

FACTSHEET: PACIFIC CHILD UNINTENTIONAL INJURIES



In New Zealand, Pacific peoples are a youthful ethnic population group compared to other ethnic populations. According to the 2013 New Zealand census, 35.7% of Pacific peoples were under the age of 15 years. Compared to the New Zealand population, children under the age of 15 years account for 20% of the total population. [1]

Of the total child (0-14 years) population, Pacific children make up 12.8% (105,519) of all children in New Zealand. [1]

Injury*

On average (2010-2014), around 960 Pacific children are injured severely enough to be admitted to hospital for an unintentional injury each year. That is around 2 to 3 (2.6) Pacific children per day.

Pacific children account for 12.9% (4,801; 2010-2014) of all child unintentional injury hospitalisation in New Zealand. Between 2010 and 2014, the rate of child unintentional injury hospitalisation for Pacific children (1046.9 per 100,000 children) was higher than the rate for tamariki Māori (922.8 per 100,000 children) and all children (816.1 per 100,000 children) in New Zealand.

Between 2010 and 2014, the rate of hospitalisation for Pacific children declined by 15.9%. (See Figure 1) [2]

960 Pacific children are hospitalised each year
That's 3 a day

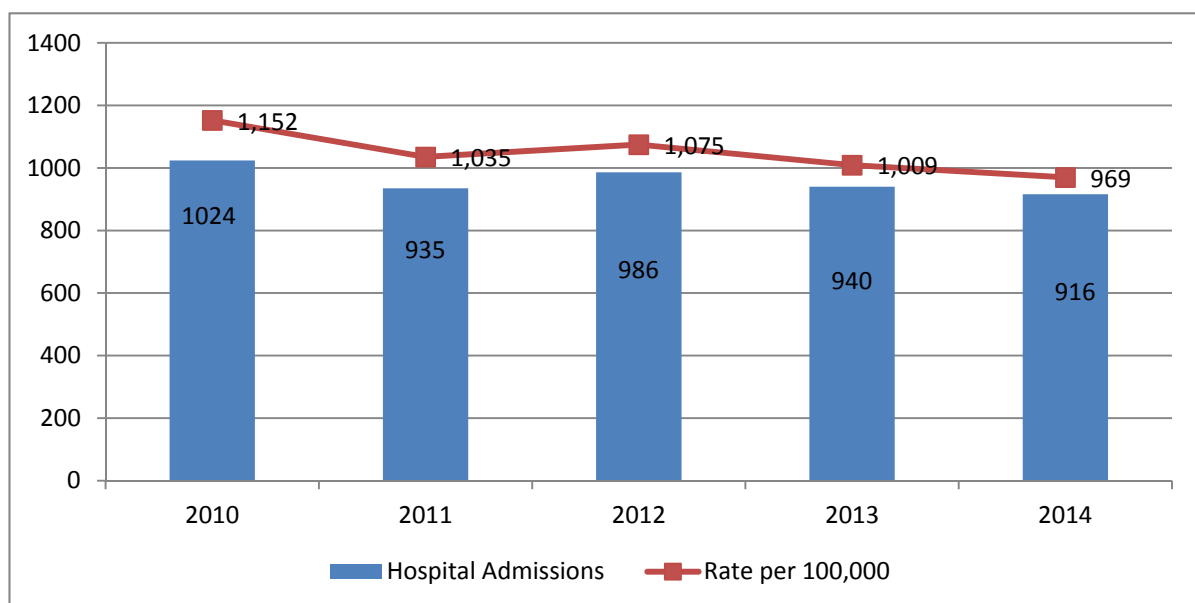


13% of all child unintentional injury admissions are Pacific children

Under-5s are hospitalised more than any other age groups



Figure 1: Number and rate of child unintentional injury hospital admissions, Pacific, 2010-2014. [2]

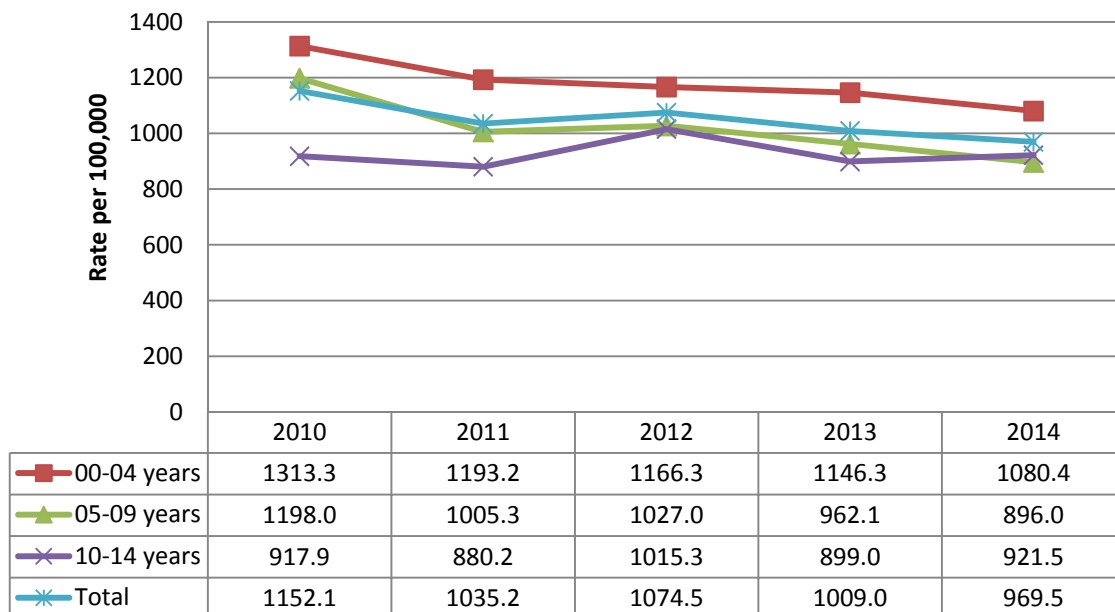


Data source: Injury Prevention Research Unit, University of Otago, Analysis by Safekids Aotearoa.

* Data excludes discharges: as a result of readmission for an existing injury; for a length of stay in hospital of less than one day; where there was not a primary diagnosis of injury; for patients who died in hospital

The rate of hospital admission for the 0 to 4 years age group was higher than the 5 to 9 and 10 to 14 age groups, including the overall Pacific child rate. (See Figure 2) [2]

Figure 2: Rate of child unintentional injury hospital admissions by 5 year age group, Pacific, 2010-2014. [2]



Data source: Injury Prevention Research Unit, University of Otago. Analysis by Safekids Aotearoa

Data excludes discharges: as a result of readmission for an existing injury; for a length of stay in hospital of less than one day; where there was not a primary diagnosis of injury; for patients who died in hospital

The leading causes of non-fatal injuries were: fall-related injuries (46%), struck by or against somebody or an object (9%), cutting and/ or piercing injury (7%), burn from a hot object/ substance (5%) natural/ environmental (4%), and cyclist injury (non-traffic) (3%). [2] [4]

Fall-related injury

- The most common causes of fall-related injuries are falls from playground equipment (29%) followed by children slipping or tripping on same level ground (12%), fall on same level due to collision with, or pushing by, another person (10%) and children who have fallen out of or through a building or structure, such as a window (7%). [2]
- Rates of non-fatal fall injuries among European/ Other and Pacific Island children fall between those of Māori and Asian children, with tamariki Māori having the highest rate. [3]
- Fall-related injuries account for around half (46%; rate=482.1 per 100,000) of all unintentional injury hospitalisation for Pacific children and are easily the leading cause of injury. Fall-related injuries are particularly high amongst Pacific children aged 5 to 9 years (rate=577.0 per 100,000). [2]

Struck by or against somebody or an object

- The most common causes of struck by or against injuries are being struck by or against an object (35%), accidental hit, strike, kick, twist, bite or scratch by another person (27%) and being struck by a thrown, projected or falling object (20%) [2]
- Pacific children were hospitalised at around twice the rate of Asian and European/Other children when struck by an object, and nearly three times the rate of Asian children when unintentionally struck by a person. [3]
- Struck by or against injuries accounted for 9% (rate=90.9 per 100,000) of all unintentional injury hospitalisations for Pacific children, and is the second leading cause of injury. Struck by or against injuries are more common amongst Pacific children aged 10 to 14 years (rate=128.4 per 100,000). [2]

Cutting and/or piercing injury

- The most common causes of cutting and/or piercing injuries are being in contact with sharp glass (54%), foreign body or object entering through skin e.g. edge of stiff paper, nail, splinter, tin-can lid (20%), contact with a knife, sword or dagger (11%) and being in contact with a non-powered hand tool (10%). [2]
- Tamariki Māori and Pacific were hospitalised for cutting and piercing injuries at around twice the rate of Asian and European/Other children.[3]
- A cutting and/or piercing related injury accounted for 7% (rate=77.8 per 100,000) of all unintentional injury hospitalisation for Pacific children and is the third leading cause of injury. Cutting and/or piercing related injuries are more common amongst Pacific children aged 5 to 9 years (rate=86.8 per 100,000) and 10 to 14 years (rate=89.8 per 100,000). [2]

Burns from hot objects or substances

- The most common causes of injury are burns from hot drinks, food, fats and cooking oils (48%), contact with hot fluids (25%) and contact with hot household appliances (15%). [2]
- Tamariki Māori and Pacific were hospitalised from hot object/ substance burns at roughly twice the rate of Asian and European/Other children. [3]
- Hot object/ substance burns accounted for 5% (rate=48.0 per 100,000) of all unintentional injury hospitalisation for Pacific children and is the fourth leading cause of injury. This type of injury is most common amongst Pacific children aged 0 to 4 years (rate=111.8 per 100,000). [2]

Natural/ environmental injuries [5]

- The most common causes of natural/ environmental related injuries are contact with a dog (52%), and being bitten or stung by a nonvenomous insect (e.g. mosquitoes, fleas and ticks) and other nonvenomous arthropods (e.g. bees and wasps) (36%).[2]
- Tamariki Māori had the highest rate of injury from contact with dogs, with around 1.5 times the rate of Pacific and almost twice the rate of European children. [3]
- Natural/ environmental related injuries accounted for 4% (rate=39.2 per 100,000) of all unintentional injury hospitalisation for Pacific children and is the fifth leading cause of injury. Natural/ environmental related injuries are more common amongst Pacific children aged 0 to 4 years (rate=47.5 per 100,000). [2]

Leading causes of non-fatal injuries:



Falls (46%)



Collisions with people/animals or injured by an object (9%)



Cuts from broken glass and sharp objects



Burns from a hot object/substance (5%)



Animal/insect bites and nature-related injuries (4%)



Cyclist injury non traffic (3%) [4]

Table 1: Leading causes of child unintentional injury hospital admissions, Pacific, by 5 year age group, 2010-2014 [2]

	0 to 4 years			5 to 9 years			10 to 14 years			0 to 14 years		
	Hospital admission	Ave. per year	%	Hospital admission	Ave. per year	%	Hospital admission	Ave. per year	%	Hospital admission	Ave. per year	%
1 Fall	711	142.2	36.3%	864	172.8	56.9%	636	127.2	48.1%	2211	442.2	46.1%
2 Hot object/substance	186	37.2	9.5%	130	26	8.6%	183	36.6	13.9%	417	83.4	8.7%
3 Struck by or against	129	25.8	6.6%	105	21	6.9%	128	25.6	9.7%	357	71.4	7.4%
4 Cut/Pierce	99	19.8	5.0%	64	12.8	4.2%	85	17	59.6	220	44	48.0
5 Poisoning	93	18.6	4.7%	53	10.6	3.5%	55	11	38.6	180	36	39.2
6 Natural/Environmental	79	15.8	4.0%	48	9.6	3.2%	37	7.4	26.0	138	27.6	30.1
7 Suffocation	39	7.8	2.0%	24	4.8	1.6%	27	5.4	18.9	111	22.2	24.2
8 Pedestrian	31	6.2	1.6%	17	3.4	1.1%	21	4.2	14.7	111	22.2	24.2
9 Pedal Cyclist, non-traffic	30	6	1.5%	11	2.2	0.7%	13	2.6	9.1	106	21.2	23.1
10 Motor Vehicle Traffic - Occupant	18	3.6	0.9%	10	2	0.7%	10	2	7.0	56	11.2	12.2
All the rest	484	96.8	24.7%	168	33.6	11.1%	102	20.4	7.7%	783	156.6	16.3%
Unspecified	62	12.4	3.2%	25	5	1.6%	24	4.8	16.8	111	22.2	24.2
Total	1961	392.2	1178.0%	1519	303.8	100.0%	1321	264.2	926.8%	4801	960.2	1046.9%

Data source: Injury Prevention Research Unit, University of Otago. Analysis by Safekids Aotearoa

Data excludes discharges: as a result of readmission for an existing injury; for a length of stay in hospital of less than one day; where there was not a primary diagnosis of injury; for patients who died in hospital

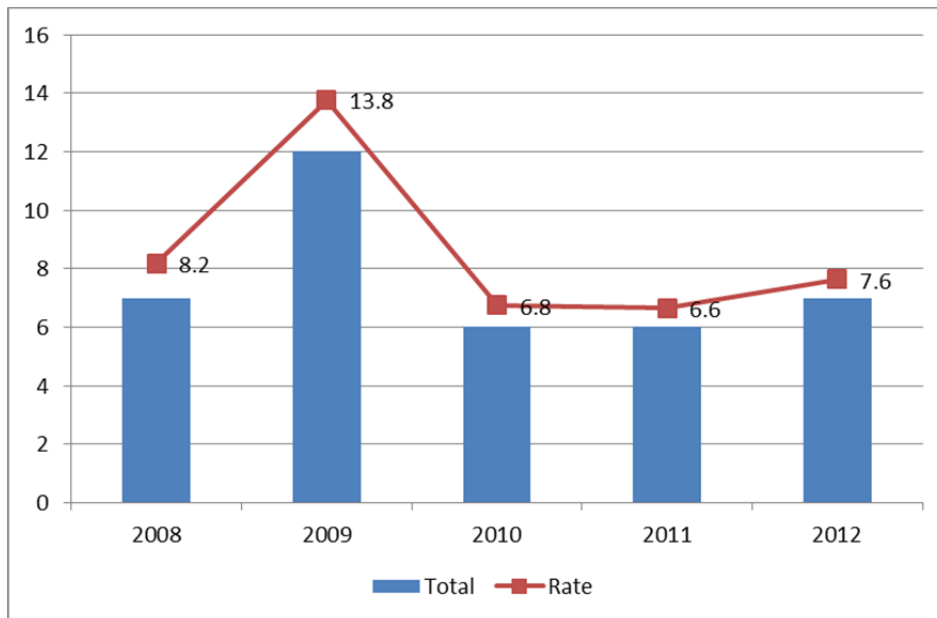
Deaths:

Between 2008 and 2012, 38 Pacific children died as a result of an unintentional injury (rate of 8.5 per 100,000 children). During this period, Pacific child deaths accounted for a tenth (10.1%) of all child unintentional injury deaths in New Zealand. [2]

Between 2008 (rate 8.2 per 100,000 children) and 2012 (rate 7.6 per 100,000), the rate of Pacific child unintentional injury fatalities decreased slightly by 7.3%. (See Figure 3). [3]



Figure 3: Number and rate of Pacific unintentional injury deaths, child aged 0-14 years, 2008-2012 [2]



Data source: Injury Prevention Research Unit, University of Otago.

Analysis by Safekids Aotearoa

- Three out of five (61%) Pacific unintentional injury deaths occurred in the home. These deaths were most common amongst the 0 to 4 years age group (74%). (See Figure 4)
- Other than suffocation, motor vehicle traffic (15.8%) and pedestrian (non-traffic) – includes driveway runover cases (13.2%), injury deaths were the other leading causes for Pacific children. (See Table Two) [2]

Figure 4: Percentage of child unintentional injury deaths, Pacific, by 5 year age group, 2008-2012 [2]

Data source: Injury Prevention Research Unit, University of Otago.

Analysis by Safekids Aotearoa

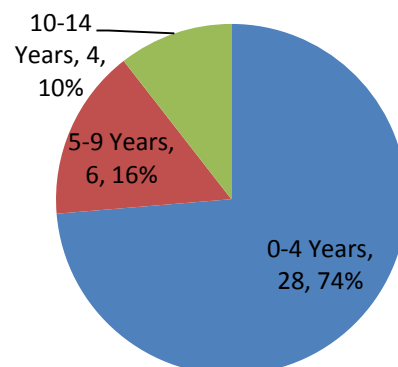


Table 2: Leading causes of Pacific child unintentional deaths, 2008-2012 [2]

Cause	2008-2012	Average per year	Percentage
Suffocation	13	2.6	34.2%
Motor vehicle traffic	6	1.2	15.8%
Pedestrian (non-traffic)	5	1	13.2%
Fire/hot object or substance	4	0.8	10.5%
Drowning	3	0.6	7.9%
All the rest	7	1.4	18.4%
Total	38	7.6	100%

Data source: Injury Prevention Research Unit, University of Otago, analysis by Safekids Aotearoa.

Suffocation (including SUDI)

All suffocation deaths occurred to children aged one year or less. The common cause of suffocation in this age group was due to accidental suffocation and strangulation in bed by things such as bed linen, mother's body rolling onto baby or a pillow (85%) and Sudden Unexpected Death in Infancy (SUDI).

Car crashes

Motor vehicle traffic crashes were most common amongst Pacific children aged 0 to 4 years (67%).

Pedestrian (non-traffic) [4]

Four out of five pedestrian (non-traffic) deaths occurred to children aged 0 to 4 years. All deaths in this age group occurred in the home environment. Most common are child driveway runovers. [2]

Leading causes of death:



Suffocation, including strangulations (34%)



Car crashes (16%)



Pedestrian* (13%)



Fire, hot object (11%)



Drowning (8%)

**Non-traffic, includes driveway runover*

Good practice interventions:

Fall-related injury

While childhood falls are often viewed as part of growing up, they can cause serious injury and in some cases are fatal. Prevention strategies to reduce child fall-related injuries and fatalities need to consider the age of the child and the setting in which they live and play.

Evidence at a glance:

- Playground equipment height and surface standards and compliance – *very good evidence*.
- Reducing exposure to falls from within buildings and homes e.g. through stair guards – *good evidence*.
- Personal protective equipment such as a helmet when skateboarding, skating, skiing or riding scooters – *the evidence is promising*.
- Reduce use of baby walkers – *good evidence*.
- Reduce the opportunity to fall from cots, beds and bunks – *some evidence supports this approach*. [3]

Struck by or against somebody or an object, and prevention of cutting and/or piercing injury

Severe and fatal injuries happen when children fall through glass windows or doors that are not fitted with safety glass. Children also receive severe foot or leg injuries after being run over by lawn mowers. Injury prevention opportunities include ensuring the effective removal of broken glass from public spaces; encouraging children to wear footwear; the increased use of safety glass in windows and doors; increased awareness of the dangers of equipment such as lawn mowers and kitchen equipment; and keeping fences and playgrounds in good repair.

Evidence at a glance:

- Safety glass – *good evidence*.
- Home visiting programmes – *promising evidence*. [3]

Natural/ environmental injury

Responsible dog ownership, such as separating young children from dogs, avoiding high-risk dogs, neutering and teaching children how to approach a dog safely, have been suggested as prevention strategies, along with regulatory enforcement and standardised monitoring of bites. Evidence for the efficacy of these methods is uncertain but promising.

Evidence at a glance:

- Educating families on neutering male dogs and avoiding choosing unsafe breeds as pets – *evidence is uncertain*.
- Educating children on how to interact with pet dogs – *evidence is uncertain*. [3]

Poisoning

Prevention strategies tend to focus on effective barriers between children and poisonous substances, in particular through the use of safe storage such as high and locked cupboards, and through child-resistant packaging and child-resistant closures on bottles of medicine, cleaners and chemicals. Child-resistant closures, however, are not child-proof. It is also recommended that poisons, cleaning products and medications are stored in their original packaging, and never placed in food or drink containers. They should be safely disposed of after use.

Evidence at a glance:

- Use of child-resistant packaging – *good evidence*.
- Protection from toxic substances through storage, transport etc. – *good evidence*.

- National Poisons Centre for expert information – *good evidence*.
- Storing toxic substances in original packaging – *some evidence*. [3]

Cyclist injury (non-traffic) [4]

Good practice to improve cyclist safety includes:

- Cycle helmets – *very good evidence*.
- Increased visibility through visibility aids such as bio-motion detectors (that detect cyclists and alert cars that a cyclist is present, covering the blind spots in cars) – *promising evidence*.
- Cycle ways and pathways – *promising evidence*.
- Area-wide traffic calming – *promising evidence*.
- Training children to be safe on the roads – *precaution, mixed evidence*. [3]

Suffocation (including SUDI)

Good practices for reducing suffocation injuries and deaths include:

- Design, construction, materials for cots, folding cots, high chairs to minimise entrapment and to have baby's head in safe position for breathing – *some evidence*.
- Toys for < 3 year olds not to have small parts that can be pulled or broken off - *some evidence*.
- Wahakura, Pepi pods (specially designed baby beds for safe sleeping) – *promising evidence*.
- Health promotion messages – *promising evidence but the messages need testing and consistency*. [3]

Child pedestrian safety

Walking allows children and young people to learn about their environment, improve their fitness and explore their surroundings. Child pedestrian injuries can be severe and fatal. In general, safety can be improved by separating children from motor vehicles, using traffic calming measures to reduce the speed of motor vehicles and making children more visible to drivers.

Evidence at a glance:

- Area-wide traffic calming techniques – *promising evidence*.
- The reduction of speed limits in residential areas and school zones, and its enforcement – *good evidence*.
- Vehicle modifications such as reversing mirrors and cameras – *good evidence*.
- Separating driveways from gardens and play areas – *good evidence*.
- Training children to be safe on the roads – *the evidence is mixed*.
- Community awareness initiatives – *promising evidence*. [3]

Cyclist safety and assessment of evidence at a glance

Good practice to improve cyclist safety includes:

- Cycle helmets – *very good evidence*.
- Increased visibility through visibility aids such as bio-motion detectors (that detect cyclists and alert cars that a cyclist is present, covering the blind spots in cars) – *promising evidence*.
- Cycle ways and pathways – *promising evidence*.

- Area-wide traffic calming – *promising evidence*.
- Training children to be safe on the roads – *precaution, mixed evidence*. [3]

Passenger (occupant) safety

There has, however, been an overall decline in road crash fatalities, which is in line with the experience of other Western countries. A combination of safer cars, safer roads and roadsides, speeds, road use, infrastructure and roadside improvements (signage, median barriers, rumble strips), more effective enforcement, the use of child restraints, targeted education campaigns, improved vehicle crashworthiness and crash avoidance technology, to some extent better trauma care are likely to have contributed to this.

Evidence at a glance:

- The correct use of child restraints – *very good evidence*.
- The correct use of booster seats – *very good evidence*.
- The implementation and enforcement of alcohol limits for drivers – *good evidence*.
- Traffic calming techniques – *promising evidence*. [3]

Drowning

Childhood drowning tends to be silent and fast. The locations in which children drown reflect their developmental activity and the environments in which they spend time. The speed at which children drown suggests that the active supervision of children around water is an important strategy. Isolation fencing reduces the risk of young children drowning in domestic swimming pools and spa pools

Evidence at a glance:

- Personal flotation devices in boats – *good evidence*.
- Child-proof perimeter or isolation fencing for domestic swimming pools (including spas) – *very good evidence*.
- Swimming training – *fair evidence*.
- Supervision – *quite good evidence*. [3]



References:

1. Statistics New Zealand, www.stats.govt.nz
2. Data source: Injury Prevention Research Unit, University of Otago, accessed 2016
3. Safekids Aotearoa. (2015). *Child unintentional deaths and injuries in New Zealand, and prevention strategies*. Auckland, NZ: Safekids Aotearoa.

4. Definitions related to transport accidents:

(d) A *non-traffic* accident is any vehicle accident that occurs entirely in any place other than a public highway

International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10)-WHO Version for; 2016, Chapter XX External causes of morbidity and mortality (V01-Y98), Accidents (V01-X59), Transport accidents (V01-V99)

<http://apps.who.int/classifications/icd10/browse/2016/en#/V01-V99>

5. Natural/Environmental injury definition - Injuries from natural and environmental factors, e.g. excessive heat, excessive cold, hunger, neglect, venomous animals and plants, other injury caused by animals, lightning, cataclysmic storms, floods, earth surface movements, or other and unspecified environmental cause. <http://apps.who.int/classifications/icd10/browse/2016/en>