# NEW PLYMOUTH DISTRICT COMMUNITY INJURY PREVENTION NEEDS ASSESSMENT 2015

# **Overview and Statistics**





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#### DISCLAIMER

This report has been prepared by Ian Hodges and Caroline Maskill of HealthSearch Ltd, under contract to the New Plymouth injury Safe Trust.

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### **GLOSSARY**

ACC	Accident Compensation Corporation.
Active claim (ACC)	A claim being paid out in any given time period, regardless of when it was first registered. An active claim can be a new claim or one first registered before the stated time period.
Active entitlement claim (ACC)	A claim still being paid out, regardless of when it was first registered, for (usually) moderate and serious injuries requiring compensation for more than just primary health care or dental expenses.
Animate	Relating to a living thing (animal).
Area unit	A (usually) small geographic area in between a meshblock and territorial authority in size. In urban areas, area units are often suburbs with populations of about 3,000–5,000. In rural areas, area units can have much smaller populations.
ASR	Age-standardised rate – rate adjusted for the age structure of the population.
BeST	Be Safe Taranaki.
DHB	District Health Board.
ED	Emergency Department.
Entitlement claim (ACC)	A claim for a (usually) moderate or serious injury involving more than just primary health care or dental expenses. The claim could also include costs such as lost income, attendant care or childcare, specialised equipment, or vehicle or home modifications.
GP	General practitioner (family doctor).
Hospitalisation	A day-patient or inpatient admission to a New Zealand public hospital (excludes hospital emergency department attendances).
HPU	Health Promotion Unit (of the Taranaki District Health Board).
ICD	International Classification of Diseases.
Inanimate	Relating to a non-living thing (non-animal).
Injury-related health loss	The total number of years of life lost and years lived with disability resulting from fatal and non-fatal injuries (Ministry of Health and Accident Compensation Corporation 2013).
Intentional injury	Injury resulting from a deliberate act such as a self-harm or assault.
ISC	International Safe Community (formerly known as WHO Safe Community).

LAP	Local alcohol policy.
Main urban area	A large urban area centred on a city or major urban centre, with a minimum population of 30,000. For further information about the area units included in this category in New Plymouth District see appendix table 2.7.
MBIE	Ministry of Business Innovation and Employment.
Minor urban area	An urban area centred around a smaller town with a population between 1,000 and 9,999. For further information about the area units included in this category in New Plymouth District see appendix table 2.7.
New claim (ACC)	A claim for injury-related costs first registered in the stated time period. Excludes active claims that are still being paid out in the stated period, but were first registered at a previous time.
New entitlement claim (ACC)	A claim first registered in the stated period, for (usually) moderate and serious injuries requiring compensation for more than just primary health care or dental expenses.
New Zealand Deprivation Index 2013 (NZDep2013)	A measure or 'index' of the levels of socio-economic deprivation in different geographic areas / neighbourhoods of New Zealand. The index is based on an area's average levels of income, home ownership, sole-parenting, employment, educational qualifications, household living space and access to the internet and vehicles.
	NZDep2013 decile 1 indicates that people are living in the least-deprived 10% of New Zealand neighbourhoods, while NZDep2013 decile 10 indicates that people are living in the most deprived 10% of New Zealand neighbourhoods. (See Atkinson et al. 2014 for further details).
NPD	New Plymouth District.
NPDC	New Plymouth District Council.
NPiS	New Plymouth injury Safe.
NZHIS	New Zealand Health Information Service.
NZIPS	New Zealand Injury Prevention Strategy.
Other rural area	A non-urban area not based around a rural centre. For further information about the area units included in this category in New Plymouth District see appendix table 2.7.
РНО	Primary health organisation.
Rural centre	An area unit with a population between 300 and 999 people that is not defined as urban. For further information about the area units included in this category in New Plymouth District see appendix table 2.7.

SCFNZ	Safe Communities Foundation New Zealand.
Secondary urban area	An urban area with a population between 10,000 and 29,999 people, centred on a larger regional centre (New Plymouth District has no secondary urban areas).
Sequelae	(Long-term) consequences.
TDHB	Taranaki District Health Board.
TLA	Territorial local authority.
Unintentional injury	Injury from a non-deliberate / accidental event such as a fall, car crash, fire.
WHO	World Health Organization.

# SUMMARY

#### New Plymouth District Community Injury Prevention Needs Assessment 2015: Overview and Statistics

This report presents the latest injury statistics for New Plymouth District, focusing especially on the years 2011–14.<sup>1</sup>

Commissioned by New Plymouth injury Safe (NPiS), the report is intended as a resource for the entire community, to promote discussion and guide future development of injury prevention and community safety activities across the district.

#### What is injury?

Injury can be defined as any damage or harm to the body resulting from acute exposure to energy - thermal, mechanical, electrical or chemical - or from an absence of essentials for life such as heat or oxygen.

Typically, an Injury is damage or harm that occurs suddenly, or in a short space of time. Injuries can be unintentional (accidental) or intentional.

#### What is the impact of injury?

Injury is a major cause of premature death and disability in New Zealand. Nationally, it is estimated to account for 8% of all health loss (death and disability) experienced by people in a year.

#### What is the New Plymouth District?

A community of 74,200 people living in the Taranaki region of North Island, New Zealand. The population includes 11,100 Māori (Ngāti Tama, Ngāti Maru, Ngāti Maniapoto, Ngāti Mutunga, Te Ātiawa, and Taranaki iwi) and 61,300 European New Zealanders. Although mainly urban dwellers (most people live in New Plymouth City), about 16% live in rural areas. Compared to New Zealand's larger cities, the district has fewer extremes of wealth and deprivation. Many in the district are employed in manufacturing, construction, agriculture, forestry or fishing. Others work in health care, social assistance, the retail trade, or education and training.

# What is the New Plymouth injury Safe Trust?

New Plymouth injury Safe Trust is a coalition of local organisations interested in injury prevention and community safety. The coalition has been operating since 2001, based on principles of community development and intersectoral working. New Plymouth District was formally accredited as an International Safe Community in 2005.

The Trust's vision is 'New Plymouth District, a safe community without the burden of injury'. Its mission is to achieve a positive safety culture and create safer environments for all people in the New Plymouth District.

<sup>&</sup>lt;sup>1</sup> Availability of data for the report varied between datasets, for example the latest available injury death data was for 2012.

#### Injury deaths in New Plymouth District 2008–2012

Injury deaths	
Year	Total
2008	28
2009	37
2010	33
2011	32
2012	51
5-year average	36

#### Māori injury death rates

per 100,000 population		
(5 year average)		
	All ages	
Māori	56*	
Non- Māori	32*	
*age-standardised		

In the 25–44 age group, nearly half (49%) of all injury deaths were from intentional injury.

Overall, males were 5 times more likely than females to be fatally injured.

Thirty-four percent of all male injury deaths were from intentional causes, compared with only 15% of female deaths.

Injury death rates were by far the highest in the 75+ age group, for males as well as females. The majority of these deaths were from falls.

#### Injury deaths

In the five years from 2008 to 2012, a total of 181 New Plymouth District people died as a result of injury. This was an average of 36 deaths per year.

The three leading causes of injury deaths in New Plymouth District were falls (29%), intentional self-harm (26%), and transport accidents (23%). Together these three causes accounted for 78% of all injury deaths.<sup>2</sup>

Altogether, 69% of New Plymouth District injury deaths were from unintentional injury and 29% were from intentional injury (intentional self-harm plus assaults). Age-group injury death rates per 100,000 population (5 year average)

Age	Male	Female
0–14	3	3
15–24	54	5
25–44	82	6
45–64	83	20
65–74	62	19
75+	300	174
All ages	57*	11*

\*age-standardised

Causes of injury deaths, New Plymouth District, by injury groups, five years 2008–2012 combined



<sup>2</sup> In the previous 2011 needs assessment, the leading cause of injury death was intentional self-harm, followed by transport accidents and falls.

#### Age-standardised annual injury death rate, New Plymouth District and New Zealand, 1989-1999, 2000-2012



Injury death rates over time: Both New Plymouth and New Zealand had generally declining injury death rates over the period from 1989 to 2012. During most of this period, New Plymouth District's rates (3-year running average) tracked slightly below New Zealand's rates.

Note: the injury classification system changed from ICD-9 to ICD-10 in year 2000.

#### **Recent NPiS injury prevention** Alcohol and safety activities . Falls

- Developing an action plan to reduce falls in working-age people
- Running the 'Spot the Safe Footwear' campaign
- Researching vitamin D for older people

#### Suicide and self-harm

- Working with Suicide Prevention Taranaki
- Promoting suicide prevention skills training workshops
- Contributing to the region's new Suicide Prevention and Postvention **Action Plan**

- Running an anti-drink driving media campaign alongside a new police home visiting programme for repeat offenders
- Developing a toolkit for making submissions on alcohol licences
- Advocating for stronger controls in the New Plymouth District Council's proposed Local Alcohol Policy (LAP)

#### Workplace health and safety

- Supporting the Taranaki Trades Apprentice Safety Challenge competition and Taranaki Secondary Schools Agricultural Safety Challenge
- Facilitating education sessions on New Zealand's new workplace health and safety system

# Hospitalisations for injury in New Plymouth District 2010–2014

#### Injury hospitalisations – all ages

Year	Total admissions	Rate per 100,000 population
2010	1,916	2,222*
2011	1,811	2,061*
2012	1,932	2,127*
2013	1,904	2,158*
2014	2,008	2,222*

#### Māori injury hospitalisation rates

per 100,000 pop	pulation (5-year avera
	All ages
Māori	2,561*
Non- Māori	2,140*

#### Main causes of injury hospitalisation

Falls	45 %
Transport accidents	13 %
Inanimate mechanical forces	13 %
Intentional self-harm	6 %
Animate mechanical forces	4 %
Over-exertion, travel, privation	4 %
Assault	3 %
*age-standardised	

#### Injury hospitalisations

Hospitalisation means a day patient or inpatient admission to a public hospital. It excludes emergency department visits.

In the five years 2010–2014, people in New Plymouth District had a total of 9,571 injury hospitalisations, an average of 1,914 injury hospitalisations per year.

Most (87%) of the injury hospitalisations were for unintentional injury ('accidents').

Falls were by far the most common reason people were hospitalised for injury (45% of all injury hospitalisations). Next most common were transport accidents (13%) and exposure to inanimate mechanical forces (13%).

Intentional injuries (self-harm plus assault) made up 9% of all injury hospitalisations.

Falls on the same level, especially falls resulting from either slipping, tripping or stumbling, comprised the majority of fall hospitalisations (52%). Contact with a sharp glass, knife, sword, dagger or non-powered hand tool comprised 21% of injuries caused by inanimate mechanical forces.

# Rate of injury hospitalisation, New Plymouth District, by age and gender, five years 2010–2014 combined

ge)



Car occupants (31%), motorcycle riders (23%) and pedal cyclists (22%) featured prominently in the injury hospitalisations caused by transport-related accidents.

Women in the 75+ age group had the greatest risk of injury hospitalisation in 2010–2014, with about a one in 10 chance of being hospitalised in a year (10,426 injury hospitalisations per 100,000 women). The next highest-risk group was men in the 75+ age group, followed by men in the 15–24 age group. Intentional self-harm was the leading cause of injury hospitalisation for females aged 15–24 and 25–44.

In all adult age groups except 75+, Māori had slightly higher injury hospitalisation rates than non-Māori.

Injury hospitalisation rates over time: Throughout the period from 1989 to 2007, the district's all-age injury hospitalisation rates generally tracked downwards. By contrast, New Zealand's rates slowly but steadily went up. New Plymouth's rates spiked in 2009 (possibly due to a change in patient admission recording practices) but dropped again after that. They've been lower than the national average for the last five years.

Hospitalisation rates for falls: Since 2001, New Plymouth's all-age injury hospitalisation rates for falls have been notably lower than New Zealand's in every year but 2009. Two areas of focus for NPiS in the past have been falls in the young and elderly.

Hospitalisation rates for falls among pre-school children aged 0–4: Since 2004, New Plymouth's hospitalisation rates (3-year running average) for falls among preschool children aged 0–4



Annual injury hospitalisation rates, New Plymouth District and New Zealand, 1989–2014

Annual injury hospitalisations caused by falls among children aged 0–4, New Plymouth District and New Zealand, 2001–2014



have been considerably lower than New Zealand's. National rates have steadily increased, whereas New Plymouth's rates decreased from 2003–2007, rose a bit after that, flattening out and then dropped again.

*Hospitalisation rates for falls among older adults:* For nearly the whole 14-year period 2001–2014, hospitalisation rates for falls among New Plymouth District people aged 70–79 and 80+ have been lower than the national average.

#### Suicide and self-harm

Over the five years from 1 July 2009 to 30 June 2014, there were 75 suicides in the Taranaki region.

Over two-thirds (53) of these deaths occurred in New Plymouth District, including 42 in New Plymouth City.

The remaining 22 suicides were in other parts of Taranaki, including 17 in South Taranaki District and five in Stratford District.





\*, #, ^ provisional data

The highest number of suicide deaths was in the 25–44 year age group. This group accounted for one-third of the cases in New Plymouth City, and for nearly half (45%) of cases in the rest of Taranaki.

Hospitalisation for intentional self-harm: Between 2010 and 2014, New Plymouth residents recorded a total of 588 hospitalisations for intentional self-harm. The most common form of self-harm was poisoning by, and exposure to, drugs, medicines and biological substances. Both New Plymouth's and New Zealand's hospitalisation rates for self-harm have been tracking upwards since 2001.



# Injury hospitalisations caused by intentional self-harm, New Plymouth District and New Zealand, 2001–2014

#### ED visits for injury, New Plymouth District residents, all ages, 2010– 2014

Year	Total ED visits for injury	Rate per 100,000 population
2010	7,666	10,474*
2011	7,597	10,076*
2012	8,072	10,593*
2013	8,642	11,649*
2014	8,489	10,854*

#### Māori and injury ED visits - 2014

EL	Total D visits	Rate per 100,000 population
Māori	1,448	13,066*
Non- Māori	7,041	11,158*

\*not age-standardised

The most common scene or place where ED patients got injured was at home (54% of all visits). Next most common was public areas (11%), sports fields (7%) and roads (7%).

Similarly, home accidents were

the most frequent cause of ED visits (51%), followed by recreational (26%), sporting (8%) and workplace (5%) injuries.

Māori aged 50–64 were almost twice as likely as non-Māori of the same age to be injured in a home accident.

#### Emergency department visits for injury

Taranaki District Health Board has emergency departments at Taranaki Base Hospital and Hawera Hospital. In 2014, New Plymouth residents made a total of 8,489 visits to these EDs for injury treatment.

Close to a half (43%) of all ED visits for injury were by children and young people aged 0–24 years. Another 41% were by working-age adults aged 25-64 years.

In terms of age-specific risk, men aged 15–24 were the most likely to go to an ED for injury, a more than 1 in 5 chance in the year. Women and men aged 80+, and boys aged 5–14, had about a 1 in 6 chance of going.

Rates of emergency department attendance for injury, New Plymouth District, by age and gender, 2014



Location/scene where injury sustained prior to emergency department visit, New Plymouth District, 2014



#### ACC injury insurance claims for New Plymouth District

#### Scene of accident, new entitlement claims, 2014

Home	42 %
Recreation or sports	19 %
Commercial / service location	12 %
Road or street	9 %
Industrial place	4 %
Farm	3 %
Place of medical treatment	2 %
Other	8 %

#### Sports and recreation with highest ACC new entitlement claims, 2014 \_\_\_\_\_

Rugby union	17 %
Cycling	9 %
Netball	7 %
Soccer	7 %
Rugby League	5 %
Horse riding	4 %
Trail biking, motocross	4 %
Basketball	4 %
Skateboarding	4 %
Mountain biking	3 %

Māori and Non- Māori new entitlement claims, 2014 Rate per 100,000 population, all ages Māori 2,360\*

Non- Māori 2,995\*

\*age-standardised

#### ACC injury new entitlement claims

Entitlement claims are insurance claims to ACC for medical expenses, rehabilitation costs and compensation for lost income due to moderate or serious injury. Claims for primary health care only (which make up more than 90% of all new claims registered nationally), rejected claims, dental-only claims and 'ongoing' claims are not included in this analysis.

Of the district's 2,295 newly registered entitlement claims in 2014, 60% were for males and 40% for females. Males aged 15–24 had the highest rate of new entitlement claims, followed by males aged 25–44. For females, the highest rate of accepted new claims was in the 75+ age group.

ACC new entitlement claims, New Plymouth District, rates by age and gender, 2014



In 2014, home was the most common place where injuries occurred resulting in new entitlement claims (42% of claims). Next were sport and recreation places (19%), commercial or service locations (12%), then the road or street (9%).

More than half (53%) of all females' new entitlement claims were for injuries sustained in the home. Males, by contrast, had a higher proportion of claim injuries sustained at recreation or sports places, commercial or service locations, industrial places, and farms.

In 2014, a total of 569 or 25% of the district's new entitlement claims were work-related. The largest proportion of these work-related claims came from the agriculture, forestry and fishing industry (18%) and manufacturing industry (18%). Together with construction (14%), these industries accounted for half (50%) of all work-related new entitlement claims in 2014.

# Cost of active ACC entitlement claims in 2014: \$46.5 million

Active claims are ongoing ACC injury insurance claims that are still being paid out, regardless of when they were first registered (some claims have ongoing payments for a number of years).

In New Plymouth District in 2014, there were 5,787 active entitlement claims (i.e. claims for injuries requiring more than just primary health care or dental costs). This was 16% of all active claims.

These active entitlement claims cost an annual total of \$46,533,530. This was 85% of the total cost of all the district's active claims for the year.

Injuries in the home (\$13.2 million) made up the biggest share of the cost of active entitlement claims, followed by injuries on the road or street (\$10.5 million), then injuries at sports or recreation venues (\$7.1 million).

The average cost per active entitlement claim in 2014 was \$8,041.

In 2014, a total of 544 or 24% of the district's new entitlement claims were for sports and recreation injuries. Rugby union was the sport or recreation with the highest number of new entitlement claims, followed by cycling, netball, soccer, rugby league, and horse riding.

The most frequent causes of injury that led to new entitlement claims were injuries related to falling, lifting or twisting. More specifically, the three most common causes were: loss of balance or personal control (29%), lifting / carrying / strain (10%) and slipping or skidding on foot (9%).

Altogether, half (50%) of all New Plymouth District's new entitlement claims in 2014 were for falls. Per capita claim rates for falls were highest for men and women aged 85+, women aged 75–84, and young men aged 15–24.

> The most common type of injuries were soft tissue injuries (contusions, internal organ injuries or strains) (45% of all claims) and fractures or dislocations (31%). These two types of injuries accounted for just over three-quarters of all new entitlement claims.



# ACC expenditure for active entitlement claims, New Plymouth District, by scene of accident, 2014

#### **Road safety**

There were 108 road injury crashes reported to the Police in New Plymouth District in 2014. A total of 150 people were injured in these crashes including 6 killed and 20 seriously injured. One hundred and twenty-four people received minor injuries.

Reported minor injury road casualty totals have been dropping steadily



Year

2014

2010 2011 2012 2013

Minor, serious and fatal road crash casualties, New Plymouth District,

1996 in the district since 2007. Serious casualties have also been trending downwards.

0

1997

Of the 171 people killed or seriously injured in road crashes in New Plymouth District from 2010-2014, 71% were male. This included 103 males between the ages of 15 and 64.

2001 2002 2003 2004 2005

Road crashes and casualties		Casualties, 20	10-2014	1 combined	
in New Ply	mouth	n District		Male	Female
2010–2014			Fatal	17	6
			Serious	105	43
			Minor	444	359
Fatal or serious	s crashes	and casualties,	Total (5 years)	* 566	408
2010–2014			*total excludes	1 of unkr	nown gender
Year	Total	Total			
fatal or se cr	erious rashes	fatal or serious casualties	Injury crashes 2010-2014 co	on rura mbined	l and urban roads
2010	30	33	Т	otal	Percent
2011	28	38	Rural	310	41 %
2012	41	45	Urban	443	59 %
2013	25	29			
2014	24	26			
			Age-group of 2010-2014 co	fatal or s mbined	serious casualties
njury crashes a	and casu	alties,		Total	Percent
2010–2014 con	nbined		0–4	0	0 %
Cr	rashes	Casualties	5–14	1	1 %
			15–24	42	25 %
atal	21	23	25–44	41	24 %
erious	127	148	45–64	54	32 %
Vinor	605	804	65–74	10	6 %
Total (5 years)	753	975	75+	17	10 %
			Unknown	6	4 %
			Total (5 years	171	100 %

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More than half (56%) of the people killed or seriously injured were car or van drivers and passengers. One in every 5 was a motorcyclist and about 1 in every 10 was a cyclist.





The total social cost of the 108 injury crashes in New Plymouth District in 2014 is estimated to be just over \$50 million. This includes nearly \$43 million for the 24 fatal and serious crashes.

#### Road safety behaviour – Taranaki Region

Year		
2014	Adults (15+) wearing front seat be	lts 97 %
2014	Adults (15+) wearing rear seat belt	ts 94 %
2014	Children (0-4) using child restraint	t 94 %
2015	School children & adult cyclists wearing helmets	98 %
2014	Average unimpeded road speed on open road (100km/h limit)	93.3 km/h
2014	Average unimpeded road speed on urban road (50km/h limit)	48.4 km/h

#### The shifting national injury prevention scene

Key New Zealand structural and legislative changes since 2012 have included:

- Disestablishment of the long-running cross-government NZ Injury Prevention Strategy, led by ACC
- Creation of a new entity, the Crossgovernment Injury Prevention Work Plan, targeting four initial priority areas: mental impairment and injuries in older age groups; vulnerable children; family violence; and sexual violence
- A new framework guiding ACC's funding of national and regional injury prevention projects, targeting seven of the most expensive ACC claim cost areas: falls; road injuries; workplace injuries; treatment injuries; sport and recreation injuries; lifting, carrying and strain injuries; and intentional harm (including assault and sexual violence)
- New alcohol legislation enabling city and district councils to develop legally enforceable local alcohol policies (LAPs), to restrict the sale of alcohol and reduce harm in communities
- System-wide reform of the New Zealand workplace safety scene including:
  - creation of WorkSafe New Zealand, a new workplace injury prevention, regulation, and enforcement agency
  - introduction of the new Health and Safety at Work Act, making business operators responsible for ensuring the safety of all workers they influence or direct

#### Recorded criminal offences in Taranaki Police Area, 2014

	Total	Percent
Theft and related offences	1,860	27 %
Property damage and environmental pollution	1,036	15 %
Unlawful entry/burglary, break and enter	873	13 %
Acts intended to cause injury	824	12 %
Public order offences	688	10 %
Illicit drug offences	459	7 %
Abduction, harassment and other related offences against a person	309	5 %
Offences against justice procedures,		
government security and government operations	292	4 %
Fraud, deception and related offences	178	3 %
Prohibited and regulated weapons and explosives offences	147	2 %
Sexual assault and related offences	78	1 %
Robbery, extortion and related offences	21	<1 %
Dangerous or negligent acts endangering persons	18	<1 %
Homicide and related offences	2	<1 %
Miscellaneous offences	31	<1 %
Total	6,816	100 %

#### **Criminal offences**

A total of 6,816 criminal offences were recorded In the Taranaki area in 2014. This included violent offences resulting in injury, as well as other offences that make people feel unsafe like burglary and public disorder.

Around 13% of all offences in Taranaki involved assaults or other actions either causing or intending to cause physical injury (e.g. common assault, serious physical assault, sexual assault, homicide).

Taranaki Police Area,

offender

Age

0–9

10-13

14–16

17–20 21–30

31–50

Gender

Female

Māori

Unknown

Ethnic group

Non-Māori

Unknown

Male

Apprehensions for all offences, 2014

Total

624

1,210

1,047

4,039

Total

3,175

847

17

Total

1,846

2,125

Percent

<1 %

4 %

15 %

19 %

30 %

26 %

5 %

100 %

Percent

79 % 21 %

<1 %

46 %

53 %

2 %

Percent

by age, gender, ethnic group of

*Family violence offences*: Offences recorded by the Police related to family violence include certain types of assault and sexual offences including common assault (domestic), serious assaults, offences related to the neglect / ill-treatment of people under care, and breaches of protection orders. In Taranaki in 2014 there were:

- 121 recorded common assaults (domestic)
- 68 recorded serious assaults by a male on a female resulting in physical injury, plus a further 60 assaults not resulting in physical injury
- 14 recorded serious assaults on children resulting in physical injury, plus 29 other serious assaults on children not resulting in physical injury
- 142 breaches of protection orders.

From 1994 to 2014 in Taranaki, the numbers of recorded serious assaults by a male on a female causing physical injury have more than halved. However, this drop has been matched by a generally upward trend in the numbers of serious assaults by males on females not causing physical injury.

The number of reported serious assaults on children not resulting in serious injury, has also increased since 2006. This may indicate that, compared with the past, people are more willing now to report family violence incidents.

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# Examples of recent activities by other local organisations supporting the New Plymouth Safe Community

- Breakfast workshops on how to engage staff in workplace safety initiatives – (Be Safe Taranaki)
- Developing a regional Suicide Prevention and Postvention Action Plan – (Taranaki District Health Board)
- Events for White Ribbon Day, the annual campaign to stop men's violence against women – (Taranaki Safe Families Trust )
- Falls prevention education for parents and caregivers of 0–4 year olds (Kidsafe Taranaki)
- Ready2Drive, road and driving skills training for high school students (Roadsafe Taranaki, New Plymouth Police, ACC)
- The What Are You Missing? campaign encouraging all road users to engage more intensely with the road environment – (New Plymouth District Council's Let's Go team, New Plymouth Police, Roadsafe Taranaki)



**POPULATION 74,200** 

**36** FATALITIES

1,900 HOSPITALISATIONS

**8,500** EMERGENCY DEPARTMENT VISITS

36,700

ACC INSURANCE CLAIMS Including 5,800 active claims for moderate or serious

injury

All totals except fatalities and population are for calendar year 2014. Fatalities are the 5-year average 2008-2012. Population is 2013 NZ Census usually resident population for New Plymouth District. Images totals are not to scale. NPiS

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#### Notes to readers

Detailed statistical tables and other background information for this report are available from the New Plymouth injury Safe Trust (contact details at the front of this report).

All injury data in the report and accompanying statistical tables should be interpreted cautiously, especially when assessing possible reasons for trends or changes identified. Some rates, especially death rates, are based on relatively small numbers of cases. Data based on use of hospital or insurance services may vary for reasons apart from the true incidence of injury in a population. Changes in admission policies, bed availability, insurance entitlements, healthcare technologies, information systems and other factors may all potentially influence service utilisation data.

# INTRODUCTION

#### **Purpose of this report**

This report presents the latest injury statistics for New Plymouth District, focusing especially on the years 2011–14.

Commissioned by New Plymouth injury Safe (NPiS), the report is intended as a resource for the entire community, to promote discussion and guide future development of injury prevention and community safety activities across the district.<sup>3</sup>

The report also describes NPiS's recent work and key developments in the wider injury prevention and community safety scene in New Plymouth, and New Zealand generally.

### What is injury?

#### Injury can be defined as:

Any damage or harm to the body resulting from acute exposure to energy - thermal, mechanical, electrical or chemical - or from an absence of essentials for life such as heat or oxygen (Guyer et al 1989, Christoffel and Gallagher 2006).

Injury is normally defined as damage or harm that occurs suddenly, or in a short space of time. Injuries can be unintentional ('an accident') or intentional. Examples of injury events include:

- road crashes
- crushing or piercing by machinery
- falls
- poisoning
- burns
- suffocation
- drowning

<sup>&</sup>lt;sup>3</sup> Injury statistics for the district have been compiled for earlier community injury needs assessment reports (McClellan et al 2001, 2006; Maskill et al 2012). The present report contains the most up-to-date data.

- suicide
- assault
- homicide.

### What is the impact of injury in New Zealand?

- Injury is a major cause of premature death and disability in this country. It is estimated to account for 8% of all health loss (death and disability) experienced by New Zealanders in a year (Ministry of Health and Accident Compensation Corporation 2013).<sup>4</sup>
- Injury is the third leading cause of premature death in New Zealand, after cancer and vascular conditions (coronary heart disease, stroke).
- About 60% of the health loss caused by injury in New Zealand is from unintentional injuries (road crashes, falls, drowning). The remaining 40% is from intentional injuries (suicide and self-harm, assault, homicide).
- Suicide and self-harm account for a third of all injury-related health loss. Transport injuries account for a further third. The next leading causes are falls (10%) and interpersonal violence (6%).
- More than half of all injury-related health loss in New Zealand is experienced by people under the age of 35.
- Males are almost three times more likely than females to experience health loss from injury.
- Māori have twice the rate of injury-related health loss as non-Māori. This is mainly because Māori have higher rates of transport injuries, self-inflicted injuries and injuries from interpersonal violence
- Falls account for half of all injury-related health loss in people aged 65+.
- Alcohol is estimated to be a factor in about a quarter of all injury-related health loss in New Zealand.<sup>5</sup> Alcohol impairs people's perceptions, reactions and judgement, and is associated with aggressive behaviour.
- Mental illness is estimated to account for a quarter of all injury-related health loss, especially losses related to self-inflicted injury.

## What is injury prevention?

Most health losses from injury are potentially avoidable. Injury prevention and safety promotion is any kind of action that aims to reduce the frequency or severity of injury in a community. It includes:

<sup>&</sup>lt;sup>4</sup> It is important to note that statistics on the burden of injury only take into account lost years of life and years of life with disability for the individual. They do not quantify the impact of injury on the lives of people close to the victim, such as partners, children or other family and whānau.

<sup>&</sup>lt;sup>5</sup> A 2011 study at Taranaki Base Hospital's emergency department found 13% of adults aged 15+ presenting for injury treatment were intoxicated. Most of the injured intoxicated people presented in the early hours of the morning (1.00am to 4.00am). For details see:<u>www.tdhb.org.nz/news/documents/media\_release\_2014\_08\_07.shtml</u>

- educating people about injury risks and dangers and giving them the skills, resources and motivation to better protect themselves and others
- modifying the natural and human environments to make them safer (e.g. road design, vehicle technology, house design)
- introducing policies, laws, regulations, codes of practice and other frameworks that change people's behaviours to reduce injury risk and promote safety.

#### What is the New Plymouth injury Safe Trust?

New Plymouth injury Safe Trust is a coalition of local organisations interested in injury prevention and community safety. The coalition, with the trust board as a 'backbone organisation', has been operating since 2001, based on principles of community development and intersectoral working. The New Plymouth District was accredited as an International Safe Community in 2005.

The Trust's vision is 'New Plymouth District, a safe community without the burden of injury'. Its mission is to achieve a positive safety culture and create safer environments for all people in the New Plymouth District. Its main objectives are to:

- gather and share information on injury trends, priorities and programmes
- establish and strengthen effective partnerships with others working towards improving safety
- raise awareness, commitment and motivation to promote safety within organisations and throughout the community
- guide and support the development of plans for effective injury prevention within organisations that target high risk and vulnerable groups
- enable New Plymouth District to meet the International Safe Community (ISC) criteria for Safe Communities.

A key goal of the Trust is to encourage local organisations, groups and businesses to:

- recognise they are all engaged in a common struggle to reduce injuries and promote safety
- network with each other and exchange information on injury and safety issues
- share resources and collaborate together to implement effective local injury prevention and community safety policies, projects and programmes.

As a result of the greater joined-up thinking and synergies created by collaborative working, the Trust aims to help get more value out of the often limited pool of resources available locally for injury prevention and safety work.

#### **NPiS Trust Group and Programme Manager**

The NPiS Trust Group and programme manager lead NPiS's efforts to promote a collaborative, community-wide approach to injury prevention.

The Trust Group meets monthly and includes representation from key New Plymouth-based organisations and groups including (by date of joining the Trust):

- Tui Ora Ltd a kaupapa Māori health and social services organisation
- Taranaki District Health Board
- New Plymouth District Council
- Kidsafe Taranaki a charitable trust addressing unintentional injuries to children
- Accident Compensation Corporation (ACC)
- New Plymouth Police
- Ministry of Business, Innovation, and Employment (MBIE)
- New Zealand Fire Service
- Bishop's Action Foundation a charitable trust that aims to support the unanswered needs of Taranaki communities
- Be Safe Taranaki a health and safety education and training centre.
- Federated Farmers Taranaki a regional advocacy and support organisation for farmers

Activities during monthly meetings include: information sharing, strategy development, building consensus on priority areas for action, joint planning for local safety projects, and supporting the work of the NPiS programme manager.

The programme manager is the main public face of the Trust and responsible for much of its day-today work. She is employed part-time by the Trust and based at the Health Promotion Unit of the Taranaki District Health Board. Both the programme manager and the Trust board have responsibilities for extending and strengthening the links between NPiS and other organisations working towards safety in New Plymouth District.

In recent years, the Trust has obtained funding for its work from a variety of agencies including ACC, Ministry of Health, New Plymouth District Council, Taranaki District Health Board and the TSB Community Trust. Some of this money has been ear-marked for one-off campaigns or research projects. Other money has been for programme manager salaries and the general operation of the Trust. Local businesses also help by sponsoring safety campaigns and projects.

# NEW PLYMOUTH INJURY SAFE: DEVELOPMENTS AND ACTIVITIES 2012-2015

This section presents an overview of New Plymouth Injury Safe's recent work. It focuses especially on cross-sectoral prevention and safety activities that NPiS has helped to develop, support or run in the past four years.<sup>6</sup> All these activities have aimed in some way to counter risky behaviours and environments that underlie the injury statistics described later in this report.

The discussion also highlights recent developments in the wider New Zealand injury prevention and community safety scene, of which NPiS is a part. This includes legislative, policy and structural changes in government and non-government organisations with whom NPiS has links, and which to a degree set the context for NPiS's work.

A particular focus of the discussion is NPiS's work in four areas:

- falls
- suicide and self-harm prevention
- alcohol (especially its contribution to injury)
- workplace health and safety.

These four areas are identified as key priorities for NPiS's work in its Strategic Plan for 2013–2016.

A fifth area, Road Safety, is also covered here, as it has been a core part of NPiS's activities in recent years.

<sup>&</sup>lt;sup>6</sup> For descriptions of activities prior to 2012 see the previous needs assessment reports for 2011, 2006 and 2001 (McClellan et al 2001, 2006, Maskill et al 2012).
The information covered here has been compiled from several sources including; NPiS Trust reports, newsletters, meeting minutes and other documents; literature and research from other New Zealand groups and agencies with an interest in injury prevention including ACC, WorkSafe New Zealand, Ministry of Business, Innovation and Employment (MBIE), Ministry of Health, and the Safer Communities Foundation NZ (SCFNZ).

#### **Core work by NPiS**

Early in 2012, NPiS successfully applied to ACC for funds to develop a project on adult falls and with this were financially viable enough to employ a new programme manager.<sup>7</sup> The programme manager position was advertised and in July 2012 the new programme manager, Teresa Gordon, began work.

Core work of the NPiS Trust Group and programme manager since then has included:

- meeting regularly with local groups and organisations to jointly plan injury prevention and community safety campaigns and projects
- representing NPiS on other district and region-wide multi-sectoral groups addressing aspects of injury prevention and community safety, e.g. Suicide Prevention Taranaki, Road Safety Action Plan, DHB Falls Prevention Steering Group
- coordinating input from a variety of stakeholders, contributors and sponsors during the delivery of safety campaigns and projects

#### CHANGING INJURY PREVENTION PRIORITIES

ACC is the lead government agency responsible for injury prevention in New Zealand. In June 2013, the corporation announced a fundamental review of its strategic direction for injury prevention, referring to 'significant changes' in its operating environment as the catalyst for the review (ACC 2013). The scope of the review included looking at:

- the long-running cross-agency, multi-sector New Zealand
   Injury Prevention Strategy, led by ACC
- ACC's own Injury Prevention Strategy (a separate entity from the cross-agency strategy).

In December 2013, the NZ Injury Prevention Strategy was officially disestablished and its governance group replaced by a new entity, the Cross-government Injury Prevention Work Plan.

Reasons ACC gave for disestablishing the strategy included 'a lack of clear targets and accountabilities' and 'a failure to get traction in areas where the causes of injuries and underlying risk factors sit across agencies' (ACC 2013: 15).

ACC believes the new Cross-government Work Plan will achieve better collaboration across a range of stakeholders and support an effective whole-of-government response to reducing the incidence and severity of injury. Stakeholders and collaborating agencies include MBIE, Ministry of Transport, Ministry of Health, Ministry of Justice, Ministry of Social Development, NZ Police, the Health Promotion Agency, NZ Transport Agency, the Health and Quality and Safety Commission, and Statistics New Zealand.

The new Cross-government Plan is also expected to include better use of data to design programmes, and better targeting of the areas of focus of programmes. Initially the Work Plan will address four priority areas: mental impairment and injuries in older age groups; vulnerable children; family violence; and sexual violence.

In June 2014, ACC also signalled the introduction of an updated framework for its own funding of injury prevention programmes and projects (ACC 2014). This aimed to ensure the corporation worked more effectively with communities, health care providers and public sector organisations to prevent injuries.

Under the new framework, ACC's strategy for investing in injury prevention is now governed by a committee of ACC senior managers. Funding for prevention is targeted at seven of the most expensive ACC claim cost areas: falls; road injuries: workplace injuries: treatment injuries: sport

<sup>&</sup>lt;sup>7</sup> By early 2012, NPiS had been without a programme manager for more than a year, mainly as a result of reviews and funding cuts by government agencies, ostensibly in response to the Global Financial Crisis.

- helping with front-of-house delivery of local safety campaigns and projects
- giving presentations and running seminars to raise awareness of local injury and safety issues (e.g. presenting results of the 2011 Needs Assessment at public seminars and to meetings of the New Plymouth District Council, and Taranaki DHB staff and board members)
- conducting local research on injury and safety issues, including reviews of literature, surveys, interviews, focus groups, and evaluations
- preparing submissions to local agencies on safety issues
- representing NPiS at national and international injury prevention and safety conferences
- preparing the monthly *NPiS Update* electronic newsletter, circulated to about 400 subscribers in New Plymouth and across the country, highlighting local harm prevention issues, people, stories and events
- regularly updating the NPiS website and completing a major website redesign
- preparing NPiS's three yearly Strategic Plan and annual Implementation Plans, based on local data and community consultation
- writing and commissioning newspaper columns and other media to publicise local injury and safety issues
- preparing funding proposals to support the ongoing work of NPiS and other local groups.

#### **Developments in falls prevention**

Falls prevention has been a key priority of NPiS's activities since its inception in 2001. Early work included:

- setting up a multi-agency regional falls prevention co-ordinating group and implementing a regional Falls Prevention Strategy
- awareness-raising in the community, training care workers and promoting modified Tai Chi exercise programmes for older adults.

NPiS has also been a long-standing active supporter of Kidsafe Taranaki's falls prevention education workshops. Designed for parents and caregivers of 0–4 year olds, the workshops provide guidance on active supervision, child development issues and how to make physical environments safer.

A kaupapa Māori component of the project also provides one-on-one advice sessions to parents and caregivers during Tamariki Ora home visits.

In 2013, Safekids Aotearoa, the national injury prevention service of Starship Children's Health, picked up Taranaki's workshop-based model for fall prevention education and is now promoting it as an exemplar to community coalitions throughout New Zealand (Safekids Aotearoa 2014).

More recently NPiS has taken a special interest in falls prevention for working-age adults. Across the country, 40% of all ACC claims for falls at home are for working-age adults.

In the first half of 2013, with support from ACC, NPiS completed a sizeable focus group-based research project, which asked a selection of Taranaki women and men aged from 20 to 64 what they believed to be the causes of falls (New Plymouth InjurySafe Trust 2013). The study identified a number of behavioural factors thought to contribute to falls including inattention/not thinking, rushing, alcohol use, misjudging ability, distractions, over confidence/she'll be right, reduced agility and people not recognising their physical limits. Environmental factors thought to contribute to falls included uneven or slippery surfaces, toys/clutter and other surface hazards, and risky footwear.

The study's findings have been used as a basis for preparing an action plan identifying practical strategies to reduce falls in working-age people. The long term goal of the plan is to reduce the rate of home falls in the district's working age population by 10% over the next ten years.

Strategies proposed in the action plan include:

- media campaigns to raise awareness
- promoting physical capacity assessments and suitable education and exercise options for all people aged 50+ and for people aged 45+ at high risk of falling
- running home-hazard awareness programmes in selected Taranaki communities.

In 2014 and 2015, in conjunction with coalition partners, NPiS started implementing some of these strategies. However, resource constraints and delays in the setting of ACC funding guidelines (see above) restricted activities somewhat over this period.

Other NPiS activities in support of falls prevention have included working with Taranaki DHB's Falls Prevention Steering Group to plan and deliver the annual April Falls education campaigns in the region. Themes of the three most recent week-long campaigns have included:

- In 2013, preventing falls by hospital patients (part of a national initiative developed by the Health Quality and Safety Commission).
- In 2014, 'Spot the Safe Footwear', which included the NPiS programme manager occupying a specially designed display stand in a busy downtown shopping centre, talking with passersby about the risks of unsafe footwear such as jandals, backless shoes and unstable stiletto heels.<sup>8</sup>
- In 2015, vitamin D and balance. The target audience was staff and visitors at Taranaki Base and Hawera hospitals. The campaign included static displays, a vitamin D quiz, balance assessments and a demonstration of modified Tai chi.

Lack of vitamin D is now widely accepted to be a risk factor for falls in older people. NPiS has assisted with recent projects by Taranaki DHB and ACC to promote greater prescribing and use of vitamin D by older people, especially older people living in residential care or hospital.

<sup>&</sup>lt;sup>8</sup> Other work in 2013-14 in conjunction with the Falls Prevention Steering Group included submitting a proposal to ACC for funding for a Taranaki Integrated Falls Service.

In 2014 and 2015, this included contributing to the design and running of two local research studies to:

- measure existing vitamin D prescription rates in the region
- investigate factors either restricting or enabling the wider prescribing of vitamin D to older people in care.

Other recent NPiS work in support of falls prevention includes:

- developing an interactive home-safety module, for training people about hazards in the home, including fall hazards. The Be Safe Taranaki education centre (see below) now uses the module as a hands-on training resource, and also as a static display for visitors
- setting up and participating in the Taranaki Construction Safety Focus Group. This is an
  informal group of construction industry representatives that meets regularly to share ideas
  and plan training programmes, seminars and other initiatives to raise awareness of health
  and safety issues in the local construction sector. A core goal of the group is to reduce fallrelated injuries in the sector.

#### **Developments in suicide and self-harm prevention**

Suicide is the second-leading cause of injury death in New Plymouth district (after falls).

In 2008, with funding from the Ministry of Health, NPiS completed a detailed suicide prevention needs assessment for the Taranaki region. This including a literature review and consultation with a range of local agencies and organisations (New Plymouth injury Safe 2008). The assessment identified four population groups at high risk of suicide: young males (especially young Māori males); older non-Māori males; farmers, and mental health service consumers. Two other groups, young people aged 15–24 and women aged 25–44, were considered at high risk of non-fatal self-harming behaviour.

Soon after this, NPiS led a multi-agency collaboration to develop a Taranaki-wide Suicide Prevention Action Plan. This included setting up a permanent cross-sectoral group, the Taranaki Suicide Prevention Coordination Group (now called Suicide Prevention Taranaki), to plan and run local prevention projects.

In recent years, NPiS has continued to work closely with the Suicide Prevention Taranaki group, including facilitating strategic planning sessions and helping to develop action plans. The group includes representation from organisations such as Taranaki DHB's Mental Health and Addiction Services, ACC, local contracted mental health providers, and Māori health providers such as Tui Ora. It also networks with local Federated Farmers, Ministry of Social Development, secondary schools and primary health organisations (PHOs).

One of Suicide Prevention Taranaki's major ongoing projects has been securing sponsorship to regularly offer subsidised suicide prevention skills training workshops to people in the region. The two-day workshops, run by Lifeline Aotearoa, are particularly aimed at community workers, health

workers, clergy, Māori health workers and others who are likely to come into contact with people at risk through their work. Workshop participants learn about how to identify someone at possible risk of suicide, and how to help them access suitable resources and support.

The workshops are a core contribution to Action Area 3 of the NZ Suicide Prevention Action Plan 2013-2016 (training community members to identify and support individuals at risk) (Ministry of Health 2013). There are plans to increase the availability of this kind of training throughout the Taranaki region in 2015, with support from a grant from the TSB Community Trust.

Recently, Suicide Prevention Taranaki also organised a series of shorter length suicide prevention skills training seminars. These are designed for community leaders, teachers, senior high school students, parents and school communities. Also run by Lifeline Aotearoa, the seminars are four hours long and held in the evenings.

Another regular part of Suicide Prevention Taranaki's work has been organising local events, meetings, speakers and media for World Suicide Prevention Awareness Day, held each year on September 10.

The 2013 event was a particularly well-attended and included:

- high-profile media personalities Mike King and Tai Tupou relaying their personal stories of depression, anger and hope to a number of different audiences, urging people to talk about their problems instead of bottling them up
- the Chief Coroner Judge Neil MacLean speaking to several groups about media reporting of suicide, including challenging the idea of automatic blanket suppression of all details of a suicide
- a motorcycle rally run by the Riders Against Teen Suicide group, with food, coffee and live music provided alongside information from local mental health experts.

Around the same time in 2013, a 16 page tabloid newsprint publication, *Feeling Down on the Farm -Mental Health in Rural Taranaki*, was developed, launched and distributed to rural mail boxes throughout the region. The publication, which is still available online,<sup>9</sup> includes personal stories from farmers who have experienced depression. It aims to raise awareness of mental health issues in farming communities and emphasises the importance of seeking help.

Although Suicide Prevention Taranaki had planned initially to produce the publication, in the end it was put together by an enthusiastic group of volunteers working in conjunction with the Taranaki Rural Support Trust and Like Minds Taranaki, with sponsorship from local businesses.<sup>10</sup>

<sup>&</sup>lt;sup>9</sup> Go to: <u>www.mentalhealth.org.nz/assets/ResourceFinder/Feeling-Down-On-The-Farm-Mental-Health-in-Rural-</u> <u>Taranaki.pdf</u>

<sup>&</sup>lt;sup>10</sup> In mid-2015, the Taranaki Rural Support Trust expressed renewed concern for the mental wellbeing of people working in the region's rural sector, following major flood damage and significant falls in international dairy prices. For details see: <u>http://www.stuff.co.nz/taranaki-daily-news/70455204/concerns-grow-for-taranaki-farmers-aspressures-mount</u>.

More recently, in 2015, representatives from both NPiS and Suicide Prevention Taranaki have sat on a multi-agency steering committee developing a Suicide Prevention and Postvention Action Plan for the region. Convened by the Taranaki DHB, the committee also includes local people from agencies such as Tui Ora, Ngāti Ruanui, Ministry of Education, Ministry of Social Development, NZ Police and the Department of Corrections.

The Action Plan is scheduled for release later in 2015. Impetus for developing the plan came from the Ministry of Health, noting that district health boards were well placed to co-ordinate a comprehensive and intersectoral regional response to suicide behaviours (Ministry of Health 2014, Ministry of Health 2015).

The Ministry's expectation is that regional action plans should reflect current evidence, and be tailored to local needs and resources. Plans should also adhere to the principles of the New Zealand Suicide Prevention Strategy 2006–2016. These principles include recognising and respecting diversity, acknowledging that everyone has a role in suicide prevention, and having a commitment to reducing inequalities.

The research literature recognises that suicide prevention is a complex and challenging field. There are no easy answers. Prevention has to involve multiple actions at different levels of society (Collings and Beautrais 2005, Hegerl et al 2006, Knox et al 2010, Pray et al 2013, Van Orden et al 2010).

#### Developments related to alcohol and injury

Alcohol is now one of NPiS's four priority areas for action in 2013–2016. This reflects community feedback in the 2011 needs assessment, singling out alcohol as a key factor contributing to both intentional and unintentional injuries in the district.

This increased focus on alcohol has coincided with important changes in legislation and other frameworks supporting local community action to reduce alcohol-related harm.

In December 2013, new alcohol laws came into full force across the country. These aimed to improve New Zealand's drinking culture and reduce the harms caused by excessive drinking.<sup>11</sup>

A key element of the new laws has been the setting of default maximum trading hours for on- and off-licence businesses that sell alcohol. Under the new legislation, the maximum trading hours for on-licences (e.g. bars, pubs and nightclubs) is now 8am-4am. For off-licences (e.g. bottle stores, supermarkets and grocery stores) the hours are 7am–11pm.

<sup>&</sup>lt;sup>11</sup> Another significant change in the alcohol area occurred in June 2012 - disestablishment of the Alcohol Advisory Council (ALAC). Set up in 1978, ALAC was an autonomous Crown entity and the lead government agency focused on alcohol-related harm (Kypri et al. 2015). ALAC's policy, research, health promotion and treatment funding functions were transferred to the new Health Promotion Agency, a Crown agency with multiple responsibilities across several areas including nutrition, tobacco control and immunisation. The agency also has less independence from government and ministerial direction.

Another key element of the new legislation is the option for local councils to develop legally enforceable local alcohol policies (LAPs). LAPs can be used to further limit maximum alcohol trading hours in a district or city council area. For example, a local alcohol policy may permit bars, pubs and nightclubs to stay open no later than 1am, instead of 4am.

LAPs can also be used to:

- restrict the number of licensed businesses located near places like schools, churches, playgrounds or marae
- limit the density of businesses in a specific neighbourhood or area
- impose conditions relating to the sale of alcohol on groups of licensed businesses.

NPiS and its coalition partners have taken a lead role in raising objections to aspects of the Local Alcohol Plan being drawn up by the New Plymouth District Council. This has included advocacy, research and community consultation aimed at building a strong case for modifying the plan so that it more effectively contributes to reducing alcohol-related harm in the community.

As part of this work, NPiS has provided research and peerreview assistance to other organisations making submissions to council, including church groups, alcohol treatment services, and other local health and social service agencies such as ACC and the Taranaki DHB.

Early in 2014, NPiS submitted a funding proposal to ACC to do a local study comparing ambulance and police data on incidents involving alcohol. It was hoped evidence from the study could be used to inform submissions on the Local Action Plan. However, changes in ACC's funding criteria

#### FEATURES OF THE NEW DRINKING LAWS

On-license businesses must make available water, low-alcohol beverages, food and information about safe transport.

Businesses can't irresponsibly advertise or promote alcohol, e.g. offer free alcohol or large discounts.

Tighter controls on the supply of alcohol to people under the age of 18.

On-the-spot fines for drinking or having an open alcohol container in a liquor ban area, or presenting a fake ID or using someone else's ID to buy alcohol.

Tighter controls around the serving of alcohol to intoxicated people.

A range of other possible measures recommended by the Law Commission were not adopted in the new legislation.

resulted in the project being scaled back significantly. The continuing lack of an alcohol harm surveillance system in Taranaki, particularly within the Taranaki District Health Board's emergency department, has limited the ability of policy makers to make informed decisions regarding alcohol.

In May 2014, following written submissions from a variety of agencies and businesses, the New Plymouth District Council adopted a draft alcohol policy that saw the maximum possible closing time for on-licenses in the district increased from 2am to 3am.

In August 2014, the NPiS programme manager made an oral submission to the council committee reviewing the draft alcohol plan. Dr Peter Miller, an experienced alcohol and public health researcher from Deakin University, Melbourne, also phoned in to present evidence in support of NPiS's submission.

Subsequently, in September 2014, the council announced that its Local Alcohol Policy would substantially reduce the permissible opening hours for off-license premises, such as bottle stores and supermarkets. However, the maximum closing time for on-licenses such as bars and clubs would not be changed from the existing 3am limit.

NPiS viewed the reduction in off-license hours as a positive result of the research and advocacy work it had done in conjunction with partner organisations. However, it was disappointed the council did not also limit the opening hours for on-licenses.

Across the country, there are indications that it will take some time yet to bed-in processes around the development of local alcohol plans. For now, it is unclear how willing local councils will be to restrict liquor outlet density or opening hours in the face of potentially costly legal challenges from the alcohol industry (Kypri et al. 2015). It is also unclear what strength of evidence may be required to adequately prove the existence of alcohol-related harm when making submissions to the new licensing control authorities.

Police have voiced initial support for aspects of the reforms, including the scope they give for issuing instant infringement notices for liquor ban breaches, instead of having to prosecute people through the courts. There are also reports of the new default closing hours contributing to reductions in overnight public place assaults and disorder in major city centres.

The hospitality industry has concerns about the complexity and practicality of the new laws. It also contends the legislation may be pushing alcohol consumption increasingly into unsupervised environments (Health Promotion Agency 2014).

#### Developments in workplace health and safety

Workplace health and safety is another of NPiS's priorities for 2013–2016.

Ongoing projects and programmes that NPiS contributes to include:

- The Taranaki Trades Apprentice Safety Challenge competition. This is an annual safety competition organised by the Taranaki Construction Safety Group, supported by sponsorship from local businesses. The competition aims to improve the safety knowledge and skills of the region's trade apprentices. The latest 2015 event saw approximately 25 apprentices competing in groups on behalf of their companies. The competition included a segment on home safety, covering risk areas such as driveways, fences, pools, play areas, barbeque areas and clotheslines.
- The Taranaki Secondary Schools Agricultural Safety Challenge. This a one-day modulebased competition between teams of high school students from across the region focusing on aspects of farm safety such as animal yarding, quad bikes, tractors, chemicals and first aid.
- The Taranaki Construction Safety Focus Group's TOOLBOX evening sessions. These are workshops promoting relevant safety issues and idea to local construction company staff.

Recently, too, NPiS has partnered with the Be Safe Taranaki and other local agencies, including Worksafe NZ, to run seminars to discuss the significant structural and legislative changes occurring in New Zealand's workplace health and safety system.

Two major independent inquiries – the 2012 Royal Commission on the Pike River Coal Mine Tragedy and the 2013 Independent Taskforce on Workplace Health and Safety – have been highly critical of New Zealand's workplace safety systems. They describe an environment characterised by a lack of oversight and inspections, and a culture of victim-blaming and acceptance of worker deaths as inevitable and unavoidable. They also point to a lack of collaboration and coordination between agencies on workplace harm prevention efforts.

In response to these criticisms, significant system-wide reforms have been made, and are continuing to be made, to the New Zealand workplace safety scene. Led by central government, the reforms aim to produce a step change in the country's workplace health and safety performance. This includes achieving the target of a 10% reduction in serious workplace injuries and fatalities by 2016, and a 25% reduction by 2020 (Ministry of Business, Innovation and Employment 2015).

#### WORKSAFE NEW ZEALAND

NZ's latest workplace health and safety reforms have included creation of a new agency, WorkSafe New Zealand.

Established in 2013, the agency is the government's single point of accountability and leadership for workplace health and safety (WorkSafe New Zealand 2013). This includes taking responsibility for workplace injury prevention regulation, enforcement and education.

WorkSafe is expected to work collaboratively with employers and employees to embed and promote good workplace health and safety practices.

WorkSafe is also expected to work closely with MBIE and ACC. MBIE retains responsibility for government policy, legislation and regulations relating to workplace health and safety. ACC will work in partnership with WorkSafe to promote workplace injury prevention, with changes to be made to the Accident Compensation Act 2001 to enshrine this shared responsibility in law.

In its first year of operation, Worksafe has engaged closely with high risk industries such as manufacturing, construction, agriculture and forestry. Already there are indications that the foresty sector has improved its health and safety practices and the numbers of serious injury accidents in the sector are dropping.

In October 2014, a well-attended workshop for industry and business leaders was held at Be Safe, discussing best practice models for how to foster a more engaged and participatory workforce. Effective worker engagement is a core principle of the new workplace health and safety legislation.

More workshops of this kind are planned for 2015 and 2016 as the new health and safety legislation is finalised, and as new regulations and codes related to it are progressively rolled out.

Other recent activities by NPiS have included exchanging knowledge on local workplace safety initiatives with Worksafe New Zealand's New Plymouth office.

#### **NEW WORKPLACE SAFETY LAWS**

Previous legislation is being overhauled and replaced by a new Health and Safety at Work Act. Modelled on Australia's 2011 workplace safety laws, the new legislation was introduced into Parliament in March 2014. It was subsequently referred to the Transport and Industrial Relations Select Committee, which heard submissions on detail of the legislation. The Select Committee reported back to Parliament in July 2015, and it is expected the legislation, with some amendments, will be passed into law later in 2015 or in 2016.

A key feature of the proposed legislation, as currently drafted, is the requirement for business operators and others who control a place of work to, as far as reasonably practicable, ensure the health and safety of all workers they influence or direct. This includes not just employees, but any other workers they have control or influence over such as contractors, subcontractors, outworkers, apprentices, trainees, and volunteers.

Once the new legislation comes into force, employers, managers and company directors will need to manage workplace health and safety much more proactively. The new laws will also impose stricter penalties for health and safety breaches, including substantial fines and/or imprisonment. There will also be scope for the courts to require offenders to publicise a breach or take specific steps to remedy a breach.

In response to concerns in some sectors that elements of the proposed legislation will be too onerous financially or practically for some businesses, in July 2015 the Transport and Industrial Relations Select Committee recommended a number of amendments to the new legislation. These included:

- excluding family farmhouses from the definition of workplace and clarifying the health and safety duties of farmers
- providing greater flexibility in the obligations of small, lower risk businesses to involve workers in the development and monitoring of health and safety practices.

The latter change in particular has been greeted with scepticism in some quarters. There are concerns it will essentially exempt smaller businesses from the need to liaise with workers in decisions about workplace safety, and enable business operators to ignore worker requests to nominate health and safety representatives.

There are also concerns that the new legislation as currently drafted will make it difficult to mount private prosecutions for workplace safety offences.

#### **Developments in road safety**

NPiS continues to help provide Ready2Drive, a day-long interactive road and driving skills training session for high school students, run in partnership with NZ Police, ACC and Roadsafe Taranaki.<sup>12</sup> The training sessions include a computer-simulated driving safety component. Surveys by Roadsafe indicate student attitudes to road safety have improved in New Plymouth schools after participating in Ready2Drive.

<sup>&</sup>lt;sup>12</sup> Roadsafe Taranaki is a regional community road safety programme initiated by the New Zealand Transport Authority

Other recent NPiS road safety activities include:

- supporting the regular Rider Training Days for motorcyclists, run by the Taranaki Motorcyle Safety Group.
- (in conjunction with Roadsafe Taranaki) evaluating the impact of a local media campaign on community attitudes to drinking and driving (run alongside a new Police recidivist drink-driver home visiting programme)
- assisting with running and evaluating a new road safety intervention for Corrections Department clients, to help reduce re-offending
- assisting with strategy development and priority setting for the Taranaki region's cross-sectoral Road Safety Action Plan (emerging issues identified by the group include ageing drivers and pedestrian safety).

Work by NPiS in partnership with the Road Safety Action Plan group has also resulted in the development of a new, local

#### **NEW DRINK DRIVING LIMITS**

In December 2014, the alcohol limit for drivers aged 20 years and over was lowered from 400 micrograms of alcohol per litre of breath to 250 micrograms (Land Transport Amendment Act [no. 2] 2014). This is equivalent to a blood alcohol limit of 50 milligrams per 100ml of blood – down from the previous 80 milligrams.

Drivers aged under 20 still have a zero limit, i.e. they are not allowed to drive if they have breath or blood alcohol levels of more than zero.

cross-agency multi-media (print, radio, online) safety campaign 'What Are You Missing?'

Launched in October 2014, the 'What Are You Missing?' campaign is aimed at all road users including drivers, riders, walkers and joggers. It encourages them to engage more intensely with the road environment, and to think more carefully about what might be hidden or out of view. Other partners in the initiative include New Plymouth District Council's Let's Go team (which is coordinating the campaign), New Plymouth Police, and Roadsafe Taranaki, with sponsorship from Shell Todd Oil Services.

In 2015 a new 'Be Seen' theme was added to the 'What Are You Missing?' campaign. This focuses on the importance of cyclists and pedestrians wearing bright clothes and using lights.

#### Maintaining New Plymouth District as an International Safe Community

Since 2005, when New Plymouth District was first officially designated as a World Health Organization International Safe Community, part of NPiS's work has included ensuring the district continues to meet criteria for accreditation as a Safe Community.

New Plymouth was formally re-designated as a WHO Safe Community in September 2010. It is scheduled to apply again for re-designation in 2015 but has chosen to delay this until 2016 in order to complete this needs assessment document. Re-designation is an important formal acknowledgement of the district's ongoing commitment to using collaborative, inclusive, community-focused approaches to injury prevention and safety promotion.

In the first stage of the 2016 re-designation process, NPiS will consult with local agencies and groups who are key partners in achieving a Safe Community to confirm their interest in continuing to work together according to the WHO collaborative model.

NPiS will then prepare a detailed re-designation application. This will include a summary of local injury and safety statistics and a description of the district's main crossagency injury prevention and safety projects and programmes.

The application will be submitted to the Safe Communities Foundation New Zealand, the organisation responsible for accrediting New Zealand Safe Communities on behalf of the WHO. Evidence and indicators required to be covered in the re-accreditation application include (Safe Communities Foundation NZ 2015a):

1. *Leadership and Collaboration*: Demonstration of leadership by a coalition or group focused on improving community safety.

2. *Programme Reach*: The range and reach of community safety programmes operating throughout the community/region, including an indication of the extent to which they are based on proven or promising intervention strategies.

3. *Priority Setting*: Demonstration of programmes that target and promote safety for high risk/vulnerable groups and environments.

### SAFE COMMUNITIES: AN INTERNATIONAL MOVEMENT

Worldwide, there are over 350 WHO designated Safe Communities in a range of countries and regions including Scandinavia, Australia, North America, China and Japan.

In New Zealand, there are now 27 officially designated Safe Communities, with New Plymouth being one of the first.

A further six NZ cities or districts have applications pending or are showing an interest in applying for designation. This includes the Stratford District, on New Plymouth District's south-eastern boundary (Safe Communities Foundation NZ 2015).

4. Data Analysis and Strategic Alignment: Analysis of available safety (injury, crime, violence and safety perception) data for the community/region and how they align with established national/regional priorities and action plans.

5. *Evaluation*: Outline of expected impacts and how they are being measured or evaluated.

6. *Communication and Networking*: Demonstration of community engagement with relevant sectors of the community/region and on-going participation in local, national and Pan Pacific Safe Communities Networks.<sup>13</sup>

<sup>&</sup>lt;sup>13</sup> The Pan-Pacific Safe Communities Network represents approximately 100 accredited Safe Communities in Australia, Canada, New Zealand and the United States. The network aims to assist Safe Communities to share innovation and skills, and promote evidence-based programme planning and evaluation.

# 2 PEOPLE OF NEW PLYMOUTH DISTRICT

This chapter presents a short profile of the New Plymouth District population. This sets the scene for the injury statistics and other material covered in the rest of the report. Readers familiar with the district and its people may prefer to skip this chapter and go straight to the injury statistics in the next chapter.

Statistics presented here come mainly from the 2013 Census of Population and Dwellings - the latest available New Zealand census data.

#### Location

New Plymouth District is situated on the western edge of the North Island of New Zealand. It is the northernmost of the three territorial local authorities in the Taranaki region, the others being Stratford and South Taranaki (see figure 2.1 overleaf). Outstanding natural features of the area include the scenic coastline running along the district's north-western boundary, and Mount Taranaki and Egmont National Park on the district's southern boundary.

The district's largest urban centre is the city of New Plymouth, located on the coast at the junction of state highways 3 and 45. Smaller urban centres include the towns of Inglewood, Waitara, Bell Block and Oakura.

New Plymouth District includes the following iwi (Māori tribal) areas (New Plymouth District Council 2015):

- Ngāti Tama in the north-eastern part of the district, including the Mohakatino and Tongaporutu Rivers, Pukearuhe and Parininihi (Whitecliffs)
- Ngāti Maru in the eastern part of the district, including Tarata, Purangi and the Waitara valley
- Ngāti Maniapoto claim interests in land in the far north of the district, near the Mohakatino River

- Ngāti Mutunga in the middle, coastal part of the district, including Urenui, Okoki, Mimi and Onaero
- Te Ātiawa mainly coastal land in the south-west of the district around the New Plymouth urban area, Waitara and Inglewood
- Taranaki coastal land to the west of New Plymouth urban area, including Oakura and overlapping the boundary between New Plymouth District and South Taranaki District.





Source: New Plymouth Injury Safe (2010).

#### Whole population

In 2013 a total of 74,187 people were usually resident in New Plymouth District. This was 68% of the total Taranaki regional population of just over 109,750. The populations of the Stratford and South Taranaki districts were 8,988 and 26,577 respectively.

Over the seven-year period 2006–2013 the population of New Plymouth District grew by a total of 5,286 people or 7.7%. This was above the national average of 5.3%. Previously, the district's population decreased by 2.2% over the five-year period from 1996–2001, and increased by 3.5% from 2001–2006 (see appendix table 2.1).

The district's population is projected to increase steadily in the future, reaching 90,000 by 2033 (Statistics New Zealand 2015).

#### Age and gender

At the 2013 census, the median age for New Plymouth District was a little older than the New Zealand average – 41 years compared with 38 (Statistics New Zealand 2015).

In 2013, the New Plymouth District population consisted of:

- 15,111 children aged 0–14 years (20% of the population)
- 8,619 young people aged 15–24 (12%)
- 37,998 adults aged 25–64 (51%)
- 12,459 older people aged 65 or more (17%).

See figure 2.2 for a more detailed picture of the age structure of the local population.





Source: Statistics New Zealand, 2013 Census of Population and Dwellings. Data in appendix table 2.2.

Compared to the national average, the New Plymouth District has a slightly higher proportion of older people aged 65 and over (17% versus 14%) and a slightly lower proportion of adults in the working age group 15–64 (63% versus 65%).

The proportion of children aged 0–14 in the New Plymouth District population (20%) is the same as the national average (see appendix tables 2.2 and 2.3).

As for the whole of New Zealand, in New Plymouth District there are slightly more females (51%) than males (49%).

#### Māori

At the 2013 census, a total of 11,082 New Plymouth District residents self-identified as Māori.<sup>14</sup> This is 15% of the New Plymouth District population, slightly higher than the proportion of Māori people in the total New Zealand population (14%).

Altogether, 12,750 people (17%) said they were of Māori descent. Of these people, 9,396 (74%) stated which iwi (tribe or tribes) they belonged to. By far the most common iwi group affiliation was Te Ātiawa (3,465 people) (see appendix table 2.4).

As for the whole of New Zealand, the Māori population of New Plymouth District is much younger than the average for all ethnic groups, with a median age of 23 years at the 2013 census (Statistics New Zealand 2015).

Over a third (36%) of local Māori were children aged 0–14 years. Only 5% of Māori living in New Plymouth District were aged 65 or older in 2006 (see figure 2.3).



Figure 2.3: Age and gender of Māori population, New Plymouth District, 2013 census

Source: Statistics New Zealand, 2013 Census of Population and Dwellings. Data in appendix table 2.2.

<sup>&</sup>lt;sup>14</sup> This includes people who identified Māori as their only ethnic group, as well as people who identified Māori as one of their ethnic groups.

#### Other ethnic groups

In 2013, 61,323 New Plymouth District residents (83%) identified themselves as European. This is a higher proportion than in the New Zealand population as a whole (70%). Another 2% identified themselves as 'New Zealanders'.

Much smaller percentages of Pacific and Asian peoples live in New Plymouth District than in New Zealand as a whole. In 2013, 2,838 Asian people lived in the district – 4% compared with 11% nationally. There were also 1,248 Pacific people – 2% compared with 7% nationally (see appendix table 2.5).

#### **Birthplace**

In 2013 only 14% of people living in New Plymouth District were born overseas. This is considerably less than for the country as a whole (24%). The most common overseas birthplaces of people living in New Plymouth District were the UK and Ireland (6% of the population), Asia (3%), and Australia (2%) (see appendix table 2.6).

#### **Urban / rural areas**

Over two-thirds (71%) of New Plymouth District residents live in the 'main urban' area of New Plymouth City. A further 13% live in the 'minor urban' areas of Waitara and Inglewood. Two percent live in the 'rural centres' of Urenui, Okato or Egmont village and the remainder (14%) live in 'other rural' areas – Kaitake, Kaimata, Lepperton, and Okoki-Okau (appendix table 2.7).<sup>15</sup>

#### **Education**

New Plymouth District residents tend to have a lower level of formal educational achievement than the national average. In 2013, 22% of New Plymouth District people aged 15 years and older had no qualifications compared with 19% of all New Zealanders of this age. Nine percent of New Plymouth District people aged 15 years and older had a degree or level 7 qualification as their highest qualification, compared with 12% of all New Zealanders of the same age (appendix table 2.8).

#### Work

#### Labour force status

The labour force status of people in New Plymouth District is fairly similar to that of all New Zealand adults. At the 2013 census, of the 59,073 adults aged 15 and over living in New Plymouth District, 35,881 (61%) were in some form of paid or unpaid employment. This compares with 59% of all New Zealand adults (appendix table 2.9).

A total of 27,117 New Plymouth District people aged 15 years and older (46%) were employed fulltime and a further 8,694 people (15%) were employed part-time (compared with 46% and 14% respectively for New Zealand as a whole). Four percent of local people in this age group were unemployed – compared to the New Zealand average of 5%. Nearly one-third (32%) of New

<sup>&</sup>lt;sup>15</sup> See the glossary for definitions of the different types of rural / urban areas. For further information about the area units included in these categories see appendix table 2.7.

Plymouth District residents aged 15 and over were 'not in the labour force', similar to the New Zealand average of 31% (appendix table 2.9).<sup>16</sup>

#### Employees / employers

In 2013, just over three-quarters (78%) of the 35,811 New Plymouth District residents who were employed were employees, and 7% were employers. Twelve percent were self-employed with no employees and 2% were unpaid family workers. This was similar to the national pattern (Statistics New Zealand 2015).

#### Industries

Table 2.1 shows the ten most common industries in which New Plymouth District people aged 15+ worked in 2013. Men most frequently worked in manufacturing, construction and agriculture / forestry / fishing industries; whereas women were most likely to work in health care / social assistance, the retail trade or education and training.

Table 2.1: Most common industries of employment, New Plymouth District, by ger	ıder,
2013 census	

Males			Females			
Industry (ranked)	No.	%	Industry (ranked)	No.	%	
Manufacturing	3,180	16.9	Health care and social assistance	3,339	19.7	
Construction	2,697	14.3	Retail trade	2,112	12.5	
Agriculture, forestry, and fishing	1,425	7.6	Education and training	2,004	11.8	
Retail trade	1,365	7.2	Accommodation and food services	1,215	7.2	
Professional, scientific, and technical services	1,359	7.2	Professional, scientific, and technical services	1,113	6.6	
Transport, postal, and warehousing	1,098	5.8	Manufacturing	981	5.8	
Wholesale trade	876	4.6	Agriculture, forestry, and fishing	900	5.3	
Mining	873	4.6	'Other' services	759	4.5	
'Other' services	699	3.7	Public administration and safety	522	3.1	
Health care and social assistance	648	3.4	Administrative and support services	480	2.8	

Source: Statistics New Zealand, 2013 Census of Population and Dwellings. Data in appendix table 2.10.

<sup>&</sup>lt;sup>16</sup> 'Not in the labour force' includes retired people, students, invalids, parents looking after children at home, and others who are unable or unavailable to work.

#### Occupation

The most common occupational groups for New Plymouth District people aged 15 and over in 2013 were:

- professionals (19% of all employed people)
- managers (17%)
- technicians and trades workers (14%).

New Plymouth adults were slightly less likely to be professionals than all New Zealand adults (19% compared with 21%) and were slightly more likely to be technicians and trades workers (14% compared with 11%) (see appendix table 2.11).

#### Income

In 2013, New Plymouth District residents had slightly higher than average annual personal incomes compared with all New Zealanders. The median income for local adults aged 15 and over was \$29,100 compared with the national average of \$28,500 (Statistics New Zealand 2015). Slightly fewer (33%) of New Plymouth district adults earn \$20,000 or less each year compared with all New Zealand adults (35%) (appendix table 2.12).

In 2013, the median income for Māori adults living in New Plymouth District was \$23,600, again slightly higher than the national average for Māori of \$22,500 (Statistics New Zealand 2015). Forty-one percent of local Māori adults earned \$20,000 or less compared with 43% of all Māori in New Zealand (appendix table 2.12).

The most frequent types of income sources for New Plymouth District adults aged 15 and over were: wages and salaries (54%); investments (22%); and New Zealand Superannuation or Veterans Pension (19%). Compared to New Zealand as a whole, slightly higher proportions of local adults obtained income from New Zealand Superannuation or Veterans Pension, or investments (appendix table 2.13).

#### Home ownership

There were 29,202 private dwellings in New Plymouth District in 2013. Of these, 19,248 (66%) were owned or partly owned by the usual residents (including family trusts), compared with 61% for New Zealand as a whole.

Altogether, 14,964 or 51% of New Plymouth District private dwellings were owned or partly owned by the usual residents (either with or without a mortgage). This compares to the national rate of 47%. An additional 15% of New Plymouth District dwellings were held in family trusts by the residents, similar to the proportion (14%) for all New Zealand.

In terms of rental accommodation, 29% of residential dwellings in New Plymouth District were not owned by the usual residents. This compares to 33% of dwellings in New Zealand as a whole, indicating that renting is less common in New Plymouth than elsewhere (appendix table 2.14).

#### Access to telecommunications

In 2013, only 1% of New Plymouth District households had no access to telecommunications systems such as a cell phone, telephone, fax or the internet. This was very similar to the national average (2%).

Eighty-four percent of New Plymouth District households had access to a phone (land-line), and 80% had access to a cell-phone, compared with New Zealand's figures of 81% and 79% respectively. Local households were slightly less likely than all New Zealand households to have internet access (71% vs. 73%) or a fax machine (13% vs. 14%) (appendix table 2.15).

#### Access to vehicles

Only 7% of households in New Plymouth District had no access to a motor vehicle in 2013, similar to the average for all New Zealand households (8%). However, local households were slightly more likely than all New Zealand households to have access to only one vehicle (38% vs. 36%) (appendix table 2.16).

#### Neighbourhood deprivation / Deprivation index (NZDep2013)

NZDep2013 is a measure or 'index' of the levels of socio-economic deprivation in different geographic areas / neighbourhoods of New Zealand. The index is derived from national census data indicating levels of income, home ownership, sole-parenting, employment, educational qualifications, household living space and access to the internet and vehicles.

The NZDep2013 index ranges from 1 to 10. NZDep2013 decile 1 indicates that people are living in the least deprived 10% of New Zealand neighbourhoods, while NZDep2013 decile 10 indicates that people are living in the most deprived 10% of New Zealand neighbourhoods (Atkinson et al 2014).

Compared with New Zealand as a whole, higher proportions of people in New **Plymouth District** live in neighbourhoods with mid-range socio-economic deprivation (figure 2.4).



#### Figure 2.4: New Plymouth District population living in NZDep2013 deciles 1– 10, New Plymouth District, 2013 census

Source: Statistics New Zealand, 2013 Census of Population and Dwellings. Note:

# **INJURY DEATHS**

Death is arguably the most extreme outcome of an injury event. Quite apart from the emotional toll on family / whānau and other close people, injury deaths have potentially major social and economic impacts in terms of lost productivity and earnings.

The data reported in this chapter has been obtained from medical certificates of cause of death and coroners' reports. The data is routinely compiled by the Ministry of Health as part of its Mortality Collection. Causes of injury death have been categorised according to the International Classification of Diseases (ICD-10) system for coding the external causes of health conditions (E-codes). All deaths caused by injury are included in the analysis except those resulting from medical misadventure.<sup>17, 18</sup>

#### **Overview of injury deaths**

In the five years from 2008 to 2012 (the most recent period for which data is available), a total of 181 New Plymouth District people died as a result of injury. This was an average of 36 deaths per year, or 6 percent of all local deaths from all causes during the period. The lowest annual number of injury deaths during the period was 28 in 2008; the highest was 51 in 2012 (table 3.1).<sup>19</sup>

Table 3.1: Number of injury de	aths (all causes), New P	lymouth District, 2008–2012
--------------------------------	--------------------------	-----------------------------

YEAR						
2008 2009 2010 2011 2012 Total						
28	37	33	32	51	181	

Source: Data supplied by Ministry of Health.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

<sup>&</sup>lt;sup>17</sup> In particular, the following E-code categories have been excluded from the analysis: Y40–Y84 Complications of medical and surgical care, Y88 Sequelae with surgical and medical care as external cause, Y89 Sequelae of other external causes, Y90–Y98 Supplementary factors related to causes of morbidity and mortality classified elsewhere. Deaths from these causes have been excluded because they relate mainly to risk factors in hospitals and other health-care settings, not the wider community.

<sup>&</sup>lt;sup>18</sup> All mortality data for 2012 reported in this chapter is provisional.

<sup>&</sup>lt;sup>19</sup> In 2012 there were higher numbers than usual of injury deaths relating to transport accidents (13) and falls (16). However due to the relatively small numbers, these trends may be at least partly due to annual random variations.

#### Unintentional and intentional injury deaths

Altogether, during the period 2008–2012, 125 (69%) of the total New Plymouth District injury deaths were from unintentional injury ('accidents') and 52 (29%) were from intentional injury (intentional self-harm and assaults).

However, in the 25–44 year age group, nearly half (49%) of all injury deaths were from intentional injury (figure 3.1).



# Figure 3.1: Unintentional and intentional injury deaths, New Plymouth District, by age, five years 2008–2012 combined

Source: Data supplied by Ministry of Health. Data in appendix table 3.1.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

Some of percentages based on relatively small numbers.

'Other' includes injuries of undetermined intent, legal interventions, operations of war, and sequelae (late affects) of injury.

From 2008–2012, for males of all ages, 34% of all injury deaths were from intentional causes, compared with only 15% for females (appendix table 3.1).

During the same period, for Māori just under half (46%) of injury deaths were from intentional causes, compared with a quarter of injury deaths (25%) for non-Māori (appendix table 3.2).<sup>20</sup>

<sup>&</sup>lt;sup>20</sup> Māori figures are based on small numbers (28 deaths in total).

#### Main causes of injury deaths

During 2008–2012 the three leading causes of injury death in the New Plymouth District population were falls (29% of all injury deaths) intentional self-harm (26%), and transport accidents (23%) (figure 3.2). Together these three causes accounted for more than three-quarters (78%) of all injury deaths.



Figure 3.2: Causes of injury deaths, New Plymouth District, by injury groups, five years 2008–2012 combined (n=181)

Some percentages based on relatively small numbers.

The leading cause of death has changed since the last needs assessment; from intentional selfharm, to falls. This appears to be due to a noticeable rise in the number of falls related deaths during the period (36 deaths between 2004–2008 to 53 deaths between 2008–2012) (table 3.2).

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Table 3.7: To	D 3 CAUSES OF IT	illirv deaths	New Pr	vmouth District		2004-2008	2008-2012
	p 0 00000 01 11	ijai y avatiiv	,		,		

2000-2003		2004–2008 2008–2012			
Injury group	No.	Injury group	No.	Injury group	No.
Transport accidents	32	Intentional self-harm	44	Falls	53
Intentional self-harm	28	Transport accidents	40	Intentional self-harm	48
Falls	23	Falls	36	Transport accidents	41
Source: Data supp	lied by Minis	try of Health.		·	
Notes: Years are	calendar ve	ars 1 Januarv to 31 December. D	Data for 2012	is provisional.	

Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

#### Falls

Looking more closely at the specific types of falls that caused injury deaths in New Plymouth District in the five-year period 2008–2012, a total of 21 of the total 53 falls deaths were due to falls on the same level. Ten were due to falls from one level to another, including from stairs, steps, ladders or scaffolding (table 3.3). The proportion of 'unspecified falls' deaths has increased from 13.8% to 41.5% since the last needs assessment. The reasons for this increase are unclear.

Table 3.3: Injury deaths caused by falls, New Plymouth District, by
specific injury types, five years 2008–2012 combined

Injury type	Number
Unspecified fall	22
Other fall on same level	12
Fall on same level from slipping, tripping or stumbling	9
Other fall from one level to another	5
Fall on and from stairs and steps	4
Fall on or from ladder or scaffolding	1
Total falls	53

Source: Data supplied by Ministry of Health.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

#### Intentional self-harm

In the same five-year period, nearly two-thirds of intentional self-harm deaths were by hanging, strangulation or suffocation (31 of the total 48). A further nine were due to intentional self-poisoning and five were due to firearms discharge (table 3.4).<sup>21</sup>

# Table 3.4: Injury deaths caused by intentional self-harm, New PlymouthDistrict, by specific injury types, five years 2008–2012 combined

Injury type	Number
Intentional self-harm by hanging, strangulation and suffocation	31
Intentional self-poisoning by and exposure to other and unspecified chemical and noxious substances, including alcohol and including gases	6
Intentional self-harm by firearm discharge	5
Intentional self-poisoning by and exposure to drugs, medicaments and biological substances, excluding alcohol	3
Intentional self-harm by other or unspecified means	3
Total intentional self-harm	48

Source: Data supplied by Ministry of Health.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

<sup>&</sup>lt;sup>21</sup> During 2004–2008, there were 44 Injury deaths caused by intentional self-harm for New Plymouth District (Maskill et al 2012).

#### **Transport accidents**

Of the 41 local people fatally injured in transport accidents during 2008-2012, just over half (21) were car occupants. Another 10 were motorcycle riders, and three were pedestrians (table 3.5). No pedal cyclists were killed during the five-year period.

Injury type	Number
Car occupant injured other transport accident	11
Car occupant injured in collision with motor vehicle (excl. trains)	10
Motorcycle rider injured in other transport accident	5
Motorcycle rider injured in collision with motor vehicle (excl. trains)	5
Other land transport accidents	3
Pedestrian injured in collision with motor vehicle (excl. trains)	2
Occupant of pickup truck injured in collision with motor vehicle (excl. trains)	2
Air and space transport accidents	2
Pedestrian injured in other transport accidents	1
Total transport accidents	41

# Table 3.5: Injury deaths caused by transport accidents, New PlymouthDistrict, by specific injury types, five years 2008–2012 combined

Source: Data supplied by Ministry of Health.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional. Excl. = excluding.

#### Injury deaths in different age groups

Figure 3.3 shows age-specific average annual injury death rates for New Plymouth District males and females. The rates indicate the probability of males and females in each age group dying from injury.

Injury death rates were by far the highest in the 75+ age group, for males as well as females.

In every age group except 0–14, where the rates were very similar, males had higher injury death rates than females. In the 15–24 year age group, males were 12 times more likely than females to die from injury; and in the 25–44 year age group they were 13 times more likely to die from injury.



Figure 3.3: Injury death rate, New Plymouth District, by age and gender, five years 2008–2012 combined

Source: Data supplied by Ministry of Health. Data in appendix table 3.4.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

The age group with the highest total number of injury deaths was the 75+ group (64 deaths in the 5-year period). The majority (48) of these deaths were from falls (table 3.6 overleaf).

There were two injury-related deaths among pre-school children aged 0–4, and these were breathing-related events. There were no injury-related deaths in children aged 5–14.

Intentional self-harm and transport accidents together accounted for well over half of the injuryrelated deaths among adults aged 25–44 and 45–64.

There were 12 injury-related deaths in the 65–74 year age group, with transport accidents and intentional self-harm together accounting for 11 of these.

# Table 3.6: Causes of injury deaths, New Plymouth District, by age and injury groups, five years 2008–2012 combined

Injury groupNo.Injury groupNo.
Other accidental threats to breathing 2 Transport accidents 8
Total     2     Intentional self-harm     4
Accidental drowning and submersion 1
Exposure to smoke, fire and flames 1
Total 14
Age 25–44 years Age 45–64 years
Injury groupNo.Injury groupNo.
Intentional self-harm 17 Intentional self-harm 20
Transport accidents9Transport accidents12
Accidental poisoning by and exposure to noxious Accidental poisoning by and exposure
substances 4 to noxious substances 5
Exposure to inanimate mechanical forces 2 forces 4
Assault 2 Falls 3
Sequelae of transport, other accidents, intentional
self-harm, assault and events of undetermined
intent 2 Accidental drowning and submersion 2
Falls1Assault2
Accidental drowning and submersion 1 Event of undetermined intent 1
Sequelae of transport, other accidents,
ambient air pressure 1 of undetermined intent
Total   39   Total   50
Age 65–74 years Age 75+ years
Injury groupNo.Injury groupNo.
Transport accidents6Falls48
Intentional self-harm 5 Transport accidents 6
Accidental poisoning by and exposure
Falls   1   to noxious substances   3
I otal     12     Exposure to forces of nature     2
Intentional self-harm 2
Accidental drowning and submersion 1
Exposure to smoke, fire and flames 1
Accidental exposure to other and
Total 64

Source: Data supplied by Ministry of Health. Data in appendix table 3.3.

Notes:

Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

There were no injury-related deaths for 5–14 year-olds. Injury groups with no deaths have been excluded from the table.

#### Injury deaths among males and females

In 2008–2012, males had 5.1 times the average annual age-standardised injury death rates of females (57 per 100,000 population compared with 11 per 100,000) (appendix table 3.4).

Reflecting these rates, nearly three-quarters (74 percent), or 134 of the 181 New Plymouth District people fatally injured during this five-year period were male.

Top of the list for specific causes of injury death for males was intentional self-harm, followed by transport accidents (table 3.7). Altogether, 45 out of the 134 male deaths (34%) were for intentional injury (nearly all from intentional self-harm).

The top injury death cause for New Plymouth District females was falls, followed by transport accidents. Intentional self-harm was less prominent for females than for males; nonetheless 7 of the 47 female deaths in the five years (15%) were from intentional injury (self-harm or assault).

### Table 3.7: Causes of injury deaths, New Plymouth District, by gender and injury groups, five years 2008–2012 combined

Male		Female		
Injury group	No.	Injury group	No.	
Intentional self-harm	44	Falls	24	
Transport accidents	32	Transport accidents	9	
Falls	29	Intentional self-harm	4	
Accidental poisoning by and exposure to noxious substances	9	Accidental poisoning by and exposure to noxious substances	3	
Exposure to inanimate mechanical forces	6	Assault	3	
Accidental drowning and submersion	5	Exposure to forces of nature	2	
Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined	2	Other appidental threats to breathing	1	
	5	Accidental exposure to other and unspecified		
Exposure to smoke, fire and flames	2	factors	1	
Other accidental threats to breathing	1	Total	47	
Exposure to electric current, radiation, & extreme ambient air pressure	1			
Assault	1			
Event of undetermined intent	1			
Total	134			

Source: Data supplied by Ministry of Health.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

#### Injury deaths among Māori and non-Māori

In 2008–2012, Māori living in New Plymouth District had 1.8 times the average annual agestandardised injury death rates of non-Māori (56 per 100,000 population compared with 32 per 100,000) (appendix table 3.5).<sup>22</sup>

Of the 28 Māori people fatally injured during this period, 11 died as a result of intentional self-harm and 4 died in transport accidents (table 3.8). <sup>23</sup> Altogether, nearly half (13 of 28) of Māori injury deaths were from intentional injury (either self-harm or assault).

groups, five years 2008–2012 combined	
groups, nve years 2006–2012 combined	

Māori		Non-Māori*		
Injury groups	No.	Injury groups	No.	
Intentional self-harm	11	Falls	51	
Transport accidents	4	Transport accidents	37	
Exposure to inanimate mechanical forces	3	Intentional self-harm	37	
Falls	2	Accidental poisoning by and exposure to noxious substances	10	
Other accidental threats to breathing	2	Accidental drowning and submersion	4	
Accidental poisoning by and exposure to noxious substances	2	Exposure to inanimate mechnical forces	3	
Assault	2	Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	3	
Accidental drowning and submersion	1	Exposure to smoke, fire and flames	2	
Event of undetermined intent	1	Exposure to forces of nature	2	
Total	28	Assault	2	
		Exposure to electric current, radiation, & extreme ambient air pressure	1	
		Accidental exposure to other and unspecified factors	1	
		Total	153	

Source: Data supplied by Ministry of Health. .

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional. \*The rest of the population, not identifying as Māori.

The leading non-Māori injury death cause was falls, with 51 cases, at least partly reflecting the older population. Intentional self-harm and transport accidents were next most common, with 37 deaths each. Thirty-nine non-Māori injury deaths (25%) were from intentional injury (either self-harm or assault).

<sup>&</sup>lt;sup>22</sup> During 2004–2008, the Māori age-standardised injury death rate was 2.4 times that of non-Māori (Maskill et al 2012).

<sup>&</sup>lt;sup>23</sup> During 2004–2008, there were 7 Māori deaths from self-harm and 9 Māori deaths from transport accidents (Maskill et al 2012).

#### **Rural-urban areas**

As would be expected from the number of people living there, New Plymouth main urban area had the highest *numbers* of injury-related deaths in the district during 2008–2012 (130 of the total 181). However, the minor urban areas (Waitara West and East, and Inglewood) had the highest age-standardised injury death *rate*. Next highest was New Plymouth urban area. Rural centres and other rural areas had somewhat lower injury death rates (figure 3.4).<sup>24</sup>



Figure 3.4: Injury death rate, New Plymouth District, by rural-urban category, five years 2008–2012 combined

Source: Data supplied by Ministry of Health. Data in appendix table 3.6. Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional. \*Rate for 'Rural centre' based on small numbers.

<sup>&</sup>lt;sup>24</sup> See the glossary for definitions of the different types of rural / urban areas. For further information about the area units included in these categories see appendix table 2.7.

#### Neighbourhood deprivation (NZDep2013)

As noted previously in Chapter 2, the New Zealand Deprivation Index 2013 (NZDep2013) is an indicator of levels of relative socioeconomic deprivation in different neighbourhoods of New Zealand. Category 1 on the index refers to the least socioeconomically deprived 10% (decile) of New Zealand's areas. Category 10 refers to the most socioeconomically deprived 10% of New Zealand's areas.

Figure 3.5 shows the injury death rates for New Plymouth District people according to their NZDep2013 category. Those living in categories 8-10, the most deprived population areas, were more likely to be fatally injured than those living in categories 4–7, or 1–3, the least deprived population areas.



# Figure 3.5: Injury death rate, New Plymouth District, by NZDep2013 deciles, five years 2008–2012 combined

Source: Data supplied by Ministry of Health. Data in appendix table 3.7.

Notes: Years are calendar years 1 January to 31 December. Data for 2012 is provisional

#### Trends in injury deaths

Overall, the average annual age-standardised injury death rate for New Plymouth District for the period 2008–2012 was 34 per 100,000 population. This was very similar to the New Zealand rate of 35 per 100,000

Figure 3.6 compares trends in annual injury death rates for New Plymouth District and all of New Zealand for the 24-year period 1989–2012. The rates are age-standardised to neutralise the effect of differences in the age-profiles of the New Plymouth and New Zealand populations. The figure also shows three-year running averages for New Plymouth District injury death rates. In relatively small populations like New Plymouth District, numbers of deaths can vary markedly from year to year because of chance alone. Using three-year running averages helps to smooth out these random variations, making it easier to identify trends over time.

# Figure 3.6: Age-standardised annual injury death rate, New Plymouth District and New Zealand, 1989–1999, 2000–2012



 Source:
 Data supplied by Ministry of Health. Data in appendix table 3.8.

 Notes:
 Years are calendar years 1 January to 31 December. Data for 2012 is provisional.

 In 2000, the ICD classification system changed from ICD-9 to ICD-10.

Comparing New Plymouth District's three-year running averages with the annual injury death rates for all New Zealand, both New Plymouth and New Zealand have recorded generally declining injury death rates over the period. Most of the time, New Plymouth District's rates have tracked slightly below New Zealand's rates. However, there have been just a few years when local rates have been similar to, or very slightly higher than the national average.

# **HOSPITALISATIONS FOR INJURY**

This chapter presents data on injury hospitalisations in the New Plymouth District population mainly for the five calendar years 2010 to 2014.<sup>25</sup>

It also examines longer-term trends in the district's injury hospitalisation rates. Where appropriate, comparisons are made with injury hospitalisation data for New Zealand as a whole.

Hospitalisation is defined as a day patient or inpatient admission to a New Zealand public hospital. It excludes hospital emergency department attendances, although a proportion of emergency department patients will subsequently be admitted to hospital as day or inpatients.<sup>26</sup>

In general, injuries requiring hospitalisation are more likely to be serious, life-threatening or disabling compared with injuries only requiring treatment in emergency departments, health centres or GP clinics.

A wide range of factors influence the number of injury hospitalisations recorded in any given year. These include variations in the true incidence of injury in the population (itself shaped by a multiplicity of factors), variations in people's treatment-seeking behaviour, their access to public and private services, and changes in admission policies or the types of services provided in hospital or non-hospital injury-treatment settings.

<sup>&</sup>lt;sup>25</sup> Hospitalisation data for 2014 is provisional.

<sup>&</sup>lt;sup>26</sup> Information about emergency department attendances is reported in the next chapter.

#### **Overview of injury hospitalisations**

In the five years 2010–2014, there were 9,571 injury hospitalisations recorded for people living in New Plymouth District. This is an average of 1,914 injury hospitalisations per year, or 11% of all public hospitalisations for the period for people in the district.

#### Unintentional and intentional injury hospitalisations

Altogether, during the period 2010–2014, 8,308 (87%) of the total New Plymouth District injury hospitalisations were from unintentional injury ('accidents') and 860 (9%) were from intentional injury (intentional self-harm and assaults).<sup>27</sup>

However, a higher proportion of hospitalisations were due to intentional injury in the 15–24 and 25–44 year age groups – 23% and 19% respectively (figure 4.1).



# Figure 4.1: Unintentional and intentional injury hospitalisations, New Plymouth District, by age, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.1.

Notes: Years are calendar years 1 January to 31 December.

'Other' includes injuries of undetermined intent, legal interventions, operations of war, and sequelae (late affects) of injury.

<sup>&</sup>lt;sup>27</sup> This was similar to New Zealand's 86% for unintentional injuries and 11% for intentional (appendix table 4.2).

#### Main causes of injury hospitalisations

As is the case for deaths, causes of injury hospitalisation are classified using the International Classification of Diseases' (ICD-10) system for coding the external causes of health conditions (E-codes). All hospitalisations caused by injury are included in the analysis except those arising from medical misadventure.

Falls were by far the most common causes of injury hospitalisation. Forty-five percent of all New Plymouth District injury hospitalisations were for falls (figure 4.2). In the district in 2006–2010, 41% of all hospitalisations were for falls (Maskill et al 2012).

The second and third most common causes of injury hospitalisation were transport accidents and exposure to inanimate mechanical forces (13% each).

# Figure 4.2: Causes of injury hospitalisation (injury groups), New Plymouth District, five years 2010–2014 combined (n=9,571)



'Inanimate' = not related to living things.

#### Falls

During the five-year period 2010–2014 there were 4,351 hospitalisations for unintentional fallrelated injuries among people living in New Plymouth District. Table 4.1 indicates the most common specific causes for injury hospitalisations from falls. There has been a 28% increase in the total number of falls hospitalisations since the last needs assessment (Maskill et al 2012) – from 3,387 (2006-2010) to 4,351 (2010-2014).

Falls on the same level, especially falls resulting from either slipping, tripping or stumbling, made up the majority of fall hospitalisations (52%). In addition, a notable proportion of falls hospitalisations were caused by 'other types' of falls from one level to another (13%), and falls on and from stairs and steps (8%).

Injury type	No.	Percent
Fall on same level from slipping, tripping or stumbling	1,243	28.6
Other fall on same level	1,037	23.8
Unspecified fall	723	16.6
Other fall from one level to another	548	12.6
Fall on and from stairs and steps	344	7.9
Fall involving playground equipment	181	4.2
Fall from or out of or through building or structure	106	2.4
Fall on or from ladder or scaffolding	91	2.1
Other fall on same level due to collision with, or pushing by another person	78	1.8
Total falls	4,351	100.0

Table 4.1: Injury hospitalisations caused by falls, New Plymouth District, byspecific injury types, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.3.

Notes: Years are calendar years 1 January to 31 December.
#### **Transport-related accidents**

During the same five-year period 2010–2014, the next most common injury group was transport accidents, for which there were 1,289 hospitalisations. Car occupants (31%), motorcycle riders (23%) and pedal cyclists (22%) featured prominently in the injury hospitalisations caused by transport-related accidents. Altogether, just over three-quarters (77%) of transport-related accident hospitalisations involved these three groups (table 4.2).

There was a 16% increase in the total number of transport-related hospitalisations since the last needs assessment (Maskill et al 2012) – from 1,113 (2006-2010) to 1,289 (2010-2014).

 Table 4.2: Injury hospitalisations caused by transport-related accidents, New Plymouth

 District, by specific injury types, five years 2010–2014 combined

Injury type	No.	Percent
Motorcycle rider injured in other transport accident	253	19.6
Pedal cyclist injured in other transport accident	245	19.0
Car occupant injured other transport accident	210	16.3
Car occupant injured in collision with motor vehicle (excl. trains)	188	14.6
Other land transport accidents	135	10.5
Pedestrian injured in collision with motor vehicle (excl. trains)	63	4.9
Motorcycle rider injured in collision with motor vehicle (excl. trains)	48	3.7
Pedal cyclist injured in collision with motor vehicle (excl. trains)	43	3.3
Water transport accidents	31	2.4
Occupant of heavy transport vehicle injured other transport accident	21	1.6
Occupant of pickup truck injured in other transport accident	14	1.1
Pedestrian injured in other transport accident	9	0.7
Bus occupant injured other transport accident	7	0.5
Other and unspecified transport accidents	7	0.5
Occupant of pickup truck injured in collision with motor vehicle (excl. trains)	4	0.3
Occupant of heavy transport vehicle injured in collision with motor vehicle (excl. trains)	4	0.3
Air and space transport accidents	4	0.3
Bus occupant injured in collision with motor vehicle (excl. trains)	3	0.2
Total transport accidents	1,289	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.3.

Notes: Years are calendar years 1 January to 31 December. excl. = excluding.

#### Inanimate mechanical forces

During 2010–2014 New Plymouth District people experienced almost 1,200 hospitalisations for unintentional injuries related to 'inanimate [non-living] mechanical forces'. The most frequent specific cause in this category was contact with sharp glass, knife, sword, dagger or non-powered hand tool (21%) (table 4.3).

There was almost no change in the total number of inanimate mechanical forces hospitalisations since the last needs assessment (Maskill et al 2012) – from 1,191 (2006-2010) to 1,199 (2010-2014).

Table 4.3: Injury hospitalisations caused by inanimate mechanical forces, New
Plymouth District, by specific injury types, five years 2010–2014 combined

Injury type	No.	Percent
Contact with sharp glass, knife, sword, dagger, non-powered hand tool	252	21.0
Striking against or struck by other objects	193	16.1
Exposure to other inanimate mechanical forces	165	13.8
Contact with other and unspecified machinery	161	13.4
Foreign body entering into or through eye or natural orifice	127	10.6
Caught, crushed, jammed or pinched in or between object	124	10.3
Struck by thrown, projected or falling object	96	8.0
Striking against or struck by sports equipment	56	4.7
Contact with agricultural machinery	11	0.9
Discharge of firework, other explosions	8	0.7
Explosion and rupture of pressurised devices	5	0.4
Discharge from firearms	1	0.1
Total exposure to inanimate mechanical forces	1,199	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.3.

Notes: Years are calendar years 1 January to 31 December.

#### **Animate mechanical forces**

Over the same five-year period, there were 382 local hospitalisations related to 'animate [living] mechanical forces'. Nearly half (52%) of these injury hospitalisations were caused by people being hit, struck, kicked, twisted, bitten, scratched or struck against by these forces. An example is a person being kicked by a horse.

Bites, stings or other kinds of injuries from animals including dogs largely made up the remainder of these types of hospitalisations (table 4.4).

There was a 23% increase in the total number of animate mechanical forces hospitalisations since the last needs assessment (Maskill et al 2012) – from 311 (2006-2010) to 382 (2010-2014).

## Table 4.4: Injury hospitalisations caused by animate mechanical forces, New Plymouth District, by specific injury types, five years 2010–2014 combined

Injury type	No.	Percent
Hit, struck, kicked, twisted, bitten, scratched, struck against, etc	198	51.8
Bitten, stung, struck, or crushed by another animal	119	31.2
Bitten or struck by dog	49	12.8
Exposure to other animate mechanical forces	16	4.2
Total exposure to animate mechanical forces	382	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.3.

Notes: Years are calendar years 1 January to 31 December.

#### Intentional self-harm

Turning now to intentional injuries from 2010–2014, by far the most common form of intentional self-harm leading to hospitalisation was poisoning by, and exposure to, drugs, medicaments and biological substances. This cause accounted for 86% of the total 588 hospitalisations in this injury group (see table 4.5). An example is deliberately overdosing on sleeping pills.

There was a 14% increase in the total number of intentional self-harm hospitalisations since the last needs assessment (Maskill et al 2012) – from 515 (2006-2010) to 588 (2010-2014).

# Table 4.5: Injury hospitalisations caused by intentional self-harm, New Plymouth District, by specific injury types, five years 2010–2014 combined

Injury type	No.	Percent
Intentional self-poisoning by and exposure to drugs, medicaments and biological substances	505	85.9
Intentional self-harm by other or unspecified means	51	8.7
Intentional self-poisoning by and exposure to other and unspecified chemical substances	18	3.1
Intentional self-harm by hanging, strangulation and suffocation	14	2.4
Total intentional self-harm	588	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.3. Notes: Years are calendar years 1 January to 31 December.

#### Assault

Somewhat less common causes of intentional injury hospitalisations were related to different types of assault. Over two-thirds (70%) of the total 272 assault-related hospitalisations from 2010–2014 were caused by a bodily force (e.g. hit or struck by a hand or foot) as opposed to a blunt (9%) or sharp (7%) object (table 4.6).

There was a 9% increase in the total number of assault hospitalisations since the last needs assessment (Maskill et al 2012) – from 250 (2006-2010) to 272 (2010-2014).

## Table 4.6: Injury hospitalisations caused by assault, New Plymouth District, by specific injury types, five years 2010–2014 combined

Injury type	No.	Percent
Assault by bodily force	190	69.9
Assault by other or unspecified means	33	12.1
Assault by a blunt object	25	9.2
Assault by a sharp object	18	6.6
Other maltreatment syndromes	5	1.8
Neglect and abandonment	1	0.4
Total assault	272	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.3.

Notes: Years are calendar years 1 January to 31 December.

#### **Other causes**

For details of other specific causes of injury hospitalisations, see appendix table 4.3.

#### Injury hospitalisation by gender and age

In the five years 2010–2014, the highest injury rates occurred in people aged 75+ (9,022 per 100,000) followed by those aged 15–24 (2,963 per 100,000) (appendix table 4.4).

There were slightly more injury hospitalisations per year for New Plymouth District males (5,073) than for females (4,498). This is an annual average of 1,014 hospitalisations for males and 900 for females. Overall, males had a higher age-standardised rate of injury hospitalisation (2,599 per 100,000 population, up from 2,416 per 100,000 for 2006–2010) than females (1,710 per 100,000, up from 1,504 per 100,000 for 2006–2010) (appendix table 4.4).

Age-specific injury hospitalisation rates indicate which New Plymouth age and gender groups were most at risk of being hospitalised for injury (figure 4.3).

# Figure 4.3: Rate of injury hospitalisation, New Plymouth District, by age and gender, five years 2010–2014 combined



Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

Notes: Years are calendar years 1 January to 31 December.

Women in the 75+ age group had the greatest risk of injury hospitalisation, with about a one in 10 chance of being hospitalised on average each year (10,426 injury hospitalisations per 100,000). The next highest-risk group was men in the 75+ age group (7,047 injury hospitalisations per 100,000), followed by men in the 15–24 age group (3,895 injury hospitalisations per 100,000).

In all age groups except the 65–74 and 75+ age groups, males had a higher risk of injury hospitalisation than females.

It is useful now to look at which causes of injury hospitalisation were the most common for each age and gender group in New Plymouth District.

### Causes of injury hospitalisation – children aged 0–4

Table 4.7 shows the most common causes of injury hospitalisations for pre-school boys and girls aged 0–4 years. Falls were by far the most common, making up 40% of all injury hospitalisations for males aged 0–4 and 41% of all injury hospitalisations for females aged 0–4.

Male			Female		
Injury group	No.	Percent	Injury group	No.	Percent
Falls	90	39.5	Falls	72	40.7
Exposure to inanimate mechanical forces	43	18.9	Exposure to inanimate mechanical forces	29	16.4
Accidental poisoning by and exposure to noxious substances	23	10.1	Accidental poisoning by and exposure to noxious substances	20	11.3
Contact with heat and hot substances	18	7.9	Contact with heat and hot substances	14	7.9
Exposure to animate mechanical forces	13	5.7	Exposure to animate mechanical forces	10	5.6
Accidental exposure to other and unspecified factors	12	5.3	Other accidental threats to breathing	10	5.6
Transport accidents	10	4.4	Accidental exposure to other and unspecified factors	6	3.4
Over-exertion, travel and privation	6	2.6	Exposure to smoke, fire and flames	5	2.8
Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	5	2.2	Assault	4	2.3
Other accidental threats to breathing	4	1.8	Transport accidents	3	1.7
Event of undetermined intent	2	0.9	Over-exertion, travel and privation	3	1.7
Exposure to smoke, fire and flames	1	0.4	Exposure to forces of nature	1	0.6
Assault	1	0.4			
Total	228	100.0	Total	177	100.0

# Table 4.7: Causes of injury hospitalisation, 0–4 age group, New Plymouth District, by gender and injury group, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

#### Causes of injury hospitalisation – children aged 5–14

In 2010–2014 falls accounted for around half of all injury hospitalisations among New Plymouth District residents aged 5–14. Transport accidents and exposure to inanimate mechanical forces were the next most common (table 4.8).

## Table 4.8: Causes of injury hospitalisation, 5–14 age group, New Plymouth District, by gender and injury group, five years 2010–2014 combined

Male			Female		
Injury group	No.	Percent	Injury group	No.	Percent
Falls	243	48.1	Falls	168	51.9
Transport accidents	103	20.4	Transport accidents	43	13.3
Exposure to inanimate mechanical forces	72	14.3	Exposure to inanimate mechanical forces	40	12.3
Exposure to animate mechanical forces	38	7.5	Exposure to animate mechanical forces	15	4.6
Accidental exposure to other and unspecified factors	12	2.4	Accidental exposure to other and unspecified factors	15	4.6
Accidental poisoning by and exposure to noxious substances	5	1.0	Intentional self-harm	15	4.6
Over-exertion, travel and privation	5	1.0	Over-exertion, travel and privation	10	3.1
Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	5	1.0	Event of undetermined intent	5	1.5
Accidental drowning and submersion	4	0.8	Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	5	1.5
Assault	4	0.8	Accidental poisoning by and exposure to noxious substances	4	1.2
Other accidental threats to breathing	3	0.6	Assault	3	0.9
Exposure to smoke, fire and flames	3	0.6	Exposure to smoke, fire and flames	1	0.3
Intentional self-harm	3	0.6			
Event of undetermined intent	3	0.6			
Exposure to electric current, radiation, & extreme ambient air pressure	1	0.2			
Contact with heat and hot substances	1	0.2			
Total	505	100.0	Total	324	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

### Causes of injury hospitalisation – young people aged 15–24

During the period 2010–2014, the three leading causes of injury hospitalisation for males aged 15–24 were exposure to inanimate mechanical forces (20%), falls (20%) and transport accidents (18%). However, females aged 20–29 were most likely to be hospitalised for injuries caused by intentional self-harm (29%), followed by transport accidents (22%) and falls (14%) (table 4.9).

Male			Female		
Injury group	No.	Percent	Injury group	No.	Percent
Exposure to inanimate mechanical					
forces	187	20.3	Intentional self-harm	124	28.5
Falls	182	10.8	Transport accidents	04	21.6
	102	19.0		54	21.0
Transport accidents	169	18.3	Falls	61	14.0
			Exposure to inanimate mechanical		
Assault	95	10.3	forces	47	10.8
Intentional self-harm	76	8.3	Assault	23	5.3
Exposure to animate mechanical					
forces	75	8.1	Event of undetermined intent	23	5.3
		0.5	For some to entire to use the size of forests		1.0
Over-exertion, travel and privation	32	3.5	Exposure to animate mechanical forces	20	4.6
unspecified factors	32	3.5	Over-exertion, travel and privation	13	3.0
			Accidental exposure to other and		
Event of undetermined intent	27	2.9	unspecified factors	9	2.1
Sequelae of transport, other accidents,					
Intentional self-narm, assault and events of undetermined intent	14	15	Accidental poisoning by and exposure to povious substances	6	14
		1.0	Sequelae of transport, other accidents,		
			intentional self-harm, assault and		
Exposure to smoke, fire and flames	13	1.4	events of undetermined intent	6	1.4
Accidental poisoning by and exposure	7	0.0	Eveneouse to employ fire and flamos	2	0.7
to noxious substances		0.0	Exposure to smoke, fire and fiames	3	0.7
Contact with heat and hot substances	5	0.5	Contact with heat and hot substances	2	0.5
Contact with venomous animals or					
plants	4	0.4	Accidental drowning and submersion	1	0.2
Other essidentel threats to breathing	4	0.1	Other engineering threads to breathing	4	0.0
Other accidental threats to breathing	1	0.1	Other accidential threats to breathing	1	0.2
Exposure to forces of nature	1	0.1	extreme ambient air pressure	1	0.2
Legal intervention and operations of		0.1			•
war	1	0.1	Exposure to forces of nature	1	0.2
Total	004	400.0	Total	405	100.0
Iotai	921	100.0	Iotal	435	100.0

Table 4.9: Causes of injury hospitalisation, 15–24 age group, New Plymouth District,
by gender and injury group, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

### Causes of injury hospitalisation – adults aged 25–44

Intentional self-harm (22%) was also the leading cause of injury hospitalisation for women aged 25–44. It was also the fourth commonest cause of injury hospitalisation for men in this age group (7%). Transport accidents (23%) and exposure to inanimate mechanical forces (22%) were the two most common injury causes of hospitalisations for men aged 25–44 (table 4.10).

Male			Female		
Injury group	No.	Percent	Injury group	No.	Percent
Transport accidents	257	22.6	Intentional self-harm	146	22.1
Exposure to inanimate mechanical forces	251	22.1	Falls	124	18.8
Falls	171	15.0	Transport accidents	108	16.4
Intentional self-harm	84	7.4	Exposure to inanimate mechanical forces	82	12.4
Assault	79	6.9	Exposure to animate mechanical forces	36	5.5
Over-exertion, travel and privation	58	5.1	Over-exertion, travel and privation	35	5.3
Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	57	5.0	Assault	27	4.1
Exposure to animate mechanical forces	53	4.7	Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	26	3.9
Accidental exposure to other and unspecified factors	38	3.3	Accidental exposure to other and unspecified factors	23	3.5
Accidental poisoning by and exposure to noxious substances	23	2.0	Event of undetermined intent	23	3.5
Event of undetermined intent	23	2.0	Accidental poisoning by and exposure to noxious substances	16	2.4
Exposure to smoke, fire and flames	14	1.2	Exposure to smoke, fire and flames	4	0.6
Contact with venomous animals or plants	11	1.0	Exposure to electric current, radiation, & extreme ambient air pressure	3	0.5
Contact with heat and hot substances	7	0.6	Accidental drowning and submersion	2	0.3
Accidental drowning and submersion	4	0.4	Contact with heat and hot substances	2	0.3
Other accidental threats to breathing	2	0.2	Contact with venomous animals or plants	2	0.3
Exposure to electric current, radiation, & extreme ambient air pressure	2	0.2	Legal intervention and operations of war	1	0.2
Exposure to forces of nature	2	0.2			
Legal intervention and operations of war	1	0.1			
Total	1,137	100.0	Total	660	100.0

# Table 4.10: Causes of injury hospitalisation, 25–44 age group, New Plymouth District, by gender and injury group, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

### Causes of injury hospitalisation – adults aged 45–64

Falls were the most frequent injury-related reasons for New Plymouth men and women aged 45–64 being hospitalised in 2010–2014 (28% and 39% respectively). Transport accidents were next most common, followed by exposure to inanimate mechanical forces for men, and intentional self-harm for women (table 4.11).

Male			Female		
Injury group	No.	Percent	Injury group	No.	Percent
Falls	297	28.0	Falls	280	38.5
Transport accidents	223	21.0	Transport accidents	108	14.9
Exposure to inanimate mechanical forces	217	20.4	Intentional self-harm	76	10.5
Over-exertion, travel and privation	68	6.4	Exposure to inanimate mechanical forces	62	8.5
Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	47	4.4	Over-exertion, travel and privation	50	6.9
Intentional self-harm	45	4.2	Exposure to animate mechanical forces	34	4.7
Exposure to animate mechanical forces	36	3.4	Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined intent	26	3.6
Accidental exposure to other and unspecified factors	32	3.0	Accidental exposure to other and unspecified factors	23	3.2
Assault	21	2.0	Accidental poisoning by and exposure to noxious substances	20	2.8
Accidental poisoning by and exposure to noxious substances	19	1.8	Event of undetermined intent	15	2.1
Event of undetermined intent	18	1.7	Contact with heat and hot substances	8	1.1
Exposure to smoke, fire and flames	11	1.0	Assault	8	1.1
Contact with heat and hot substances	10	0.9	Other accidental threats to breathing	7	1.0
Other accidental threats to breathing	7	0.7	Exposure to smoke, fire and flames	6	0.8
Contact with venomous animals or plants	7	0.7	Contact with venomous animals or plants	2	0.3
Exposure to electric current, radiation, & extreme ambient air pressure	3	0.3	Exposure to forces of nature	1	0.1
Accidental drowning and submersion	1	0.1	Legal intervention and operations of war	1	0.1
Total	1,062	100.0	Total	727	100.0

# Table 4.11: Causes of injury hospitalisation, 45–64 age group, New Plymouth District,by gender and injury group, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

### Causes of injury hospitalisation – older adults aged 65–74

Falls accounted for just over two-thirds (69%) of injury hospitalisations for older women aged 65–74 and nearly half (47%) of injury hospitalisations for men in this age group. Other causes were much less common (table 4.12).

# Table 4.12: Causes of injury hospitalisation, 65–74 age group, New Plymouth District, bygender and injury group, five years 2010–2014 combined

Male			Female		
Injury group	No.	Percent	Injury group	No.	Percent
	100				
	182	47.4	Falls	284	68.6
Exposure to inanimate mechanical forces	68	17 7	Transport accidents	35	85
	00	17.7		00	0.0
Transport accidents	47	12.2	Exposure to inanimate mechanical forces	20	4.8
Sequelae of transport, other accidents,			Sequelae of transport, other accidents,		
intentional self-harm, assault and events			intentional self-harm, assault and events		
of undetermined intent	19	4.9	of undetermined intent	20	4.8
				47	
Over-exertion, travel and privation	17	4.4	Over-exertion, travel and privation	17	4.1
Evenesure to enimete machanical forese	10	2.1	Accidental exposure to other and	10	2.4
Exposure to animate mechanical forces	12	3.1		10	2.4
unspecified factors	9	23	Exposure to animate mechanical forces	8	19
Accidental poisoning by and exposure to		2.0	Accidental poisoning by and exposure to	0	1.0
noxious substances	8	2.1	noxious substances	7	1.7
Intentional self-harm	5	1.3	Intentional self-harm	6	1.4
Other accidental threats to breathing	4	1.0	Exposure to smoke, fire and flames	3	0.7
					0.5
Contact with heat and hot substances	3	0.8	Other accidental threats to breathing	2	0.5
Event of undetermined intent	3	0.8	Contact with heat and het substances	1	0.2
	5	0.0		1	0.2
Exposure to smoke, fire and flames	2	0.5	Assault	1	0.2
Contact with venomous animals or					
plants	2	0.5			
Assault	2	0.5			
Evenes to former of notive		0.0			
Exposure to forces of nature	1	0.3			
Total	384	100.0	Total	414	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

#### Causes of injury hospitalisation – older adults aged 75+

The vast majority of injury-related hospitalisations among adults aged 75 and over, were due to falls – 82% of injury hospitalisations for men, and 86% for women (table 4.13).

# Table 4.13: Causes of injury hospitalisation, 75+ age group, New Plymouth District, bygender and injury group, five years 2010–2014 combined

Male			Female		
Injury group	No.	Percent	Injury group	No.	Percent
		<u> </u>			
Falls	683	81.7	Falls	1,514	86.0
Exposure to inanimate mechanical	41	4.0	Transport appidente	50	2.4
lorces	41	4.9		29	3.4
Transport accidents	30	3.6	Over-exertion, travel and privation	42	2.4
			· · · ·		
Over-exertion, travel and privation	15	1.8	Exposure to inanimate mechanical forces	40	2.3
Accidental exposure to other and			Accidental exposure to other and		
unspecified factors	15	1.8	unspecified factors	25	1.4
	4.4	47		00	1.0
Other accidental threats to breathing	14	1.7	Exposure to animate mechanical forces		1.2
Accidental poisoning by and exposure to	11	13	Other accidental threats to breathing	17	1.0
		1.5	Accidental poisoning by and exposure to	17	1.0
Exposure to animate mechanical forces	10	1.2	noxious substances	15	0.9
Sequelae of transport, other accidents,	-		Sequelae of transport, other accidents,		
intentional self-harm, assault and events			intentional self-harm, assault and events		
of undetermined intent	5	0.6	of undetermined intent	13	0.7
Intentional calf home	4	0.5	Intentional calf have	4	0.0
Intentional self-narm	4	0.5	Intentional self-narm	4	0.2
Event of undetermined intent	4	0.5	Event of undetermined intent	4	0.2
		0.5			0.2
Assault	2	0.2	Assault	2	0.1
			Exposure to electric current, radiation, &		
Exposure to smoke, fire and flames	1	0.1	extreme ambient air pressure	1	0.1
Legal intervention and operations of war	1	0.1	Exposure to smoke, fire and flames	1	0.1
			Contact with venomous animals or plants	1	0.1
					0.11
			Exposure to forces of nature	1	0.1
Total	836	100.0	Total	1,761	100.0

Source: Data supplied by Ministry of Health. Data in appendix table 4.4.

#### Injury hospitalisations for Māori and non-Māori

From 2010–2014, 1,352 New Plymouth District Māori and 8,219 New Plymouth District non-Māori were hospitalised for injury. This is an average of 270 Māori and 1,644 non-Māori hospitalisations each year. During this period, Māori had slightly higher age-standardised average annual rates of injury hospitalisation (2,561 per 100,000 population, compared with 2,287 per 100,000 for 2006–2010) than non-Māori (2,140 per 100,000 population, compared with 2,024 per 100,000 for 2006–2010) (appendix table 4.5).

A comparison of age-specific rates of injury hospitalisation for Māori and non-Māori residents shows which groups were more likely to be hospitalised because of injury (figure 4.4).

In the middle age groups 15–24, 25–44, and 45–64, Māori had slightly higher injury hospitalisation rates than non-Māori. However, the biggest rate difference between Māori and non-Māori was in the 65–74 age group.



# Figure 4.4: Rate of injury hospitalisation, New Plymouth District, by age and ethnic group, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.5.

Notes: Years are calendar years 1 January to 31 December. Rates calculated using Statistics NZ 2013 Census data.

For both Māori and non-Māori, falls, exposure to inanimate mechanical forces and transport accidents were the three commonest causes of injury hospitalisations (table 4.14). However, falls made up a bigger share of non-Māori injury hospitalisations at least in part because this population group is comparatively older than the Māori group (see chapter 2).

Māori			Non-Māori		
Injury group	No.	Percent	Injury group	No.	Percent
Falls	418	30.9	Falls	3,933	47.9
Exposure to inanimate mechanical forces	208	15.4	Transport accidents	1,086	13.2
Transport accidents	203	15.0	Exposure to inanimate mechanical forces	991	12.1
Intentional self-harm	105	7.8	Intentional self-harm	483	5.9
Assault	92	6.8	Over-exertion, travel and privation	332	4.0
forces	87	6.4	forces	295	3.6
Accidental exposure to other and unspecified factors	47	3.5	Accidental exposure to other and unspecified factors	214	2.6
Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined			Sequelae of transport, other accidents, intentional self-harm, assault and events of undetermined		
intent	46	3.4	intent	202	2.5
Over-exertion, travel and privation	39	2.9	Assault	180	2.2
Accidental poisoning by and exposure to noxious substances	38	2.8	Accidental poisoning by and exposure to noxious substances	146	1.8
Event of undetermined intent	22	1.6	Event of undetermined intent	128	1.6
Contact with heat and hot substances	20	1.5	Exposure to smoke, fire and flames	63	0.8
Other accidental threats to breathing	13	1.0	Other accidental threats to breathing	59	0.7
Exposure to smoke, fire and flames	5	0.4	Contact with heat and hot substances	51	0.6
Exposure to electric current, radiation, & extreme ambient air pressure	4	0.3	Contact with venomous animals or plants	27	0.3
Accidental drowning and submersion	2	0.1	Accidental drowning and submersion	10	0.1
Contact with venomous animals or plants	2	0.1	Exposure to forces of nature	8	0.1
Legal intervention and operations of war	1	0.1	Exposure to electric current, radiation, & extreme ambient air pressure	7	0.1
			Legal intervention and operations of war	4	0.0
Total	1,352	100.0	Total	8,219	100.0

# Table 4.14: Causes of injury hospitalisation, Māori and Non-Māori, New Plymouth District, by injury group, five years 2010–2014 combined

Source: Data supplied by Ministry of Health. Data in appendix table 4.5.

Notes: Years are calendar years 1 January to 31 December.

#### Rural and urban areas

As would be expected from the size of its population, the New Plymouth main urban area contributed the highest *numbers* of injury-related hospitalisations in the district for 2010–2014. However, people living in 'rural centres' in the New Plymouth District had the highest age-standardised injury hospitalisation *rate* per head of population (figure 4.5). Next were people living in minor urban areas, with people living in 'other' rural areas having the lowest rate.<sup>28</sup>





Source: Data supplied by Ministry of Health. Data in appendix table 4.6. Notes: Years are calendar years 1 January to 31 December. There are no 'secondary urban' areas in New Plymouth District. See discussion below about possible geographical miscoding.

However, there was a very high hospitalisation rate for people classified as living in the New Plymouth Central (a main urban area unit). This is likely to be at least partly due to a miscoding of some New Plymouth people living in other area units to New Plymouth Central, as was the case for Emergency Department injury visits (see next chapter).<sup>29</sup> As a consequence, the hospitalisation rate for main urban areas may be artificially inflated, and the rates for the other rural-urban categories may be lower than they should be. It is not possible, for the purposes of this report, to determine how many hospitalisations were geographically misclassified.

<sup>&</sup>lt;sup>28</sup> See the glossary for definitions of the different types of rural / urban areas. For further information about the area units included in these categories see appendix table 2.7.

<sup>&</sup>lt;sup>29</sup> 538 of the total 614 ED injury visits by New Plymouth residents were misclassified into New Plymouth Central, for example because: they were default-coded into this area unit because their street name was misspelt; they had 'no fixed abode'; or they had only a New Plymouth Central PO Box address.

### Neighbourhood deprivation (NZDep2013)

As noted earlier, the New Zealand Deprivation Index 2013 (NZDep2013) is a measure of the level of socioeconomic deprivation in small geographic areas ('neighbourhoods') of New Zealand, based on 2013 Census data. Decile 1 on the index refers to the least socioeconomically deprived 10% (decile) of New Zealand's neighbourhoods. Decile 10 refers to the most socioeconomically deprived 10% of New Zealand's neighbourhoods.

Figure 4.6 shows the age-standardised rates of injury hospitalisation for New Plymouth District people according to which NZDep2013 area they live in. In general, injury hospitalisation rates tended to be higher in the more deprived neighbourhoods of New Plymouth District and lower in the less deprived neighbourhoods.

## Figure 4.6: Injury hospitalisation, New Plymouth District, by NZDep2013 decile, five years 2010–2014 combined



Notes: Years are calendar years 1 January to 31 December.

See discussion below about possible geographical miscoding.

However, there was a very high hospitalisation rate for people classified as living in the New Plymouth Central (NZDep 2013 decile 7). This is likely to be at least partly due to a miscoding of some New Plymouth people living in other area units to New Plymouth Central, as was the case for Emergency Department injury visits (see next chapter).<sup>30</sup> As a consequence, the hospitalisation rate for the NZDep2013 4–7 decile group may be artificially inflated, and the rates for the other NZDep categories may be lower than they should be. It is not possible, for the purposes of this report, to determine how many hospitalisations were geographically misclassified.

<sup>&</sup>lt;sup>30</sup> 538 of the total 614 ED injury visits by New Plymouth residents were misclassified into New Plymouth Central, for example because: they were default-coded into this area unit because their street name was misspelt; they had 'no fixed abode'; or they had only a New Plymouth Central PO Box address.

#### Long-term trends in injury hospitalisation since 1989

Figure 4.7 compares New Plymouth District and New Zealand annual rates of injury hospitalisation for people of all ages over the 26 years from 1989–2014, for all injury causes. The rates are agestandardised to control for differences in the age structure of the New Plymouth District and New Zealand populations. The rates are also adjusted to take into account the change in the International Classification of Diseases system from 2001 onwards (from ICD9 to ICD10).

New Plymouth District's all-age injury hospitalisation rates generally tracked downwards throughout the period from 1989 to 2007. By contrast, New Zealand's slowly but steadily tracked upwards. In 2009 New Plymouth's rates spiked to be higher than New Zealand's for the first time since 1997 (possibly due to a change in patient admission recording practices). However, New Plymouth District's rates declined in 2010 and 2011 and have been lower than the national average for the last five years.

Figure 4.7: Annual injury hospitalisation rates, New Plymouth District and New Zealand, 1989–2014



Source: Data supplied by Ministry of Health. Data in appendix table 4.8.

Notes: Years are calendar years 1 January to 31 December.

All data classified using ICD-9. Years 2001–2010 back-coded from ICD-10. Data for 2014 is provisional.

### Trends in injury hospitalisation since 2001 – all injury causes

Looking more closely at trends since 2001 (using ICD10 only), figure 4.8 traces New Plymouth District injury hospitalisation rates for each of the 14 years 2001–2014 compared to New Zealand rates.<sup>31</sup> Apart from the peak in 2009 (as noted above, possibly due to a change in patient admission recording practices), New Plymouth District rates have consistently tracked below New Zealand rates over this period.



Figure 4.8: Annual injury hospitalisation rates, New Plymouth District and New Zealand, 2001–2014

Source: Data supplied by Ministry of Health. Data in appendix table 4.9.

Notes: Years are calendar years 1 January to 31 December. All data classified using ICD-10. Data for 2014 is provisional.

<sup>&</sup>lt;sup>31</sup> The rest of the trends discussed in this chapter are based on the ICD–10 classification system.

#### Trends in injury hospitalisation caused by falls

Figure 4.9 compares New Plymouth District and New Zealand all-age rates of injury hospitalisation caused by falls, for the 14 years 2001–2014. New Plymouth's fall injury hospitalisation rates were notably lower than New Zealand's in this period, especially between 2004 and 2008. New Plymouth's rate rose to be more in line with the national rate in 2009, but decreased again to become lower than the national rate for the rest of the period.



Figure 4.9: Annual injury hospitalisations caused by falls, New Plymouth District and New Zealand, 2001–2014

Source:Data supplied by Ministry of Health. Data in appendix table 4.9.Notes:Years are calendar years 1 January to 31 December. All data classified using ICD-10.<br/>Data for 2014 is provisional.

The next sections examine trends in hospitalisation rates from 2001–2014 for falls among preschool children aged 0–4 and older people aged 70–79 and 80+. Appendix 1 at the end of this document reports trends in falls-related hospitalisation rates from 2009–2014 for working-age adults aged 20–64 years.

#### Trends in hospitalisations for falls among pre-school children

Looking in more detail at trends in hospitalisations for falls among pre-school children aged 0–4, from 2002–2003 New Plymouth District had three-year running average rates that were similar, or slightly higher than New Zealand's.<sup>32</sup> However, since 2004, the overall trend has been for New Plymouth's rates to be considerably lower than New Zealand's (figure 4.10).

Whereas national hospitalisation rates for falls have steadily increased over the period, New Plymouth's rates decreased steadily from 2003–2007 and then rose to some degree after that.

## Figure 4.10: Annual injury hospitalisations caused by falls among children aged 0–4, New Plymouth District and New Zealand, 2001–2014



 Source:
 Data supplied by Ministry of Health. Data in appendix table 4.10.

 Notes:
 Years are calendar years 1 January to 31 December. All data classified using ICD-10.

 Data for 2014 is provisional.

<sup>&</sup>lt;sup>32</sup> Three-year running averages have been used for New Plymouth District because of relatively small numbers of hospitalisations in the 0–4 year age group.

#### Trends in hospitalisations for falls among older adults

For nearly the whole 14-year period 2001–2014, hospitalisation rates for falls among New Plymouth District people aged 70–79 (figure 4.11) and 80+ (figure 4.12 overleaf) were lower than the national average. The only exceptions were in 2003 (figure 4.11) when New Plymouth's rate for people aged 70–79 spiked to be slightly higher than New Zealand's, and in 2012 (figure 4.12, next page) when New Plymouth's rate for people aged 80+ was very similar to New Zealand's.

During 2001–2014 there was a gradual increase in fall hospitalisation rates for older people aged 70 and over, both in New Plymouth and New Zealand.





Source: Data supplied by Ministry of Health. Data in appendix table 4.10.

Notes: Years are calendar years 1 January to 31 December. All data classified using ICD-10. Data for 2014 is provisional.



Figure 4.12: Annual injury hospitalisations caused by falls among adults aged 80+, New Plymouth District and New Zealand, 2001–2014

Source: Data supplied by Ministry of Health. Data in appendix table 4.10.

Notes: Years are calendar years 1 January to 31 December. All data classified using ICD-10. Data for 2014 is provisional.

#### Trends in injury hospitalisation caused by transport accidents

Figure 4.13 compares New Plymouth District and New Zealand rates of injury hospitalisation caused by transport accidents for the 14 years 2001–2014. Until 2008, New Plymouth District's transport accident hospitalisation rates tracked below New Zealand's. However, In 2009 New Plymouth's rate was higher than New Zealand's, and since then the rate has been similar to New Zealand's.



Figure 4.13: Annual injury hospitalisations caused by transport accidents, New Plymouth District and New Zealand, 2001–2014

Source: Data supplied by Ministry of Health. Data in appendix table 4.9. Notes: Years are calendar years 1 January to 31 December. All data classified using ICD-10. Data for 2014 is provisional.

### Trends in injury hospitalisation caused by inanimate mechanical forces

Figure 4.14 compares New Plymouth District and New Zealand rates of unintentional injury hospitalisation caused by exposure to inanimate mechanical forces, for the 14 years 2001–2014.<sup>33</sup> New Plymouth District's rates tracked below New Zealand's consistently until 2008. In 2009 the New Plymouth rate was slightly higher than New Zealand's, but again has been consistently lower than New Zealand's since then.

# Figure 4.14: Annual injury hospitalisations caused by exposure to inanimate mechanical forces, New Plymouth District and New Zealand, 2001–2014



 Source:
 Data supplied by Ministry of Health. Data in appendix table 4.9.

 Notes:
 Years are calendar years 1 January to 31 December. All data classified using ICD-10.

 Data for 2014 is provisional.

<sup>&</sup>lt;sup>33</sup> See table 4.3, earlier in this chapter, for a list of injuries that are caused by inanimate (non-living) objects.

#### Trends in injury hospitalisation caused by intentional self-harm

Figure 4.15 compares New Plymouth District and New Zealand's intentional self-harm injury hospitalisation rates for the 14 years 2001–2014. New Plymouth's rates tracked below or were similar to New Zealand's from 2001 to 2007, but were above New Zealand's in 2009 and 2010. However, since then New Plymouth District's rates have dropped to below New Zealand's rates, apart from in 2012 when the rates were similar.



# Figure 4.15: Annual injury hospitalisations caused by intentional self-harm, New Plymouth District and New Zealand, 2001–2014

 Source:
 Data supplied by Ministry of Health. Data in appendix table 4.9.

 Notes:
 Years are calendar years 1 January to 31 December. All data classified using ICD-10.

 Data for 2014 is provisional.

EMERGENCY DEPARTMENT VISITS FOR INJURY

There are two public hospital emergency departments in Taranaki, one at New Plymouth's Taranaki Base Hospital and the other at Hawera Hospital.

Both of these emergency departments treat walk-in and ambulanced patients for urgent medical problems including injuries.

In general, most injuries treated at hospital emergency departments (EDs) are of mild or moderate severity. However, a proportion involve significant trauma and can be life-threatening.

Not all New Plymouth District people seeking medical treatment for injuries are seen at the two public hospital EDs. Some are treated at private accident and emergency clinics, general practices or other health services. Data on injury cases from these other services is not available.

National level data on ED visits for injury is not available and so no comparisons are possible between New Plymouth District and New Zealand.

Taranaki DHB currently has no surveillance system to determine whether alcohol is a factor in ED visits. NPiS hopes that the next needs assessment will be able to report on whether alcohol was a factor in ED visits for injury.

#### Injury and non-injury Emergency Department visits in 2014

New Plymouth District residents made a total of 26,733 emergency department visits in 2014:

- of these visits, 8,489 (32%) were for injury (compared to 7,666 in 2010)
- the remaining 18,216 visits (68%) were for non-injury, i.e. illness or disease (compared to 17,414 in 2010).

The ratio of injury to non-injury visits varied across age groups. For example, in 2014 nearly half (49%) of all ED visits by 5-14 year olds were for injury.

By contrast, just 20% of all ED visits by 0-4 year olds were injury-related.<sup>34</sup>

Similarly, just 22% of all ED visits by people aged 65+ were injury-related.

### Age, gender and ethnicity

Of the total 8,489 ED injury visits recorded in 2014:

- close to half (3,652 or 43%) were by pre-school or school-age children, or young adults (ages 0–24).
- almost another half (3,492 or 41%) were by working-age adults aged 25–64 years
- the remainder (1,345 or 16%) were by adults aged 65+ (for details see appendix table 5.1).



# Figure 5.1: Emergency department attendances for injury, New Plymouth District, by age and gender, 2014

Source:

Data supplied by Taranaki District Health Board. Data in appendix table 5.1.

Notes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics.

<sup>&</sup>lt;sup>34</sup> This partly reflects the high frequency of respiratory, gastrointestinal and other illnesses in very young children often requiring urgent medical treatment.

Males living in New Plymouth District made a total of 4,957 ED injury visits. This was 58% of all injury visits. Females made 3,532 injury visits; 42% of the total.

#### Population rates of emergency department visits

On a population basis, males were approximately 50% more likely than females to visit an ED for injury (an unadjusted rate of 12,946 visits per 100,000 population for males compared with 8,841 visits per 100,000 for females).

Age groups at highest risk of making ED injury visits included (figure 5.2):

- young men aged 15–24 (a more than 1 in 5 chance)
- women and men aged 80+ (about a 1 in 6 chance)
- boys aged 5–14 (just under a 1 in 6 chance).

## Figure 5.2: Rates of emergency department attendance for injury, New Plymouth District, by age and gender, 2014



Source: Notes: Data supplied by Taranaki District Health Board. Data in appendix table 5.3

Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics.

#### Māori and non-Māori

Māori in New Plymouth District made 1,448 ED injury visits in 2014. This was 17% of all ED injury visits in the district, the same ratio as for 2010.

Non-Māori made 7,041 visits (for further data on Non-Māori see appendix table 5.2).

Māori males made 884 ED injury visits (61% of all visits by Māori). Māori females made 564 ED visits.

Over half of all Māori ED injury visits (57%) were by children and young people aged 0–24 years (a total of 820 visits).

#### Māori ED injury visit population rates

Māori men aged 15–24 were at highest risk of visiting an ED for injury (almost a 1 in 4 chance, figure 5.3 below).



# Figure 5.3: Māori rates of emergency department attendance for Injury, New Plymouth District, by age and gender, 2014

otes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics.

The next highest risk groups amongst New Plymouth Māori were men aged 25–49 and boys aged 0– 4. In every age group, Māori males were more likely than Māori females to visit an ED for injury.

Amongst Māori females, the highest risk group was those aged 15–24.

### **Geographic areas**

The data obtained from Taranaki District Health Board recorded 614 ED injury visits during 2014 for people living in New Plymouth Central area unit – equivalent to a very high rate of 90,963 visits per 100,000 population, or nearly one visit for each local resident. However, looking more closely at the data, most (538) of these visits were made by New Plymouth people who were misclassified into the New Plymouth Central area unit, for example because: they were default-coded into this area due to their street name being misspelt; they had 'no fixed abode'; or they were recorded as having a New Plymouth Central PO Box address. Excluding these 538 ED injury visits from the analysis, during 2014 there were 76 ED injury visits for New Plymouth Central (11,259 per 100,000).

Apart from ED injury visits by New Plymouth Central residents, the highest numbers of ED injury visits were made by people recorded as living in the following areas:

- Bell Block (606)
- Waitara West (561)
- Westown (480)
- Struan Park (464).<sup>35</sup>

The areas with the highest *rates* of ED injury visits per head of population were:

- Okato (19,964 per 100,000 population),
- Marfell (16,814 per 100,000)
- Waitara West (15,290 per 100,000)
- Westown (14,072 per 100,000).

For further details see appendix table 5.4. Note that numbers and rates of ED visits may be affected not just by the incidence of injury but also by people's willingness or ability to access ED services.

<sup>&</sup>lt;sup>35</sup> New Plymouth District people living in these, and some other local, area units are excluded from the analysis if they were originally misclassified into New Plymouth Central area unit. Therefore numbers and rates reported here may be slight underestimates.

#### **Urban / rural areas**

In 2014, most ED injury visits were made by people living in the district's main urban areas (5,756 visits or 10,926 per 100,000 population) (appendix table 5.5).<sup>36, 37</sup>

Rural centres (Urenui, Okato and Egmont Village) had the highest rates of ED injury visits per head of population (13,599 visits per 100,000 population). The next highest rates were in minor urban areas (Waitara and Inglewood, 12,445 per 100,000) (figure 5.4).<sup>38</sup>





**Source:** Data supplied by Taranaki District Health Board. Data in appendix table 5.5

Notes: Year is calendar year 1 January to 31 December. New Plymouth District does not have any secondary urban areas. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics. These are crude rates, not age-standardised rates.

Chart excludes 538 ED injury visits by New Plymouth residents who were misclassified into New Plymouth Central area unit.

<sup>&</sup>lt;sup>36</sup> See chapter 2 for more details on the urban and rural areas of New Plymouth District.

<sup>&</sup>lt;sup>37</sup> The 538 ED visits by New Plymouth District people who were originally misclassified into New Plymouth Central area unit (classified under the main urban category) have been excluded from this analysis. Therefore numbers and rates reported here may be slight underestimates (see previous section on geographic areas).

<sup>&</sup>lt;sup>38</sup> See the glossary for definitions of the different types of rural / urban areas. For further information about the area units included in these categories see appendix table 2.7.

## Neighbourhood deprivation (NZDep2013)

The New Zealand Deprivation Index (NZDep2013) is a measure of the level of socioeconomic deprivation in small geographic areas (neighbourhoods) of New Zealand.

In 2014, people living in the least deprived areas of New Plymouth District had the lowest rates of ED injury visits. People living in the most deprived areas had the highest rates (figure 5.5).<sup>39</sup>



#### Figure 5.5: Emergency department attendance for injury, New Plymouth District, by NZDep2013 decile, 2014

Source: Data supplied by Taranaki District Health Board. Data in appendix table 5.6.
 Notes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District Excludes private accident and emergency clinics. These

in New Plymouth District. Excludes private accident and emergency clinics. These are crude rates, not age-standardised rates.

Chart excludes 538 ED injury visits by New Plymouth residents who were misclassified into New Plymouth Central area unit.

<sup>&</sup>lt;sup>39</sup> The 538 ED visits by New Plymouth District people who were originally misclassified into New Plymouth Central area unit (classified as NZDep2013 decile 7) have been excluded from this analysis. Therefore numbers and rates reported here may be slight underestimates (see earlier section on geographic areas).

### Injury location (scene)

New Plymouth residents treated at EDs were most likely to have sustained their injury at their own or someone else's home (54% of all ED injury visits, figure 5.6):



# Figure 5.6: Location/scene where injury sustained prior to emergency department visit, New Plymouth District, 2014 (n=8,489)

Source: Data supplied by Taranaki District Health Board. Data in appendix table 5.7 Notes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and

emergency clinics.

Girls and boys aged 0–4 and women aged 65+ had the highest risk of getting injured at home and needing ED treatment. In particular, boys aged 0–4 had an almost 1 in 8 chance of being treated at an ED during the year for an injury sustained at home (figure 5.7, overleaf).

Reflecting these risks:

- 85% of all ED injury visits by children aged 0-4 were for injuries sustained at home
- 77% of all ED injury visits by adults aged 65+ were for injuries sustained at home
- 89% of all ED injury visits by women aged 80+ were for injuries sustained at home (for more details see appendix table 5.7)

Even among younger working age adults (25–49 year olds), 48 percent of this age group's ED injury visits were for injuries sustained at home.



#### Figure 5.7: Rates of emergency department attendance for injuries occurring at home, New Plymouth District, by age and gender, 2014

Source: Data supplied by Taranaki District Health Board. Data in appendix table 5.9.

Notes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics.

### **Causes of injury**

Injuries treated at Taranaki DHB emergency departments are classified into various injury cause groups (see figure 5.8, below). In 2014:

• home accidents were the most frequent cause of ED visits by New Plymouth residents (51% of all injury visits).

## Figure 5.8: Cause of injury prior to emergency department visit, New Plymouth District, 2014 (n=8,489)



Source: Data supplied by Taranaki District Health Board. Data in appendix table 5.10.

Notes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics.

The next most frequent causes were:

- recreational injuries (26%)
- sporting injuries (8%).
Males aged 5–14 and 15–24 had the highest risk of needing ED treatment for recreational injuries, almost a 1 in 12 chance during the year (figure 5.9). Altogether, males in these two age groups made nearly 800 ED visits for recreational injuries in 2014. They also made over 300 visits for sporting injuries.<sup>40</sup>



# Figure 5.9: Rates of emergency department attendance for recreational injuries, New Plymouth District, by age and gender, 2014

Source: Data supplied by Taranaki District Health Board. Data in appendix table 5.12.

Notes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics.

<sup>&</sup>lt;sup>40</sup> Bear in mind these ED statistics give no indication of the severity of people's injuries.

#### Cause of injury – Māori

In 2014, Māori in New Plymouth District made:

- 727 ED visits for injuries from a home accident
- 390 ED visits for recreational injuries
- 127 ED visits for sporting injuries
- 69 ED visits for workplace injuries
- 56 ED visits for traffic injuries (for details see appendix table 5.13).

Māori aged 50–64 were almost twice as likely as non-Māori of the same age to be injured in a home accident (figure 5.10).

# Figure 5.10: Māori and Non-Māori rates of emergency department attendance for home accidents, New Plymouth District, by age, 2014



Source: Data supplied by Taranaki District Health Board. Data in appendix table 5.16

Notes: Year is calendar year 1 January to 31 December. Information is for attendances at emergency departments at Taranaki. Base and Hawera hospitals by people living in New Plymouth District. Excludes private accident and emergency clinics.

#### Trends in emergency department visits for injury, 2000–2014

Total ED injury visits by New Plymouth District residents for selected years between 2000 and 2014 are shown in table 5.1. This includes the five consecutive years 2010–2014.

# Table 5.1: Emergency department attendances for injury, New Plymouth District,selected years 2000–2014

Year											
2000			2005			2010			2011		
No.	Rate per 100,000	Percent of all ED visits	No.	Rate per 100,000	Percent of all ED visits	No.	Rate per 100,000	Percent of all ED visits	No.	Rate per 100,000	Percent of all ED visits
6,531	9,589	36.0	7,249	10,884	35.3	7,666	10,474	30.6	7,597	10,076	31.1

	2012		2013			2014		
No.	Rate per 100,000	Percent of all ED visits	No.	Rate per 100,000	Percent of all ED visits	No.	Rate per 100,000	Percent of all ED visits
8,072	10,593	32.0	8,642	11,649	31.7	8,489	10,854	31.8

Source: Data supplied by Taranaki District Health Board.

Notes: Years are calendar years 1 January to 31 December. Information is for emergency departments at Taranaki Base and Hawera hospitals. Excludes private accident and emergency clinics. Rates calculated using Statistics NZ population estimates for 2011, 2012, 2014 and 2001, 2006, 2013 Census population data for New Plymouth District. Rates are not age-standardised.

#### Points to note:

- between 2000 and 2014, the annual number of ED injury visits by New Plymouth residents increased by 30% (about 2,000 extra visits a year)
- however, crude rates<sup>41</sup> of ED injury visits per capita (per 100,000 population) remained relatively stable
- in recent years, a smaller proportion of ED visits have been for injury (in 2012, 2013 and 2014 just 32% of all ED visits were for injury, compared with 36% in 2000 and 35% in 2006)

The reasons for these variations are not known and are open to interpretation. A combination of factors may be important including:

- changes in hospital and/or community health services and systems
- population changes (e.g. population increases; lower or higher proportions of older and/or younger people in the population)
- changes in the incidence of injury in the community
- changes in people's help-seeking behaviour related to injury.

<sup>&</sup>lt;sup>41</sup> Not age-standardised.

#### Age-specific rates 2011–2014

Table 5.2 below compares New Plymouth age-specific ED injury visit rates for 2011, 2012, 2013 and 2014. Between 2011 and 2013, visit rates increased in nearly all age groups. They then decreased in 2014.

	Year							
	2011		2012		2013		2014	
Age group	No	Rate per						
(years)	110.	100,000	110.	100,000	110.	100,000	110.	100,000
0-4	626	11,657	635	11,738	594	11,633	630	11,624
5-14	1,204	12,004	1,320	12,967	1,388	13,873	1,365	12,926
15-24	1,650	17,761	1,643	17,781	1,650	19,144	1,657	17,646
25-49	2,193	9,164	2,352	9,891	2,492	10,824	2,369	9,867
50-64	897	6,032	947	6,226	1,142	7,626	1,123	7,190
65-79	513	6,071	576	6,560	764	8,601	714	7,508
80+	514	14,728	599	16,732	612	17,114	631	17,054
(65+)	1,027	8,601	1,175	9,506	1,376	11,044	1,345	10,182
Total	7,597	10,076	8,072	10,593	8,642	11,649	8,489	10,854

Table 5.2: Emergency department attendances for injury, New Plymouth District (rat	e
per 100,000 population), 2011–2014	

Source: Data supplied by Taranaki District Health Board.

Notes: Years are calendar years 1 January to 31 December. Information is for emergency departments at Taranaki Base and Hawera hospitals. Excludes private accident and emergency clinics. Rates calculated using Statistics NZ population estimates for 2011, 2012, 2014, and 2013 Census population data for New Plymouth District. Rates are not age-standardised.

Again, there is unlikely to be a simple explanation for these relatively small variations. What they do suggest is that in most age groups in the New Plymouth District, per capita rates of ED visits for injury treatment have remained reasonably stable in recent years.

# ACC INJURY CLAIMS

This chapter examines Accident Compensation Corporation (ACC) injury insurance claims data for New Plymouth District. It is important to remember that this claims data is collected largely for administrative purposes. It does not capture all injury events in the community. Obviously it excludes injury cases where no ACC claim is made, as well as cases where a claim is made but not accepted.

Any observed patterns in this ACC data may reflect changes in injury incidence rates, changes in people's access to services, or administrative or policy changes e.g. acceptance rates for different types of injury or eligibility for certain types of compensation.

Despite these limitations, ACC claims data is a useful indicator of broader injury patterns in the New Plymouth District, particularly when examined alongside the emergency department and hospitalisation statistics presented earlier.

The data here covers claims for injuries occurring in the New Plymouth District regardless of whether the claimant was a resident of the district at the time of the injury or not. For the purposes of this report, however, it has been assumed that the vast majority of claims were by New Plymouth District residents, with population rates calculated on this basis.<sup>42</sup>

<sup>&</sup>lt;sup>42</sup> Note that some of the data reported in this chapter was extracted from the ACC database on 27 June 2015 and some on 8 August. This has resulted in small discrepancies in the information, such as a total of 2295 new entitlement claims in 2014 using 27 June data and 2320 using August data. See appendix table notes for details.

#### All new claims

Figure 6.1 shows trends in the annual number of all new ACC claims for New Plymouth over the past decade. 'New' claims are those that are first registered in the period being examined. These new claims include claims for relatively minor injuries that result in just primary health care or dental costs, as well as 'entitlement' claims for moderate and serious injuries that require more than just these medical or dental expenses (see next sections and the glossary).

The annual number of new claims increased from 2005 to 2007, then decreased to 2010 and has been gradually increasing again to a total of 31,249 in 2014. New 'entitlement' claims make up about 7% of all new claims each year – a total of 2,295 cases in 2014.

### Figure 6.1: ACC annual new claims, New Plymouth District, new entitlement and other new claims, 2005–2014



Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.1.

Notes: 'New entitlement claim' = a claim first registered in the specified period, for (usually) moderate and serious injuries requiring compensation for more than just primary health care or dental expenses.

'Other new claim' = a claim first registered in the specified period, for comparatively minor injuries requiring compensation for just primary health care or dental expenses.

#### Trends in new entitlement claims

The next sections of this chapter examine ACC 'new entitlement' claims. These are claims first registered in a specified period (e.g. a year), which relate to moderate and serious injuries requiring more than just medical expenses.

New entitlement claims include compensation for lost income, attendant care and childcare, specialised equipment, and vehicle and home modifications. They exclude the costs of bulk-funded hospital services for injuries, and claims for only primary health care or only dental services. They also largely exclude non-treatment entitlements for suicide and 'wilfully self-inflicted' injuries occurring after 1 July 2010 (ACC and National Health Board 2014).

From 2005 to 2014, new entitlement claim rates for both New Plymouth District and New Zealand increased slightly, dropped between 2009 and 2011, and then increased slightly again. Throughout the decade, New Plymouth District's annual rates of new entitlement claims have been somewhat higher than the overall New Zealand rate. In 2014, the rate for New Plymouth District was 2,718 per 100,000 population, compared with the national average of 2,025 per 100,000 (figure 6.2).





Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.2.

#### Age and gender of claimants

In 2014 in New Plymouth District, 61% of new entitlement claims were for males and 31% were for females. The over-representation of males here is not surprising and is consistent with injury data from other services such as hospital emergency departments and inpatient facilities.

In the same year, the age-standardised new entitlement claim rate for males in New Plymouth District was nearly double that for females (3,553 per 100,000 population compared with 1,870 per 100,000). This compares with the New Zealand figures of 2,593 per 100,000 for males and 1,510 per 100,000 for females (appendix table 6.3).

New Plymouth District males aged 15–24 had the highest rate of new entitlement claims, followed by males aged 25–44. For New Plymouth District females, the highest rate of accepted new claims was in the 75+ age group (figure 6.3). This supports the common observation in previous chapters that younger adult males and older adult females have higher injury rates than the rest of their gender group.



Figure 6.3: ACC new entitlement claims, New Plymouth District, rates by age and gender, 2014

Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.3.

#### **Ethnic group**

In 2014, of the new entitlement claims for accident injury in New Plymouth District, 1,881 or 82% were for European / Pākehā people. Eleven percent were for Māori and 7% were for people of other ethnicities. As would be expected from the local population's ethnic make-up (see chapter 2), New Plymouth District had a higher proportion of new entitlement claims for European people than the national average, and a lower proportion for Pacific people, Asian people and 'other' ethnicities (appendix table 6.4).

Comparing age-standardised new entitlement claim rates in 2014, the rate for New Plymouth District Māori was slightly lower than for non-Māori (2,360 per 100,000 vs. 2,995 per 100,000) (appendix table 6.5).

# Location (scene) of accident

In New Plymouth District in 2014, the home was the most common place where injuries occurred resulting in ACC new entitlement claims (42% of all claims). Next were sports and recreation venues (19% of all claims) (figure 6.4).

Compared to New Zealand as a whole, New Plymouth District had slightly higher proportions of claims for injuries occurring either at home, or places of recreation or sports. However, the district had a slightly lower proportion of claims for injuries sustained in industrial places and in 'other' places (appendix table 6.6).

# Figure 6.4: ACC new entitlement claims, New Plymouth District, by scene of accident, 2014 (n=2,295)





e: Data supplied by Accident Compensation Corporation. Data in appendix table 6.6.

In 2014 in New Plymouth District, relatively higher proportions of females' claims were for injuries occurring at home, and places of medical treatment. Indeed, over half (53%) of all female new entitlement claims were for injuries sustained in the home, compared to 34% of claims by males.

Males, by contrast, sustained a higher proportion of their injuries at recreation or sports places, commercial / service locations, industrial places, and farms. These differences doubtless partly reflect general differences in work situations, occupations and recreational choices for males and females (appendix table 6.6).

#### Work-related injuries

In 2014, a total of 569 or 25% of all New Plymouth District new entitlement claims were workrelated. This was similar to the proportion of work-related new entitlement claims in New Zealand as a whole (26%) (appendix table 6.7).

#### **By industry**

In New Plymouth District, the largest proportion of these work-related claims came from the agriculture, forestry and fishing industry and manufacturing industry (both 18%). Together with construction (14%), these industries accounted for half (50%) of all workrelated new entitlement claims in 2014 (figure 6.5).

In 2014, compared with New Zealand as a whole, New Plymouth District had slightly higher proportions of work-related new entitlement claims from: agriculture, forestry and fishing; mining; and property and business services. However, the proportion of claims from manufacturing and construction were slightly lower in New Plymouth District than New Zealand as a whole (for details see appendix table 6.7). This is

# Figure 6.5: ACC Work-related new entitlement claims, New Plymouth District, by industry, 2014 (n=569)



Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.7. Notes: 'New entitlement claim' = a claim first registered in the specified period, for (usually) moderate and serious injuries requiring compensation for more than just primary health care or dental expenses. The 'other' category includes: mining; cultural and recreational services; government administration and defence; communication services; finance and insurance; and electricity, gas and water supply. at least partly because of the different industry profile of New Plymouth District workers compared with New Zealand as a whole.

#### By age and gender

In New Plymouth District in 2014, work-related new entitlement claim rates increased with age for working-age people (15–64 year olds). The claim rate for 15–24 year-olds was 852 per 100,000 people, rising to 1,254 per 100,000 for 55-64 year-olds. As might be expected from decreasing proportions of people working from age 65, there was a drop in claim rates for 65–74 year-olds (appendix table 6.8).

These age-related patterns in claim rates were particularly prominent among men. Also, claim rates were significantly higher for men than women in all age groups 15–74 (figure 6.6). This may be at least partly due to employment rates for men and women, and the types of occupation they have.



# Figure 6.6: ACC work-related new entitlement claims for adults aged 15–74, New Plymouth District, rates by age and gender, 2014

Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.8.

#### Sports / recreation injuries

In 2014 there were 544 New Plymouth District ACC new entitlement claims for sports / recreation injuries. This was 24% of all New Plymouth District new entitlement claims that year. By comparison, sports / recreation injuries made up 22% of all new claims for New Zealand as a whole.

Rugby union was the most common type of sport / recreation for which ACC new entitlement claims were made in New Plymouth District in 2014. Altogether, 93 or 17% of local sport / recreation injury claims were for rugby union. The next most frequent sport / recreation claims were for injuries related to cycling (46) netball (40), and soccer (37) (figure 6.7).<sup>43</sup>





Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.9.

<sup>&</sup>lt;sup>43</sup> Nationally, in 2013/14 the top ten sport and recreation activities for adults aged 16 and over were: walking (60%), swimming (30%), cycling (25%), equipment-based exercise (22%), fishing (20%), jogging/running (19%), pilates/yoga (11%), dance (10%), tramping (10%), and golf (10%) (Sport New Zealand 2015).

Rugby union (16%), soccer (9%), netball (7%) and cycling (6%) were also the top four types of sports/recreation for which new entitlement claims were made nationally (appendix table 6.9).

#### **Injury causes**

In 2014, the most frequent causes of injury that led to new entitlement claims in New Plymouth District were related to falling, lifting or twisting. More specifically, the three most common causes were: loss of balance or personal control (29%), lifting / carrying / strain (10%) and slipping or skidding on foot (9%) (figure 6.8).

Figure 6.8: ACC new entitlement claims, New Plymouth District, by cause of injury, 2014 (n=2,295)



Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.10.

#### **Falls-related claims**

In New Plymouth District in 2014, altogether there were 1,077 new entitlement claims specifically related to falls. This was half (50%) of all local new entitlement claims registered in the year. Just over half (553) of these falls-related claims were for men and just under half (524) were for women (appendix table 6.11).

The highest falls-related new entitlement claim rates were for people aged 75–84 and 85+ (2,048 and 5,108 per 100,000 respectively) (appendix table 6.11).

Between the ages of 10 and 64, males had higher falls-related new entitlement claim rates than females. However, in the age groups 65 and over, women had higher rates than men. By far the highest claim rate was for women aged 85+ (6,250 per 100,000). Interestingly, men's rates gradually *decreased* between the ages of 15 and 84, before increasing in the oldest age group of 85+ (figure 6.9).





Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.11.

#### **Injury diagnoses**

In 2014, a total of 1,037 or nearly half (45%) of all new entitlement claims in New Plymouth District were for soft tissue injuries (contusions, internal organ injuries or strains). Another 712 (31%) were for fractures or dislocations, meaning these two types of injuries accounted for just over three-quarters (76%) of all new entitlement claims (figure 6.10). This was similar to the national picture where 46% of claims were for soft tissue injuries and 30% were for fractures or dislocations (appendix table 6.12).



Figure 6.10: ACC new entitlement claims, New Plymouth District, by injury diagnosis, 2014 (n=2,295)

Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.12.

#### **Injury sites**

The most frequent injury sites for new entitlement claims made in New Plymouth District in 2014 were:

- knee, 279 claims (12% of the total 2,295 claims)
- shoulder, 239 (10%)
- ankle, 214 (9%)
- lower back / spine, 212 (9%)
- hand / wrist, 173 (8%)
- upper and lower arm, 166 (7%)
- hip, upper leg, thigh, 140 (6%).

(See appendix 6.13 for more details).

#### **Cost of active claims**

'Active' claims are ongoing claims that are still being paid out during a specified period, regardless of when they were first registered (some claims have ongoing payments for a number of years).

#### All active claims

In New Plymouth District in 2014, there were 36,671 active ACC claims of all types (entitlement claims plus other claims for less serious injuries). These active claims cost a total of \$54,573,041, or an average of \$1,488 each during the year. The average cost of active claims nationally was slightly less – \$1,264.

#### **Active entitlement claims**

In New Plymouth District in 2014, there were 5,787 active *entitlement* claims (for relatively serious injuries requiring more than just primary health care or dental costs). This was 16% of all active claims. However, these active entitlement claims cost an annual total of \$46,533,530, or 85% of the cost of all active local claims for the year. The average cost of active entitlement claims was \$8,041, similar to the national average of \$8,001 (appendix table 6.14).

#### Expenditure by scene of accident

Active entitlement claims for injuries occurring in local people's homes cost ACC the most during 2014 – a total of nearly \$13.2 million (28% of the total expenditure on active entitlement claims). Active entitlement claims for injuries occurring on roads / streets cost just over \$10.5 million (23%), and claims for those occurring at sports or recreation venues cost just over \$7.1 million (15%) (figure 6.11, overleaf; appendix table 6.14).

The highest average cost per active entitlement claim was for injuries occurring on the road or street (\$16,187), followed by injuries occurring in a place of medical treatment (\$11,941) (appendix table 6.14).



# Figure 6.11: ACC expenditure for active entitlement claims, New Plymouth District, by scene of accident, 2014

Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.14.

Notes: 'Active entitlement claim' = a claim still being paid out, regardless of when it was first registered, for (usually) moderate and serious injuries requiring compensation for more than just primary health care or dental expenses. \*The 'other' category includes claims for injuries occurring in other, less common types of location and where the scene of the accident is unknown.

#### Expenditure by cause of accident

In New Plymouth District, active expenditure claims for injuries caused by 'loss of balance / personal control' were responsible for the largest expenditure by ACC in 2014 – a total of just over \$10 million. This was followed by claims for injuries caused by lifting / carrying / strain (over \$5.6 million) and collisions / being knocked over by an object (\$4.8 million) (figure 6.12).



Figure 6.12: ACC expenditure for active entitlement claims, New Plymouth District, by cause of accident, 2014

Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.15A.

Notes: \*The 'other' category includes claims for injuries caused by other, less common factors and where the cause of the accident is unknown. 'Active entitlement claim' = a claim still being paid out, regardless of when it was first registered, for (usually) moderate and serious injuries requiring compensation for more than just primary health care or dental expenses.

#### Expenditure for falls

Altogether, during 2014, there were 2,154 falls-related active entitlement claims in New Plymouth District, costing a total of just over \$15.4 million. This was one-third of the total annual expenditure for active entitlement claims in the district. The average cost of a fall-related active entitlement claim was \$7,151.

#### Expenditure for work-related injuries

In 2014 there were 1,896 active entitlement claims in New Plymouth District for work-related injuries. This was one-third (33%) of the total 5,797 active entitlement claims for the year.

ACC's overall expenditure for work-related claims in the district was \$11,397,667, or almost onequarter (24%) of the total annual local expenditure for active entitlement claims. The average local cost of a work-related active entitlement claim was \$6,011 for the year, slightly higher than the national average of \$5,699 (appendix table 6.16).

A total of just over \$2.2 million was spent on active entitlement claims for injuries among manufacturing workers. Nearly \$1.9 million was spent on claims from the agriculture, forestry and fishing industry and just over \$1.8 million was spent on claims for construction workers (figure 6.13).



# Figure 6.13: ACC expenditure for active entitlement claims for work-related accidents, New Plymouth District, by industry, 2014

Source: Data supplied by Accident Compensation Corporation. Data in appendix table 6.16. Notes: \*The 'other' category includes industries where ACC expenditure was lower than those shown. 'Active entitlement claim' = a claim still being paid out, regardless of when it was first registered, for (usually) moderate and serious injuries requiring compensation for more than just primary health care or dental expenses.



This chapter presents annual road injury and road safety statistics for New Plymouth District, focusing in particular on the years 2010 to 2014.

Topics covered include:

- number of fatal, serious and minor road crash casualties
- times and places where road crash injuries occur
- factors contributing to crashes and injuries

This information complements the mortality, hospitalisation and emergency department statistics on road transport injuries described earlier.

#### Trends in road crash injuries

In 2014, there were 150 reported road crash casualties in New Plymouth District (resulting from a total of 108 injury crashes). This was the lowest recorded crash casualty total in 20 years (figure 7.1). The total included 6 fatalities and 20 people with serious injuries.

Minor injury road casualty totals have been dropping steadily in the district since 2007. Serious casualties have also been trending downwards.



Figure 7.1: Minor, serious and fatal road crash casualties, New Plymouth District, 1996–2014

Source: New Zealand Transport Agency. Data in appendix table 7.1.

Notes: Years are calendar years 1 January to 31 December. Casualties = number of people injured in crashes (can be more than one per crash). Fatal = death within 30 days of the crash. Serious = fractures, concussion, internal injuries, crushing, severe cuts / lacerations, severe general shock needing medical treatment, injuries needing hospital treatment. Minor = non-serious injuries requiring first aid, or that cause discomfort or pain e.g. sprains or bruises. For crashes, severity rated according to the most severely injured casualty in the crash.

Across the five years 2010–2014:

- 2% of road crash casualties in New Plymouth District suffered fatal injuries
- 15% had serious injuries
- 82% had minor injuries.44

<sup>&</sup>lt;sup>44</sup> This is similar to the ratio of minor, severe and fatal casualties recorded for New Zealand and Group C areas (for details see appendix table 7.17).

#### Age and gender of serious and fatal casualties

Altogether, 171 people were killed or seriously injured on New Plymouth District roads in the five years from 2010 to 2014. Over two-thirds of the people killed or seriously injured were male (71%). This included 103 males between the ages of 15 and 64 (figure 7.2).





Source: New Zealand Transport Agency. Data in appendix table 7.2.

Notes: Years are calendar years 1 January to 31 December. Casualties = number of people injured in crashes (can be more than one per crash). Fatal = death within 30 days of the crash. Serious = fractures, concussion, internal injuries, crushing, severe cuts / lacerations, severe general shock needing medical treatment, injuries needing hospital treatment.

In the 75+ age group, the ratio of fatal injuries to serious injuries was relatively high, especially for males.

#### Types of road users who get injured

Between 2010 and 2014, there were 975 road traffic casualties in New Plymouth District. Nearly three-quarters (72%) of these casualties were drivers or passengers in cars or vans (figure 7.3).

The two next highest casualty groups were motorcyclists (10%) and cyclists (8%).



Figure 7.3: Types of road users who are injured, New Plymouth District, five years 2010–2014 combined (n=975)

 Source:
 New Zealand Transport Agency. Data in appendix table 7.3.

 Notes:
 Years are calendar years 1 January to 31 December. Casualties = number of people injured in crashes (can be more than one per crash).

#### Types of road users severely or fatally injured

Of the 171 people severely or fatally injured in road crashes between 2010 and 2014:

- 56% were car or van drivers and passengers (figure 7.4)
- 20% were motorcyclists
- 11% were cyclists
- 9% were pedestrians

### Figure 7.4: Types of road users seriously or fatally injured, New Plymouth District, five years 2010–2014 combined (n=171)



Source: New Zealand Transport Agency. Data in appendix table 7.3.

Notes: Years are calendar years 1 January to 31 December. Fatal = death within 30 days of the crash. Serious = fractures, concussion, internal injuries, crushing, severe cuts / lacerations, severe general shock needing medical treatment, injuries needing hospital treatment.

#### At-fault road users

Across the five years 2010–2014, there were 446 injury road crashes in New Plymouth District reported to be fully or partly the fault of a driver. In nearly two thirds (62%) of these crashes, the driver at fault was a male.

In particular, high numbers of injury road crashes were the fault of male drivers aged 15–24 and 30–49 (figure 7.5).

However, of the injury crashes caused by drivers aged 25–29, half the people at fault were women.

Of the injury crashes caused by drivers over 70, the majority of the drivers at fault were women.



# Figure 7.5: Drivers at fault or partly at fault for injury road crashes, New Plymouth District, by age and gender, five years 2010–2014 combined

Source:New Zealand Transport Agency. Data in appendix table 7.4.Notes:Years are calendar years 1 January to 31 December.

#### **Casualties on local roads and state highways**

Between 2006 and 2014, the number of people injured on local council roads in the district dropped by over half. The numbers injured annually on the district's state highways also decreased (figure 7.6).





Source:New Zealand Transport Agency. Data in appendix table 7.5.Notes:Years are calendar years 1 January to 31 December.

#### Casualties on rural and urban roads

Between 2010 and 2014, there were more road casualties on the district's urban roads than on its rural roads (figure 7.7).

The majority of casualties on rural roads occurred on rural state highways, not rural local roads.

The majority of casualties on urban roads occurred on urban local roads, not urban state highways.

# Figure 7.7: Road crash casualties on rural and urban roads, New Plymouth District, by road type, 2010–2014



Notes: Years are calendar years 1 January to 31 December. Rural = a road with a speed limit of more than 70km/h. Urban = a road with a speed limit up to 70km/h.

Compared to the rest of New Zealand, more of the district's casualties occurred on urban and rural state highways (55%). Fewer occurred on rural and urban local roads (45%, see appendix table 7.18 for details).

#### Timing of crashes on rural and urban roads

Of the 753 injury road crashes in the district between 2010 and 2014, 59% occurred on urban roads and 41% on rural roads.

Over the five years, per month, the most rural injury crashes occurred in March. The most urban injury crashes occurred in September, May and July (figure 7.8).



# Figure 7.8: Total injury road crashes by month, New Plymouth District, by road type (rural and urban), five years 2010–2014 combined

Source: New Zealand Transport Agency. Data in appendix table 7.7.

Notes: Years are calendar years 1 January to 31 December. Crashes = number of crash incidents.

Rural = a road with a speed limit of more than 70km/h. Urban = a road with a speed limit up to 70km/h.

Certain days of the week also had more injury crashes on them than other days (figure 7.9).

The highest numbers of injury crashes on urban roads were on Fridays, Thursdays and Saturdays. The lowest numbers were on Sundays.

On rural roads, the highest numbers were Saturdays.





Source: New Zealand Transport Agency. Data in appendix table 7.8.

Notes: Years are calendar years 1 January to 31 December. Crashes = number of crash incidents. Rural = a road with a speed limit of more than 70km/h. Urban = a road with a speed limit up to 70km/h. Day = 6.00am-5.59am (0600 hrs-0559 hrs)

Most injury road crashes (72%) occurred in daytime. Fourteen percent occurred in the night time hours from 10pm to 6am.

A relatively high proportion of rural and urban road crashes on Saturdays and Sundays occurred at night time. The same was true for rural road crashes on Fridays. In fact, 30% of rural injury crashes on Fridays occurred at night time (compared to just 5% of Monday rural crashes).

#### **Events leading to injury crashes**

Of the 44 injury crashes on rural roads in 2014, over half (57%) resulted from a loss of control or head-on collision on a bend (figure 7.10). Crossing or turning movements (typically at intersections) were the next most common event leading to rural road crashes.



Figure 7.10: Rural road injury crashes – crash movement type, New Plymouth District, 2014 (n=44)

Notes:Year is calendar year 1 January to 31 December.Rural = a road with a speed limit of more than 70km/h.Movement = the principal movement a vehicle or vehicles were making when they crashed.

Of the 64 injury crashes on urban roads in 2014, over a third (36%) were a result of crossing or turning movements (figure 7.11). A further third (33%) were from rear end collisions / obstruction.



Figure 7.11: Urban road injury crashes – crash movement type, New Plymouth District, 2014 (n=64)

 Source:
 New Zealand Transport Agency. Data in appendix table 7.9.

 Notes:
 Year is calendar year 1 January to 31 December. Urban = a road with a speed limit up to 70km/h.

 Movement = the principal movement a vehicle or vehicles were making when they crashed.

#### Contributing factors to injury crashes

The two most common contributing factors to injury crashes on rural roads in 2014 was poor vehicle handling and going too fast (figure 7.12).

For crashes on urban roads, the two most common factors were poor observation and failing to give way or stop.



# Figure 7.12: Contributing factors to rural and urban road injury crashes, New Plymouth District, 2014

Source: New Zealand Transport Agency. Data in appendix table 7.10.

Notes: Year is calendar year 1 January to 31 December. Rural = a road with a speed limit of more than 70km/h. Urban = a road with a speed limit up to 70km/h. Crash factors are coded based on information from drivers, witnesses, other involved parties and the Police. Coding is subjective and data should be interpreted with caution

#### **Intersection crashes**

In 2014 in New Plymouth District, 39% of injury crashes occurred at intersections. The comparable rate for New Zealand as a whole was 37% (for details see appendix table 7.11).

#### Social cost of injury crashes

The total social cost of all the injury crashes in New Plymouth District in 2014 is estimated to be just over \$50 million (table 7.1). This includes nearly \$43 million for fatal and serious crashes.

New Plymouth's average social cost per injury crash (\$463,093) is higher than the Group C average (\$448,938) and the New Zealand average (\$361,806). This is mainly because of New Plymouth's higher costs per serious injury crash.

Group C is a New Zealand Transport Agency category of provincial towns and hinterlands that are similar to New Plymouth District.

Table 7.1: Estimated social cost of injury road crashes, New Plymouth District,							
Group C* and New Zealand, 2014							
	New Plymouth District	Group C	Now Zoala				

	New Plymouth District		Gro	oup C	New Zealand	
Severity of injury	Total cost (\$NZ)	Cost per crash (\$NZ)	Total cost (\$NZ)	Cost per crash (\$NZ)	Total cost (\$NZ)	Cost per crash (\$NZ)
Fatal	\$21,890,000	\$4,378,000	\$234,422,000	\$4,688,440	\$1,211,437,000	\$4,520,287
Serious	\$20,798,000	\$1,094,632	\$260,227,000	\$949,734	\$1,423,980,000	\$821,685
Minor	\$7,326,000	\$87,214	\$81,787,000	\$85,195	\$588,640,000	\$85,187
Total	\$50,014,000	\$463,093	\$576,436,000	\$448,938	\$3,224,057,000	\$361,806
Total fatal or serious	\$42,688,000	\$5,472,632	\$494,649,000	\$5,638,174	\$2,635,417,000	\$5,341,972

Source: New Zealand Transport Agency. Data in appendix table 7.12.

Notes: Years are calendar years 1 January to 31 December. Crashes = number of crash incidents. Fatal = death within 30 days of the crash. Serious = fractures, concussion, internal injuries, crushing, severe cuts / lacerations, severe general shock needing medical treatment, injuries needing hospital treatment. Minor = non-serious injuries requiring first aid, or that cause discomfort or pain e.g. sprains or bruises. \*Group C is a group of large NZ provincial towns and hinterland with populations of 35,000–75,000 and / or where rural crashes are less than 55% of all crashes in the area. Social cost = estimated value of loss of life and life quality, loss of output, medical costs, legal costs, and property damage costs.

#### Casualties per vehicle kilometres travelled

Comparing the number of road casualties per vehicle kilometres travelled is one way of estimating the relative safety of road travel in different parts of New Zealand.

In New Plymouth District between 2010 and 2014, for every 100 million vehicle kilometres travelled, there were 30 recorded road casualties. This was the same casualty rate as for New Zealand as a whole (figure 7.13).

Casualty rates on the district's rural local roads were lower than the average for New Zealand rural local roads (29 versus 37 per 100 million vehicle kilometres).

However, casualty rates on the district's rural state highways were higher than the average for rural state highways (24 versus 19 per 100 million vehicle kilometres).

# Figure 7.13: Number of casualties per 100 million vehicle kilometres travelled, New Plymouth District and New Zealand, by type of road, five year average 2010–2014



Source: New Zealand Transport Agency. Estimates are provisional. Data in appendix table 7.13.

Notes: Years are calendar years 1 January to 31 December.

Casualties = number of people injured in crashes (can be more than one per crash).

Rural = an area with a speed limit of more than 70km/h. Urban = an area with a speed limit up to 70km/h.

#### Seatbelt use in Taranaki

This section and the ones following present statistics for the larger Taranaki region, not just New Plymouth District. The Taranaki region includes New Plymouth, Stratford and South Taranaki districts.

The proportion of Taranaki adults using seatbelts when sitting in the front of vehicles (either as passengers or drivers) increased from 92% in 2000 to 98% and 97% in 2012 and 2014 respectively. A similar improvement occurred for New Zealand as a whole in this period (figure 7.14).

### Figure 7.14: Front seatbelt wearing by adults aged 15+ – rates (percent), Taranaki Region and New Zealand, 2000–2014



 Source:
 Ministry of Transport annual surveys of restraint use

 www.transport.govt.nz/research/roadsafetysurveys/safetybeltstatisticsandchildrestraintsurveys/

 Data in appendix table 7.14.

 Notes:
 Years are calendar years 1 January to 31 December.

 In 2012, the front seatbelt wearing survey moved from being an annual survey, to being run every 2 years.

 Hence there was no data for 2013.

 Front seatbelt wearing = seatbelt wearing by adults (aged 15+) in the front seat of cars (driver and passenger) on open and urban roads.

The proportion of Taranaki adults using seatbelts when travelling in the rear seat of vehicles rose substantially between 2000 and 2014, from a low of 65% in 2001 to a high of 99% in 2011 (figure 7.15).

Since 2005, Taranaki adult rear seatbelt wearing rates have been higher than the New Zealand average (although not by much in 2006 and 2014).



### Figure 7.15: Rear seatbelt wearing by adults aged 15+ – rates (percent), Taranaki Region and New Zealand, 2000–2014

 

 Source:
 Ministry of Transport annual surveys of restraint use www.transport.govt.nz/research/roadsafetysurveys/safetybeltstatisticsandchildrestraintsurveys/

 Data in appendix table 7.14.

 Notes:
 Years are calendar years 1 January to 31 December. There was no rear seatbelt wearing survey in 2012 or 2013. Rear seatbelt wearing = seatbelt wearing by adults (aged 15+) in the left or right rear seat of cars travelling

To or from the open road.
# Child restraint use in Taranaki

Rates of use of child restraints (infant seats, child seats, booster seats or child harnesses) by Taranaki children aged 0–4 travelling in vehicles increased from 77% in 2000 to 95% in 2002 (figure 7.16).

After 2002, Taranaki's rates were higher than the New Zealand average in every year except 2005 and 2009.



# Figure 7.16: Child restraint use by children aged 0–4 – rates (percent), Taranaki Region and New Zealand, 2000–2014

It should be noted that the data above comes from observational studies and surveyors are unable to determine if the seats are correctly fitted in the vehicle and therefore whether children are safely and legally restrained.

#### Cycle helmet use in Taranaki

Rates of cycle helmet use have fluctuated in Taranaki, falling as low as 86% and 84% in 2003 and 2009, but rising as high as 98% in 2007 and 2015 (figure 7.17).

Apart from 2007 and 2009, Taranaki's rates have been very similar to New Zealand's.



Figure 7.17: Cycle helmet use – rates (percent), Taranaki Region and New Zealand, 1997–2015

## Open road speeds in Taranaki

The average speeds of motorists travelling on Taranaki's open roads fell steadily from 2000 to 2010 (figure 7.18).

However, in 2011 and 2012, open road speeds in Taranaki increased, exceeding the national average. Speeds then decreased again, to below the New Zealand average.

Overall, Taranaki's average open road speeds dropped from 100.5 km/h in 2000, to 93.3 km/h in 2014.





Source:	Ministry of Transport annual speed surveys				
	www.transport.govt.nz/research/roadsafetysurveys/speedsurveys/				
	Data in appendix table 7.16				
Notes:	Years are calendar years. Open road = 100km/h speed limit.				

#### Urban road speeds in Taranaki

Urban road speeds have steadily declined in Taranaki over the last 15 years, from an average speed of 51.9 km/h in 2000 to an average speed of 48.4km/h in 2014 (figure 7.19).

Throughout the period, Taranaki's urban road speeds were at least 2-3 km/h lower than the New Zealand average.



Figure 7.19: Average urban road speeds, Taranaki Region and New Zealand, 2000–2014

 Source:
 Ministry of Transport annual speed surveys

 www.transport.govt.nz/research/roadsafetysurveys/speedsurveys/

 Data in appendix table 7.16.

 Notes:
 Years are calendar years. Urban road = 50km/h speed limit.



Apart from the information on suicides and attempted suicides already covered in chapters 3 and 4, additional local suicide statistics are available from the Ministry of Justice (coroner's statistics). Ministry of Health data comparing suicide rates of all the District Health Boards (DHBs) is also available. The New Plymouth District is unable to be separated out in these statistics but New Plymouth City data is available and reported on.

#### **Coroner's statistics**

For the nearly eight years from 1 July 2007 to 31 May 2015, a total of 127 suicides, or possible suicides, were recorded for the Taranaki region by the coroner. Twenty-one of these cases are currently 'active' or provisional, meaning they are still being investigated (figure 8.1).



# Figure 8.1: Annual number of suicide deaths, New Plymouth City and the rest of Taranaki, 1 July 2007 – 31 May 2015

 Source:
 Data supplied by Ministry of Justice.
 Data in appendix table 8.1.

 Notes:
 \* includes 1 active (provisional) case.
 # includes 2 active cases.

^ includes 18 active cases. Covers 11 months to 31 May 2015.

Looking more closely at the five-year period 1 July 2009 to 30 June 2014, there were 75 suicides in the Taranaki region. Over two-thirds (53) deaths occurred in New Plymouth District, including 42 in New Plymouth City. The remaining 22 suicides were in other parts of Taranaki, including 17 in South Taranaki District and five in Stratford District (appendix table 8.2).

The largest number of suicide deaths was in the 25–44 year age group. This age group accounted for one-third of the cases in New Plymouth City, and for nearly half (45%) of cases in the rest of Taranaki (figure 8.2).





A very high proportion of suicides during the same five-year period were carried out by men. This applied to 85% of suicides in New Plymouth City, and 94% in the rest of Taranaki (appendix table 8.1).

As would be expected from the proportion of people in the population, most (34 – 81%) of the 42 people who completed suicides in New Plymouth City over the five-year period were New Zealand Europeans or other Europeans. Eight (19%) were Māori. For the rest of Taranaki, the figures were fairly similar, with 24 of the total 33 being Europeans (73%) and 8 (24%) being Māori (appendix table 8.3).

Source:Data supplied by Ministry of Justice.Data in appendix table 8.1.Notes:Includes 2 active (provisional) cases.

## **Comparing District Health Boards**

In the five-year period 2008–2012, Taranaki was ranked 12th out of 21 District Health Boards (DHBs) for its suicide rates. Taranaki DHB had an age-standardised rate of 12.5 suicides per 100,000 population. This compared with the highest rate of 19.7 per 100,000 in South Canterbury DHB and the lowest rate of 7.4 per 100,000 in Capital and Coast DHB (figure 8.3).



Figure 8.3: Age-standardised suicide death rates, By District Health Board, five-year period 2008–2012

Source: Data supplied by Ministry of Health. Data in appendix table 8.4 Notes: Some data is provisional. Rates based on relatively small numbers for some DHBs. Years are calendar years.

# 9 DROWNING

Drowning is respiratory impairment of the lungs, due to immersion in liquid (Water Safety New Zealand 2014). It can be either fatal or non-fatal.

#### **Drowning fatalities**

There were five drowning fatalities in New Plymouth District from 2010 to 2014. All five fatalities were in a single year, 2012.<sup>45</sup>

Year						
2010	2011	2012	2013	2014	Total 2010–2014	Drowning rate per 100,000 residents (2010-2014)
0	0	5	0	0	5	1.3

#### Table 9.1: Number of fatal drownings, New Plymouth District. 2010–2014

Source: Water Safety NZ DrownBase. Figures are provisional.

The district's fatal drowning rate for 2010–2014 was 1.3 per 100,000 residents. This was almost half the New Zealand rate (2.3 per 100,000 residents).

# Hospitalisation for near drowning

In the five years from 2010 to 2014, a total of 12 New Plymouth residents were hospitalised as a result of accidental drowning and submersion (see appendix table 4.3).

<sup>&</sup>lt;sup>45</sup> In the Taranaki Region, including New Plymouth District, there were 8 fatal drownings from 2010 to 2014.

## **Circumstances of drowning**

Because of small numbers, it is not appropriate to analyse drowning trends in the district in detail, or identify specific risk factors. However, data for New Zealand indicates that in general (Water Safety New Zealand 2013, 2014):

- Although drowning is an issue for all age groups, most people who drown are young and middle-aged adults; pre-school and school-age children make up a comparatively small proportion of NZ's drowning figures.
- Māori, Pacific and Asian peoples are all overrepresented in drowning fatalities.
- Every year at least three-quarters of drowning victims are male.
- Typically most drownings are in the summer months of December, January and February.
- Over the five years 2008–2012, the regions with the highest per capita drowning deaths were, in order, the South Island West Coast, Northland, Southland and Marlborough. Taranaki was ranked 10th out of the 15 regions.
- Well over half of all drownings occur during recreational activities on or in water (swimming, boating, river-crossing, etc.). Another quarter or so are linked to land-based fishing, road vehicle incidents, suicide or homicide.
- Rivers are the most common drowning places, followed by beaches, out at sea (offshore) and inland lakes. Drownings are fairly rare in home or public swimming pools.



Violent offences such as homicide, assault, sexual assault and aggravated robbery cause physical and psychological harm, not just to victims but also to their families and other close people. Burglary, theft, property damage, and public disorder can also cause distress and make people feel unsafe.

Since the last needs assessment there has been a merger of two police areas into a single Taranaki policing area. This needs assessment therefore now reports on the Taranaki area as a whole.

#### **Total offences**

In 2014, across the Taranaki Area of the Central Police District, there were a total of 6,816 recorded criminal offences. The three most common categories of offence were:

- theft
- property damage
- unlawful entry with intent to commit burglary.

Over half of all recorded offences in Taranaki were in one of these three categories (table 10.1 next page).

In 2014, compared to New Zealand, Taranaki had a lower proportion of theft offences, and burglary and breaking and entering offences, but a higher proportion of property damage offences and public order offences.

Around 13% of all offences in Taranaki involved assaults or other actions either causing or intending to cause physical injury (e.g. common assault, serious physical assault, sexual assault, homicide).

	Taranal	ki Area	New Zealand	
Type of offence	No.	Percent	No.	Percent
Theft and related offences	1,860	27.3	119,323	34.1
Property damage and environmental pollution	1,036	15.2	40,358	11.5
Unlawful entry with intent/burglary, break and enter	873	12.8	53,265	15.2
Acts intended to cause injury	824	12.1	39,944	11.4
Public order offences	688	10.1	26,751	7.6
Illicit drug offences	459	6.7	16,543	4.7
Abduction, harassment and other related offences against a person	309	4.5	15,024	4.3
Offences against justice procedures, government security and government operations	292	4.3	16,085	4.6
Fraud, deception and related offences	178	2.6	9,037	2.6
Prohibited and regulated weapons and explosives offences	147	2.2	5,791	1.7
Sexual assault and related offences	78	1.1	4,056	1.2
Robbery, extortion and related offences	21	0.3	2,140	0.6
Dangerous or negligent acts endangering persons	18	0.3	737	0.2
Homicide and related offences	2	0.0	66	0.0
Miscellaneous offences	31	0.5	1,269	0.4
Total	6,816	100.0	350,389	100.0

Source: Statistics New Zealand, NZ · Stat Crime data. Data in appendix table 10.1 and 10.2.

Notes: Years are calendar years 1 January to 31 December.

In the 19 years from 1996 to 2014, the total volume of offences reported in Taranaki dropped by 47% (from 12,870 to 6,816). This was a bigger drop in reported crime than for New Zealand as a whole (27%) (appendix table 10.3).

During the same period, *rates* of recorded offences declined steeply in both Taranaki and New Zealand as a whole (figure 10.1, below).<sup>46</sup> In 2014, Taranaki's offence rate was half its 1996 rate. Taranaki's rate was also consistently below the total New Zealand offence rate throughout the entire 19-year period.

<sup>&</sup>lt;sup>46</sup> Changes in offending rates may reflect variations in the reporting of offences as well the incidence of offences.



Figure 10.1: Total recorded offences, Taranaki Area and New Zealand, 1996–2014

Source: Statistics New Zealand, NZ · Stat Crime data. Data in appendix table 10.3.

 Notes:
 Years are calendar years 1 January to 31 December.

 These are crude population rates. They have not been adjusted to control for the slightly different age structures of the New Plymouth and New Zealand populations.

#### **Assaults**

Common assault is by far the most frequent type of violent offence recorded in Taranaki (figure 10.2). Next is serious assault resulting in physical injury, followed by serious assault that does not result in physical injury. (Common assaults are where an assault occurs but without an intention to cause injury. Serious assaults are assaults where there is an intention to physically injure, regardless of whether an injury is actually caused.)

Numbers of reported sexual assaults are lower compared to other forms of assault. Homicides are rare.

From 1994–2009, the volume of common and serious assaults recorded in Taranaki trended upwards. More recently, though, they have trended downwards (figure 10.2). The numbers of reported sexual assaults have fluctuated with no obvious upward or downward pattern.



Figure 10.2: Types of recorded assault, Taranaki Area, 1994–2014

Source: Statistics New Zealand, NZ · Stat Crime data. Data in appendix table 10.4.

Notes: Years are calendar years 1 January to 31 December.

# Family violence offences

Offences recorded by the Police related to family violence include certain types of assault and sexual offences including common assault (domestic), serious assaults, offences related to the neglect / ill-treatment of people under care, and breaches of protection orders.

As mentioned earlier, common assault is where an assault occurs but without an intention to cause injury. Serious assaults are assaults where there is an intention to physically injure, regardless of whether an injury is actually caused.

In Taranaki in 2014 there were:

- 121 recorded common assaults (domestic)
- 68 recorded serious assaults by a male on a female resulting in physical injury, plus a further 60 assaults not resulting in physical injury
- 14 recorded serious assaults on children resulting in physical injury, plus 29 other serious assaults on children not resulting in physical injury
- 142 breaches of protection orders.

#### Trends in family violence involving serious assault

From 1994 to 2014 in Taranaki, the numbers of recorded serious assaults by a male on a female causing physical injury have more than halved (figure 10.3 next page). However, this drop has been matched by a generally upward trend in the numbers of serious assaults by males on females not causing physical injury.

The numbers of reported serious assaults on children causing injury have remained fairly constant throughout the two decades. However, since 2008 there has been a clear increase in reported serious assaults on children not causing injury. This may indicate that, compared with the past, people are more willing now to report family violence incidents. One factor in this is likely to be the introduction of the Crimes (Substituted Section 59) Amendment Act 2007, which made it unlawful to use parental force for the purpose of correction.



Figure 10.3: Family violence involving serious assault offences, Taranaki Area, 1994–2014

Source: Statistics New Zealand, NZ · Stat Crime data. Data in appendix table 10.5. Notes: Years are calendar years 1 January to 31 December.

#### Trends in other family violence offences

Since 1996, when the Domestic Violence Act replaced the Domestic Protection Act, the numbers of offences in Taranaki relating to breaches of domestic violence orders have fluctuated somewhere between 100 and 170 offences per year (figure 10.4 next page).

Numbers of reported common assaults (domestic) have also fluctuated, but with a generally upward trend since 2006 including a peak in 2009 and again in 2014.

Recorded offences related to neglect of children or adults under care peaked in 2003, but the numbers have remained relatively low since then (12 in 2014).





Source: Statistics New Zealand, NZ · Stat Crime data. Data in appendix table 10.5.

Notes: Years are calendar years 1 January to 31 December.

#### **Apprehensions**

An apprehension is when an offender has been found and dealt with by the Police in some way, e.g. a warning, prosecution, or a referral to a youth justice family group conference or mental health service (Statistics New Zealand 2012).

In Taranaki in 2014 there was a total of 4,039 apprehensions. The commonest types of offences for which apprehensions were made were: theft and related offences (21%); acts intending to cause injury (17%) and public order offences (16%, see table 10.2 next page).

Compared with New Zealand, a slightly higher proportion of Taranaki apprehensions were for theft and related offences (21 percent vs. 19 percent). A slightly lower proportion were for offences against justice procedures, government security and government operations (6 percent vs. 9 percent). However, in general Taranaki's profile of apprehensions was very similar to New Zealand's.

In 2014, over three-quarters (79 percent) of the Taranaki people apprehended for offences were male. This was identical to the figure for New Zealand as a whole (appendix table 10.7).

Thirty-nine percent of Taranaki people apprehended were aged 20 years or under. This is a higher rate than in New Zealand overall (32%).

Fifty-three percent of apprehended offenders were Non-Māori, identical to the national figure (appendix table 10.8).

#### Table 10.2: Apprehensions by type of offence, Taranaki Area and New Zealand, 2014

	Taranaki		New Z	ealand
Type of offence	No.	Percent	No.	Percent
Theft and related offences	863	21.4	29,114	18.7
Acts intended to cause injury	688	17.0	28,995	18.6
Public order offences	663	16.4	24,098	15.4
Illicit drug offences	419	10.4	16,029	10.3
Property damage and environmental pollution	384	9.5	12,603	8.1
Offences against justice procedures, government security and government operations	254	6.3	14,007	9.0
Unlawful entry with intent/burglary, break and enter	213	5.3	8,391	5.4
Abduction, harassment and other related offences against a person	192	4.8	8,377	5.4
Prohibited and regulated weapons and explosives offences	130	3.2	5,309	3.4
Fraud, deception and related offences	129	3.2	4,640	3.0
Sexual assault and related offences	45	1.1	1,927	1.2
Robbery, extortion and related offences	21	0.5	1,200	0.8
Dangerous or negligent acts endangering persons	10	0.2	455	0.3
Homicide and related offences	2	0.0	67	0.0
Miscellaneous offences	26	0.6	817	0.5
Total	4,039	100.0	156,029	100.0

Source: Notes: Statistics New Zealand, NZ  $^{\cdot}$  Stat Crime data. Data in appendix table 10.6.

Years are calendar years 1 January to 31 December.

In almost every year since 1996, Taranaki's apprehension rate (per 10,000 population) has been higher than New Zealand's (figure 10.5). This suggests more offenders are being successfully apprehended in Taranaki than nationally. However, apprehension rates have decreased both locally and nationally since the 1990s, and more rapidly in the last five years.



Figure 10.5: Apprehension rate, Taranaki Area and New Zealand, 1996–2014

 Source:
 Statistics New Zealand, NZ · Stat Crime data. Data in appendix table 10.9.

 Notes:
 Years are calendar years 1 January to 31 December.

 Rates are crude rates. They are not adjusted for the age of the population.



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#### **APPENDIX 1**

## Trends in hospitalisations for falls among adults aged 20–64 years

In 2009, hospitalisation rates for falls among working-age adults (aged 20–64) in New Plymouth District and New Zealand were very similar – 511 and 505 per 100,000 respectively.<sup>47</sup> However, from 2009–2012, hospitalisation rates for falls among New Plymouth District adults in this age group decreased steadily, whereas the national rates increased slightly. From 2012–2013 the local and national rates both increased, and then decreased again in 2014.

# Figure 4.10A: Annual injury hospitalisations caused by falls among adults aged 20–64, New Plymouth District and New Zealand, 2009–2014



Notes: Years are calendar years 1 January to 31 December. All data classified using ICD-10. Data for 2014 is provisional.

<sup>&</sup>lt;sup>47</sup> For this age group, comparable data for earlier years was not available for this report.