 2010 with seven deaths reported in the media for each year
- The 0–4 year age group were over-represented for this injury cause. They accounted for 88 percent (n=36) of all reported cases. The median age for all reported deaths was 2 years.
- Of the known gender (n=40) of the child, 60 percent were male.
- Of the known vehicle types (n=38) involved in a child driveway death, *Car* and *Van/ 4WD* were the most common types of vehicles involved, at 42 percent each. This was followed by light trucks at 13 percent
- Over half (55%) of vehicles involved were either a *Truck* or *Van/4WD*.
- More than three out of four (77%) 5 drivers identified were related to the child who was fatally injured.
- *Fathers* were identified as the driver in one-third of fatal drive way run overs.
- In total, parents were the driver in 44 percent of driveway run over fatalities.
- Eight percent of cases involved the accidental release of the vehicle hand brake. In all of these cases the accidental release of the hand brake was by a family member who was a child.
- The newly constituted Auckland Council (which includes the former Manukau, Waitakere and Auckland City Councils) had the highest number of reported child driveway fatalities than any other Territorial Authority, with 17 fatalities (41%). This was followed by Hutt City, Hastings and Wairoa Districts with three fatalities each.
- Figures show that child driveway run over fatalities occur predominantly in the North Island of New Zealand. Only three fatalities (7.3%) occurred in the South Island (Christchurch City, Tasman and Marlborough Districts).
- The demographics of Manukau City closely reflect the demographics associated with child driveway run over injuries. Manukau City has a high Māori and Pacific population, a very youthful population, high household occupancy rates⁷ and large areas of high deprivation.⁸

Data limitations:

The analysis of this injury cause is limited due to various factors. A dominant factor is that currently there is no agreed definition as to what constitutes a 'driveway run over' injury. This poses a difficult task in creating or assigning a specific injury code for this particular injury cause. A number of New Zealand databases include child driveway run over injuries. However, the way driveway run over injuries are defined and counted varies for each database. Different datasets provide different information about the extent of the problem.

For further detailed information about relevant research please refer to the *Safekids New Zealand Position Paper 2011: Child Driveway Run Over Injuries*.



Note: Data has been obtained through reports in the media. This information should be used with caution. *Analysis of cases where the 'driver' was known

Child Driveway Run Over Fatalities by Territorial Authority (NZ) – (Media Reports) 2000-2010		
Territorial Authority	Fatality(s)	Percentage
North Island		
Far North District	1	2.4%
Whangarei District	2	4.9%
Manukau City*	11	26.8%
Waitakere City*	5	12.2%
Auckland City*	1	2.4%
Waipa District	1	2.4%
Matamata-Piako District	1	2.4%
Waikato District	1	2.4%
Taupo District	1	2.4%
Wairoa District	3	7.3%
Gisborne District	1	2.4%
Napier City	1	2.4%
Hastings District	3	7.3%
New Plymouth District	1	2.4%
South Wairarapa District	1	2.4%
Horowhenua District	1	2.4%
Hutt City	3	7.3%
South Island		
Tasman District	1	2.4%
Marlborough District	1	2.4%
Christchurch City	1	2.4%
Total	41	100%

Note: Data has been obtained through reports in the media. This information should be used with caution. *Former territorial authorities which were disestablished in 2010. They are now amalgamated under the new Auckland Council structure.⁶



- ¹ Note: Data has been obtained through reports in the media. This information should be used with caution. The media reports on child driveway run overs have been collected by Safekids New Zealand.
- ² Starship Children's Hospital is the tertiary referral hospital and the paediatric trauma centre for the Auckland region. Starship Children's Health also provides a wide range of complex medical, surgical and mental health services for children and young people throughout New Zealand and the South Pacific.
- ³ Note: This information should be used with caution.
- ⁴ Note: Data has been obtained through reports in the media. This information should be used with caution.
- ⁵ Note: The final calculation includes the category 'hand brake release'.
- ⁶ The Auckland Council began operating on 1 November 2010 and incorporates the previous Auckland, Manukau, Waitakere and North Shore City Councils and the Papakura and Rodney District Councils and most of the area of the Franklin District Council
- ⁷ Ministry of Social Development, 'Household Crowding', *The Social Report 2010*. p.71: <http://www.socialreport.msd.govt.nz/economic-standard-living/household-crowding.html>.
- ⁸ DHB maps and background information from the Atlas of Socioeconomic Deprivation in New Zealand NZDep2006. Date of publication (online) June 2008. <http://www.maorihealth.govt.nz/moh.nsf/indexmh/dhb-maps-and-background-information-atlas-of-socioeconomic-deprivation-in-nz-nzdep2006>.
- ⁹ Refer to www.safekids.org.nz

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