Community Injury Prevention in New Plymouth District

Assessing the Needs

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Disclaimer

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REPORT SUMMARY

This report aims to assist Tui Ora and the Injury Safe Advisory Group to identify the types of injuries, population groups and injury locations that should be given priority in the work of a community injury prevention programme in New Plymouth District.

The information in the report comes from three main sources:

- research literature and other documentation on previous New Zealand and overseas community injury prevention programmes
- available statistical data on injuries in New Plymouth District
- consultation with key people and organisations in New Plymouth District with an interest in injury and injury prevention.

What is community-based injury prevention?

Community-based injury prevention is when people and organisations located in a district, city, town or neighbourhood work together to design and implement strategies to reduce the incidence or severity of injury in their population.

Building on the social work tradition of community development (Bjaras 1992), community injury prevention emphasises the use of *intersectoral collaboration* and *community participation.* Community members define the injury problems they consider important. They then build awareness and enthusiasm amongst other local people and organisations to take ownership of the problems and their solutions (Simpson 1999; Coggan and Simpson 1999).

This contrasts with other approaches to injury prevention that rely on centralised, top-down approaches, such as laws and regulations (e.g. compulsory seat belt wearing) or national education or media campaigns (Moller 1995).

The WHO Safe Communites model

During the 1980s, in parallel with other developments such as the Healthy Cities movement and the release of the Ottawa Charter on Health Promotion, the community injury prevention approach pioneered in Falköping was further refined, evolving into what is today known as the “Safe Communities” model for community injury prevention.

Key organisations and individuals involved in this work included the World Health Organization (WHO), programme managers in the various Swedish community-based injury initiatives, public health specialists from the Karolinska Institutet at the Department of Social Medicine in Stockholm, and Dr Jerry Moller from Australia.

In 1989 in Stockholm, at the First World Conference on Accident and Injury Prevention, which included 500 delegates from 50 countries, the Manifesto For Safe Communities was issued (Moller 1995) and, in 1991, the First International Conference on Safe Communities was held in Falköping.

The WHO has continued to take the lead in supporting the development of the Safe Communities concept internationally. Today, the WHO Collaborating Centre on Community Safety Promotion, based at Stockholm's Karolinska Institutet, sponsors the Safe Communities network. This network consists of all communities around the world designated as WHO Safe Communities. These Safe Communities are required to:

- form a cross sectoral group responsible for injury prevention
- involve the local community network
- address all ages, surroundings and situations
- address the concerns of high-risk groups (such as children and the elderly), high-risk environments and aim to ensure equity for vulnerable groups
- have a mechanism to document the frequency and causes of injuries
- take a long-term approach
- undertake evaluations that include indicators showing effects and provide information on the process as it advances
- identify relevant organisations in the community and assess their potential for participation in the programme
- ensure the participation of the health care community in both the registration of injuries and the injury prevention programme
- aim to involve all levels of the community in solving the injury problem
- disseminate information on the experience both nationally and internationally
- be willing to contribute to the overall network of Safe Communities.

To date, sustained community injury prevention programmes have been documented and evaluated in five New Zealand locations:

- Waitakere City (in the west of the Auckland metropolitan area)
- Waimakariri District (in North Canterbury)
- Kawerau (in the central North Island)

- Gisborne City (on the East Coast of the North Island)
- Ruatoria (also on the East Coast of the North Island).

The five NZ programmes have generally included all of the following key features:

- identification of a **single agency that takes legal and fiscal responsibility** for the programme
- establishment of an **intersectoral Advisory Group** made up of representatives from local organisations and community people with a stake in injury prevention
- establishment of one or more **Working Groups** that focus on identifying suitable activities for reducing particular kinds of injuries
- employment of one or more full or part-time programme **Co-ordinators**.

Demographic profile of New Plymouth District

New Plymouth District (NPD) is the northernmost of three territorial local authorities in the Taranaki region, situated on the west coast of the North Island of New Zealand.

Around 67,000 people currently live in NPD. This represents two percent of the New Zealand population and two-thirds of the population of the Taranaki region.

Compared with New Zealand as a whole, NPD has a relatively low proportion of young adults (aged 20-34) and a high proportion of elderly people (aged 70+).

Fifteen percent of the NPD population is Mäori (a slightly lower proportion than New Zealand overall). A very low proportion of the population is Pacific or Asian, compared with the national average.

Patterns of injury in New Plymouth District

Deaths from injury

Each year, an average of 30 New Plymouth District (NPD) residents die as a result of injury.

Rates of injury deaths in NPD are around 15 percent less than New Zealand as a whole (age-standardised rates).

Two out of three injury deaths each year in the NPD are due to *unintentional* causes (19 per year).[1] The three main causes of these unintentional injury deaths are:

- motor vehicle crashes (10 per year)
- falls (3 per year)
- unspecified fractures[2] (2 per year).

One in three injury deaths each year in the NPD are due to *intentional* causes (10 per year). Nearly all of these intentional deaths are suicides or self-inflicted injury (9 per year).

Injury death rates (intentional and unintentional injuries combined) are highest among the oldest age group (80+) and 20-29 year olds, and lowest among 0-9 year olds.

Intentional injuries (especially suicide and self inflicted injury) cause at least half of all deaths among NPD 10-19 year olds and 40-49 year olds. In all other age groups in the NPD, *unintentional* injuries are the most common cause of death.

NPD males are over two-and-a-half times more likely than NPD females to die from injuries.

NPD Mäori are just over twice as likely as NPD non-Mäori to die from injuries.

Injury death rates in the New Plymouth District have been reasonably similar to the national average over the period 1989-1998.

Hospitalisations for injury

In the year 2000, 1,374 New Plymouth District residents were admitted to public hospitals for injuries.

NPD residents are around 11 percent *less* likely than all New Zealanders to be hospitalised for injuries (age-standardised rates).

In 2000, the vast majority (92 percent) of hospitalisations for injury among NPD residents were due to *unintentional* causes. Only eight percent of hospitalisations for injury were due to *intentional* causes.

In 2000, there were 1,265 hospital admissions for *unintentional* injuries among NPD residents. The most common *groups* of injuries were:

- falls (367 admissions = 29 percent)
- unspecified fractures (191 admissions = 15 percent)

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[1] Injuries were classified using "E-codes" as included in the International Classification of Diseases (ICD) coding system. E-codes classify various environmental events, circumstances and conditions as "external causes" of injuries and poisonings. The 9th revision of the ICD coding system applies to both the mortality and hospitalisation data included in this report.

[2] These may include some fractures caused by falls.

- motor vehicle crash injuries (132 admissions = 10 percent)
- other transport injuries (83 admissions = 7 percent).

In 2000, there were 103 hospital admissions for *intentional* injuries for NPD residents. Nearly three out of four of these hospitalisations (73 percent) were for suicide and self-inflicted injury.

During the three-year period 1998-2000, 3,394 NPD residents were hospitalised for injuries. These hospitalisations were most commonly for the following six *specific* type of injuries:

- unspecified fractures (122 hospitalisations per year = 11 percent)
- falls - slipping, tripping, stumbling (114 = 10 percent)
- other falls from one level to another (88 = 8 percent)
- motor vehicle crash injuries involving drivers or passengers (68 = 6 percent)
- injuries from cutting and piercing instruments (66 = 6 percent)
- suicide attempts and self-inflicted injury (61 = 5 percent).

People from the oldest age group (80+) were by far the most likely to be hospitalised for injuries during 1998-2000. People in the middle age groups (30-69) were least likely to be hospitalised.

From 1998-2000, NPD males were 60 percent more likely to be hospitalised for injuries than NPD females (age-standardised rates). Males had higher hospitalisation rates for injury than females in all age groups except 80+.

10-19-year-olds and 20-29-year-olds were most likely to hospitalised for *intentional* injuries.

From 1998-2000, NPD Mäori were 24 percent *less* likely than NPD non-Mäori to be hospitalised for injuries.

Over the past 12 years, trends in hospitalisations for injuries among NPD residents have fluctuated slightly, but current age-standardised rates (2000) are nearly the same as they were in 1989. This contrasts with average New Zealand hospitalisation rates for injury, which have steadily increased since 1989.

Emergency department attendances for injury

In the year 2000, there were 6,531 attendances for injuries among NPD residents at public hospital Emergency Department clinics (EDs).

Overall, NPD males were 56 percent more likely to visit EDs for injuries than NPD females (age-standardised rates).

10-19-year-old males and females, 20-29-year-old males, and 80+-year-old females were most likely to attend EDs for injuries.

NPD Mäori were 35 percent *less* likely to visit EDs for injuries compared with NPD non-Mäori.

The three leading causes of injuries for which NPD people visited EDs in 2000, were:

- falls (2,290 visits = 35 percent)
- blunt trauma (1,412 = 22 percent)
- penetrating trauma (817 = 13 percent).

The most common locations where injuries occurred among NPD people who visited EDs for injury were:

- domestic situations (e.g. people's homes) (3,318 visits = 51 percent)
- sports / recreation venues (952 = 15 percent)
- public areas (634 = 10 percent)
- vehicles (614 = 9 percent)
- work (587 = 9 percent).

In 2000, males were much more likely than females to visit EDs for injuries in all locations, but the biggest differences were for injuries that occurred at work and sports / recreation venues.

ACC injury claim statistics

In the 2000 / 2001 financial year, 2,350 new entitlement claims for injuries were made to ACC in New Plymouth District.

NPD people were 12 percent more likely to make claims than New Zealanders in general.

Males were 69 percent more likely than females to apply for ACC compensation during this time (age-standardised rates).

For males, the highest claim rates were among 15-24-year olds, whereas for females, 75+-year-olds had the highest claim rates.

Children (aged 0-4 and 5-14) had by far the lowest new ACC claim rates in 2000 / 2001.

The highest numbers of claims were made for injuries that occurred:

- in home / community situations (874 claims = 37 percent)
- at work (586 = 25 percent)
- at sports / recreation venues (461 = 20 percent).

In 2000 / 2001, NPD males were far more likely than females to make claims for injuries sustained at work, and at sports / recreation venues.

Altogether, in the 2000 / 2001 financial year, over $11 million was spent on ACC claims in New Plymouth District.

On average, each local claim cost $4,990, which was 54 percent less than the national average of $7,691.

Land transport crash statistics

In 2000 in New Plymouth District, 149 road crashes and 216 casualties (injuries and deaths) were reported to the Police.

NPD had slightly higher crash and casualty rates compared with similar areas as well as New Zealand as a whole (although NPD's reporting rates are likely to be higher than average).

Local crash and casualty rates were highest on urban state highways (compared with urban and rural local roads and rural state highways) and were considerably higher than those in other similar areas and the New Zealand average.

As for the rest of New Zealand, and similar areas, New Plymouth District's crash and casualty rates have been steadily declining over the past 12 years.

Of the 886 injury crashes reported to the Police in the District during 1996-2000, most involved minor injuries (71 percent). Crashes involving serious and fatal injuries were more likely to occur on rural roads than urban roads.

Over the period 1996-2000, the most frequent types of road users involved in injury crashes were:

- car / van drivers (608 = 43 percent)
- car / van passengers (142 = 25 percent)
- motorcyclists (99 = 12 percent).

From 1996-2000, there was a significantly higher percentage of motorcyclist casualties on both urban and rural roads in New Plymouth District compared with similar areas in New Zealand as a whole.

The most common types of reported injury crashes in NPD in 1996-2000 resulted from:

- crossing / turning movements
- losing control or meeting another vehicle head-on on road bends
- rear-end / obstruction situations (such as crashing into the back of a parked or slow-moving vehicle).

Poor observation and failing to give way or stop were by far the two most frequent contributing factors to injury crashes in NPD during 1996-2000.

In a survey conducted at the beginning of this year (2001), 93 percent of adults sitting in the front seats of vehicles in Taranaki were wearing seatbelts (one percent higher than the national average).

In the latest survey of back-seat passengers in Taranaki (conducted in 2000), 66 percent were found to be wearing seatbelts (10 percent less than the national average).

In the latest survey of child-restraint use (conducted in 2000), 77 percent of Taranaki children were using a restraint (two percent less than the national average).

In another 2001 survey, 95 percent of Taranaki cyclists were wearing cycle helmets (one percent higher than the national average).

The LTSA estimates that the "social cost" of injury crashes in the year 2000 in NPD was over $44 million, the majority of which ($28 million) was due to crashes on urban state highways.

Police statistics

The last three years of New Plymouth area Police statistics show that there are averages of 770 violent crimes and 63 sexual crimes in New Plymouth area each year. Serious assaults (average 285 per year), minor assaults (242) and other violence (174) are the most types of violent crime (these can result in *intentional* injuries).

The rates of violent and sexual crimes in the New Plymouth area are only slightly above the average for New Zealand.

Summary of injury patterns, New Plymouth District

DEATHS	
Annual numbers (1996-1998)	30
Injury rates (overall) (1994-1998)	41 / 100,000
Unintentional injury rates (1994-1998)	26 / 100,000
Intentional injury rates (1994-1998)	14 / 100,000
Most common types of injuries (ranked)	Suicide, self-inflicted injuries Motor vehicle crashes Unspecified fractures[§]
HOSPITALISATIONS	
Annual numbers (1998-2000)	1,131
Injury rates (overall) (1998-2000)	1,590 per 100,000
Unintentional injury rates (1998-2000)	1,490 per 100,000
Intentional injury rates (1998-2000)	129 per 100,000
Most common types of injuries (ranked)	Unspecified fractures Falls Motor vehicle crashes
EMERGENCY DEPARTMENT ATTENDANCES	
Annual numbers (2000)	6,531
ED attendance rates (2000)	10,100 / 100,000
Most common types of injuries	Falls Blunt trauma Penetrating trauma
Most common injury locations	Domestic Sports / recreation Public area
ACC ENTITLEMENTS CLAIMS	
Annual numbers (2000 / 2001 financial year)	2,350
Claims rates (2000 / 2001 financial year)	3,222 per 100,000
Most common injury diagnoses	Soft tissue injuries Fracture / dislocations Lacerations / puncture wounds
Most common injury locations (ranked)	Home / community Work Sports / recreation
LAND TRANSPORT CRASHES	
Annual numbers of reported crashes (2000)	149
Annual numbers of reported casualties (2000)	216
CRIMES	
Annual numbers of violent crimes (2000 / 2001 financial year)	767
Annual numbers of sexual offences (2000 / 2001 financial year)	58

[§] These may include some fractures caused by falls.

Summary of injury patterns, New Plymouth District, by sex

	MALES	FEMALES
DEATHS		
Annual numbers (1994-1998)	21	9
Injury rates (overall)	Over twice female rate	Less than half male rate
Unintentional injury rates	Twice female rate	Half male rate
Intentional injury rates	Nearly five times female rate	Just over a fifth of male rate
Most common types of injuries (ranked)	Suicide, self-inflicted injuries Motor vehicle crashes Unspecified fractures[§]	Motor vehicle crashes Unspecified fractures[§] Suicide, self-inflicted injuries
HOSPITALISATIONS		
Annual numbers (1998-2000)	636	495
Injury rates (overall)	60 percent higher than female rate	60 percent lower than male rate
Unintentional injury rates	65 percent higher than female rate	65 percent lower than male rate
Intentional injury rates	37 percent higher than female rate	37 percent lower than male rate
Most common types of injuries (ranked)	Unspecified fractures[§] Cuts etc. Falls	Falls Unspecified fractures[§]
EMERGENCY DEPARTMENT ATTENDANCES		
Annual numbers (2000)	3,902	2,629
ED attendance rates	56 percent higher than female rates	56 percent lower than male rates
Most common types of injuries	Falls Blunt trauma Penetrating trauma	Falls Blunt trauma Strain
Most common injury locations	Domestic Sports / recreation Work	Domestic Sports / recreation Public area
ACC ENTITLEMENTS CLAIMS		
Annual numbers (2000 / 2001 financial year)	1,396	954
Claims rates	69 percent higher than female rates	69 percent lower than male rates
Most common injury locations (ranked)	Work Sports / recreation Home / community	Home / community Sport / recreation Work

[§] These may include some fractures caused by falls.

Summary of injury patterns, New Plymouth District, by age groups

	YOUNG CHILDREN (0-9)	OLDER CHILDREN AND ADOLESCENTS (10-19)	YOUNG ADULTS (20-29)	MID-AGED ADULTS (30-59)	OLDER PEOPLE (60+)
DEATHS					
Annual numbers (1994-1998)	1	4	7	10	9
Injury rates (overall)	Low	Medium	High	Medium	High-very high
Unintentional injury rates	Low	Low	High	Low-medium	High-very high
Intentional injury rates	Very low	High	High	Medium	Low
Most common types of injuries (ranked)	Motor vehicle crashes	Suicide, self-inflicted injuries Motor vehicle crashes	Motor vehicle crashes Suicide, self-inflicted injuries	Suicide, self-inflicted injuries Motor vehicle crashes	Fractures Motor vehicle crashes Falls Suicide, self-inflicted injuries
HOSPITALISATIONS					
Annual numbers (1998-2000)	210	189	143	287	302
Injury rates (overall)	Medium	Medium	Medium	Low	Medium-very high
Unintentional injury rates	Medium-high	Medium	Medium	Low	Medium-very high
Intentional injury rates	Very low	Medium	High	Medium-low	Very low
Most common types of injuries (ranked)	Falls Accidental poisoning Cuts etc.	Bicycle injuries Motor vehicle crashes Falls	Suicide, self inflicted injuries Cuts etc. Motor vehicle crashes	Suicide, self-inflicted injuries Motor vehicle crashes Cuts etc.	Falls Unspecified fractures
EMERGENCY DEPARTMENT ATTENDANCES					
Annual numbers (2000)	1,019	1,666	1,175	1,922	749
ED attendance rates	Medium	High	High	Medium-low	High
Most common types of injuries	Falls Blunt trauma	Falls Blunt trauma	Falls Blunt trauma	Falls Blunt trauma	Falls
Most common injury locations	Domestic	Domestic Sports / recreation	Domestic Sports / recreation	Domestic	Domestic
ACC ENTITLEMENTS CLAIMS					
Annual numbers (2000 / 2001 financial year)	Approx. 20	Approx. 150	Approx. 250	Approx. 700	Approx. 200
Claims rates	Very low	High	High	Medium-high	High
Most common injury locations (ranked)	Home / community	Home / community Sports / recreation	Sports / recreation Home / community Work	Home / community Work	Home / community

Summary of injury patterns, New Plymouth District, by ethnicity

	MÄORI	NON-MÄORI
DEATHS		
Annual numbers (1994-1998)	6	24
Injury rates (overall)	Over twice non-Mäori rate (but note small numbers)	Just under half Mäori rate
Most common types of injuries (ranked)	Suicide, self inflicted injuries Motor vehicle crashes	Suicide, self-inflicted injuries Motor vehicle crashes Unspecified fractures[§]
HOSPITALISATIONS		
Annual numbers (1998-2000)	118	1,013
Injury rates (overall)	24 percent lower than non-Mäori rate	24 percent higher than Mäori rate
Most common types of injuries (ranked)	Motor vehicle crashes Cuts etc. Falls	Unspecified fractures[§] Falls
EMERGENCY DEPARTMENT ATTENDANCES		
Annual numbers (2000)	708	5,494
ED attendance rates	35 percent lower than non-Mäori rate	35 percent higher than Mäori rate
Most common types of injuries	Fall Blunt trauma Penetrating trauma	Fall Blunt trauma Penetrating trauma
Most common injury locations	Domestic Sports / recreation Vehicle	Domestic Sports / recreation Public area
ACC ENTITLEMENTS CLAIMS		
Annual numbers (2000 / 2001 financial year)	195	1,887
Most common injury locations (ranked)	Sport / recreation Work Home / community	Home / community Work Sport / recreation

§ These may include some fractures caused by falls.

Results from community consultation

Who and how we consulted

A total of 45 face-to-face consultation interviews were completed with representatives from a cross section of community organisations and agencies, and two focus groups (one of rural women and one of rangatahi).

Who was perceived to be most at risk of injury?

Children

Childhood injuries were generally seen to have been well-catered for in the New Plymouth District by previous community-based injury prevention initiatives. Nevertheless, interviewees saw a need to 'keep up the good work' given that children were considered highly vulnerable to injury by virtue of their inexperience, innate

curiosity and innocence of the potential domestic and other environmental hazards around them.

Adolescents and young people

Adolescents and young people were also considered a group at high risk of injury. Key contributing factors were thought to include inexperience, experimentation, particularly with drugs and alcohol and risk-taking (especially in sports and recreational activities, e.g. skateboarding, surfing and cycling, as well as driving recklessly and fast). Young Māori male unlicensed drivers were also seen as a high-risk injury group.

The risk of completed suicide in young people was considered to be relatively low and therefore not a priority to target. However, several interviewees regarded the apparent rising incidence of 'hoon-like' driving behaviour, drunkenness and drug and alcohol intoxication to be a sign that all was not well with the District's youth.

Older people

Older people were identified as a 'number one' priority in terms of future community-based injury prevention approaches. Interviewees perceived the older generation as largely overlooked in terms of past community injury prevention and health promotion initiatives. The economic and personal costs of fractures in older people, particularly fractured hips in older women, were estimated to be very high and could only worsen given the projected increase in the older population over the next 40 years.

Māori

In general, Māori injury rates were perceived to be similar to non-Māori. However, some differences were noted in the prevalence of certain types of injuries and injury risk factors. Māori were considered to be at high risk of road-related, sports and industry-related injuries (especially in industries involving a high level of manual labour).

People participating in sport or recreation

Sports were perceived to be a major cause of injury. Interviewees identified a range of sporting codes and recreational activities that they perceived as high-risk. These ranged from the higher level contact sports such as rugby, rugby league, netball, basketball, and touch rugby, to the individual level sports and recreational activities such as cycling, skiing, road cycling and skateboarding. Mountain biking was described as an 'extreme sport' with a very high injury risk among its participants.

Interviewees identified a range of causative factors influencing sports injuries including:

- failure to wear suitable protective gear
- faulty equipment
- poor judgement and limited experience

- children playing sport beyond their developmental level
- coaches failing to train with safety in mind
- individuals failing to take responsibility for their own safety.

People in the workplace

The workplace was seen as one of the more potentially fruitful sites for transferring safety and injury prevention skills.

Health and safety personnel and managers from the oil, port transport and timber industries considered that all three of these industries currently have high quality safety programmes in place. In the past, these three industries apparently had a reputation for high numbers of injuries among workers (mainly back injuries and amputations). However, in recent years there appears to have been a dramatic decrease in workplace injuries in these industries, with company health and safety programmes reported to be largely responsible for this.

People on farms

A large number of interviewees believed farming families, particularly adult male farmers and children aged two to nine years, faced a relatively higher risk of injury compared to their urban counterparts. They attributed this risk to the nature of the work undertaken by farmers, which exposed them literally on a daily basis to working with unpredictable stock, with heavy machinery and potentially dangerous equipment, and to an environment where bad weather can see them "up to the eyes in mud".

The potential for injuries in farming children was perceived as influenced by similar factors impacting on and experienced by their parents. However, children's 'ignorance' and innocence of the potential dangers in their day-to-day environment was seen to pose additional risks that urban children were rarely exposed to. These dangers included:

- unfenced swimming pools and water holes
- being run over by large machinery
- under-age driving of all terrain vehicles (ATVs) and tractors
- being left at home unsupervised (in legal terms).

People at home

The home was perceived to be the most common place where injuries occur, not just for children, but for all other population groups as well (ie. young people, adult men and women, and older people).

People on the roads

Injuries and deaths from motor vehicle crashes were reported to have 'drastically reduced' over the past decade, both nationally and in the New Plymouth District.

The groups perceived to remain at highest risk of death and injury from vehicle crashes were:

- children, especially cyclists
- young people, particularly young Mäori males without a driver licence
- older people (car crashes and mobility scooters).

Suggested interventions

Participants in the consultation favoured various specific interventions to reduce the risk of different injuries in different population groups. These are discussed in detail in Chapter Six of this report.

Cross sector approaches to community injury prevention

Interviewees were generally enthusiastic supporters of the community-based intersectoral approach to injury prevention. Most saw this approach as the 'only way to go', as no one organisation or strategy was considered likely to succeed on its own.

Many interviewees pointed to 'successful' inter-agency initiatives already operating in the district to reduce injuries, such as Road Safety Taranaki, Plunket and the Kidsafe Trust. Interviewees also commended the industrial health and safety initiatives that have been developed through collaborative partnerships between ACC, OSH and the relevant industries involved.

Sectors and groups interested in community-based injury prevention

Groups that have already played a major role in developing injury prevention initiatives, such as Health Promotion Unit (Taranaki Health), New Plymouth District Council, Tui Ora, Kidsafe Taranaki, Plunket, the Police, Road Safe Taranaki and the ACC, indicated their continuing interest and desire for involvement in injury prevention in the district.

As well, several interviewees whose organisation had either been less involved or not involved at all in previous community-based injury prevention initiatives signalled their organisation's interest and willingness to be involved in future initiatives. These organisations included:

- The Fire Service
- St Johns Officers and the Ambulance Service
- Te Puni Kokiri

- WestpacTrust Sport Taranaki
- Rural women's groups
- The Pinnacle Independent Practitioners Association.

Other identified potential partners in the development of intersectoral, community-based injury prevention strategies included the Strengthening Families initiative and the Safer Community Council's focus groups.

Guiding principles for developing a community injury prevention programme

Other studies offer a range of advice and recommendations relating to the design and running of community injury prevention programmes. Key points made in these studies include:

- functions and responsibilities of the members of a programme's Advisory Group should be carefully and clearly defined
- Advisory Group members should have an understanding of, and commitment to, injury prevention using community development approaches
- in the early stages, it is important to undertake some kind of planning or consultation process to produce a community profile or needs assessment
- programmes that are well supported by local authorities (ie. city or district councils) are most likely to do well
- the co-ordinator role is pivotal to the success of community injury prevention. Programmes should employ at least one full or part-time paid co-ordinator. Relying on voluntary labour alone is not sufficient
- co-ordinators should have access, as a matter of course, to secretarial services and other support services and amenities to sustain their work
- there is really no set formula for easily working out which kinds of injury prevention activities a community injury prevention programme should adopt. The people involved need to weigh up many different factors when deciding which activities to choose.
- the philosophy, goals and strategies of the programme should be compatible with the prevailing values or beliefs of the target community
- the capacity of members of community and volunteer groups, as well as members of the general public, to participate in the work of designing and implementing community injury prevention activities can be highly variable. It

can be particularly difficult to achieve a high degree of participation in disadvantaged communities, where a high proportion of people may be experiencing adversity in their lives.

- injury prevention programmes designed for Mäori should adopt a holistic perspective; consider Mäori perspectives and values; be delivered by Mäori for Mäori; facilitate Mäori workforce development; and facilitate positive development of whanau wellbeing

- injury prevention programmes are likely to work best if the participating people and organisations are compatible with one another in terms of their overall philosophy, goals and social outlook

- developing a shared vision for the programme can be important for helping to avoiding situations where some participants end up becoming "passengers", rather than active contributors to the programme

- co-ordinating structures and decision-making processes should be kept as simple as possible

- relationships between participants in a community injury prevention programme should be characterised by trust and respect

- a community injury prevention programme needs to be given sufficient time to properly evolve, bed-in and mature

- if resources are available to evaluate injury prevention programmes, the evaluation should not dominate the programme itself

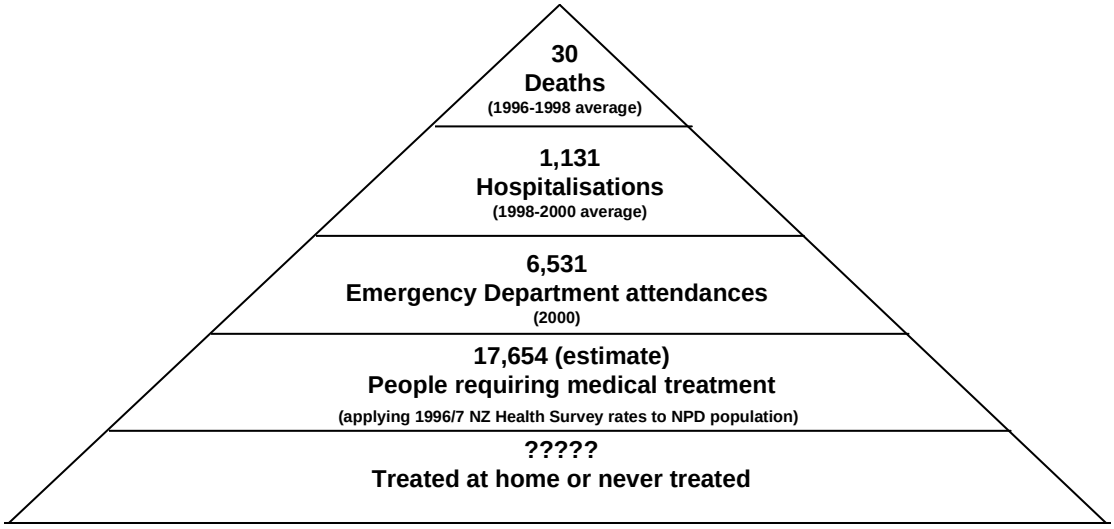
- in programme evaluations, it is often more appropriate to monitor intermediate outcomes (like changes in safety behaviour and awareness among members of the public) rather than injury incidence surveillance outcomes (like deaths, ED visits) This is because of the lack of availability of suitable surveillance data and the difficulties in causally linking these types of outcomes with the effects of the programme.

Establishing a community injury prevention programme in New Plymouth District

The challenge for the Injury Safe Advisory Group is to plan a suitable injury prevention programme for the local community, using the information in this report, together with the Group's own knowledge of the local situation and possibly further consultation with the community.

It is clear from the available statistics and the community consultation that New Plymouth District does have a problem with injuries, as summarised in the injury pyramid below:

INJURY PYRAMID FOR NEW PLYMOUTH DISTRICT - ANNUAL NUMBERS OF INJURIES



An intersectoral community injury prevention programme, based on the WHO Safe Communities model, appears to have the potential to help reduce the number and severity of these injuries.

Research suggests that there are two key pre-requisites for developing a successful community injury prevention programme:

(1) key members of the community must accept there is a need for a programme and support its introduction.

(2) there must be sufficient capacity and resources in the community to run the programme, including input from partner organisations and the wider general public.

There are favourable signs that New Plymouth District Injury Safe programme already meets these two pre-requisites.

There are also three important steps that a community injury prevention programme should aim to take early in its development to increase the likelihood that it will be successful.

(1) *identify priorities and strategies for action*. The community consultation undertaken for the needs assessment for the New Plymouth Injury Safe programme has already identified the following population groups as possible priorities:

- older people
- children
- adolescents and young people
- Mäori

- people on farms
- people participating in sports and recreation
- people in the workplace
- people at home
- people on the roads.

(2) *develop a comprehensive programme plan* that includes descriptions of the following:

- the programme's mission, goals, objectives, targets
- specific activities, strategies, interventions planned to address priorities
- organisational structure (including a paid co-ordinator, and possibly working groups)
- clearly defined partner relationships.

(3) *plan for some degree of monitoring and evaluation* of the programme.

1

INTRODUCTION

This report presents the results of an injury prevention needs assessment for New Plymouth District. The needs assessment was undertaken by Research and Evaluation Services (New Plymouth) in association with HealthSearch (Auckland), under contract to Tui Ora Limited.

Tui Ora is a Mäori development organisation that provides public health services to people in the Taranaki region (Tui Ora Limited 2000). It has been commissioned by the Accident Compensation Corporation (ACC) to undertake a planning and consultation process aimed at setting up a community injury prevention programme in New Plymouth District.

A significant step in the process has been the creation of the Injury Safe Advisory Group. This is an intersectoral advisory group that includes representatives from a variety of organisations in New Plymouth District interested in injury prevention. These organisations include Tui Ora, the Health Promotion Unit (Taranaki Health), Kidsafe Taranaki, the New Plymouth District Council and the ACC.

A key task of the Injury Safe Advisory Group is to work collaboratively with Tui Ora, as well as other people and organisations in New Plymouth District, to reach agreement on the priorities for the work of the community injury prevention programme and identify suitable prevention strategies to adopt in the district.

Purpose and scope of this report

The information in this report is intended to provide a solid foundation for decision-making by Tui Ora and the Advisory Group about the next steps to take in the development of the New Plymouth District community injury prevention programme.

In particular, the information is intended to assist Tui Ora and the Advisory Group to reach agreement on the specific types of injuries, population groups and injury locations that should be priorities for the work of the programme, as well as the kinds of prevention strategies that should be implemented.

It also aims to provide background information, drawn largely from evaluations of previous New Zealand and overseas community injury prevention programmes, indicating:

- the management, administrative and planning processes typically involved in setting up and running a community injury prevention programme
- the types of injury prevention strategies and activities implemented by other community injury prevention programmes.

2

RESEARCH METHODS AND DATA SOURCES

The information presented in this report comes from three main sources:

- research literature and other documentation on previous New Zealand and overseas community injury prevention programmes.
- available statistical data on injuries in New Plymouth District
- consultation with key people and organisations in Taranaki with an interest in injury and injury prevention.

The literature review

This involved the collection and review of published research papers, project reports and other documents providing information on features of overseas and New Zealand community injury prevention programmes. Relevant literature was identified by searching library catalogues, key bibliographic databases and the Internet. Copies of the documents were sourced from various locations including the University of Auckland's Injury Prevention Research Centre and the University of Otago's Injury Prevention Research Unit. The review focused in particular on literature covering:

- the early Swedish experience with community injury prevention and the subsequent establishment of the WHO Collaborating Centre on Community Safety Promotion, based at Stockholm's Karolinska Institutet
- recent Australian examples of the Safe Communities model
- New Zealand community injury prevention programmes, especially the five evaluated programmes that have been operating since 1994.
- features of community injury prevention programmes and other intersectoral health initiatives that tend to make them successful.

Compiling available injury statistics

In order to document the incidence of injuries in New Plymouth District, local information was analysed from six existing data sources:

- mortality data (from New Zealand Health Information Service)
- hospitalisation data (from New Zealand Health Information Service)
- Emergency Department attendance data (from Taranaki Health)

- ACC new entitlement claims data (from the Accident Compensation Corporation)
- LTSA crash statistics (from the Land Transport Safety Authority)
- crime statistics (from the New Zealand Police).

These data sources were chosen because they were readily accessible and able to be accommodated within the budget of the needs assessment. Most of them recorded relatively serious injuries in New Plymouth District. No suitable statistical information was available for more minor injuries, such as those treated by GPs and other primary health care providers, injuries treated with first aid only, and injuries that are not treated at all.

All data were analysed using Microsoft Excel worksheets, and charts were generated using the same software.

Injury rates (per 100,000 population) for different types of injuries were calculated for each age group using 1991 and 1996 census data. Detailed 2001 census data for New Plymouth District were not available at the time of the analysis. In some cases estimated population data for the year 2000 were also used, although these were not available by ethnicity at the sub-national level. Age-standardised rates were calculated in order to compare various sub-populations, to compare local New Plymouth District data with the national average, and to examine trends in local injury rates over time.

Because of the small numbers of injury cases for some of the analyses, data were aggregated as appropriate in the following ways:

- grouping injury types together
- combining data for several age groups
- calculating data for males *plus* females
- adding several years' data together
- calculating running averages.

Detailed descriptions of the features of each data source, and advice on interpreting the statistics derived from them, are provided in each subsection of Chapter Five of the report.

The community consultation

The community consultation aimed to find out what different people and organisations in New Plymouth District knew about injuries and injury prevention, and what kinds of people, locations and injuries they thought should be the main focus of a community injury prevention programme.

The consultation process involved four main steps:

- identifying key groups and individuals to consult
- developing a consultation checklist

- developing a qualitative interview schedule
- arranging and conducting the interviews.

Identifying key groups and individuals to consult

Based on suggestions made by the Injury Safe Advisory Group, the researchers identified a sample of relevant agencies and individuals to consult. These agencies and individuals were selected with the main aim of obtaining a reasonable cross-section of viewpoints and experiences related to injury, within the resources available for the consultation.

The Injury Safe Advisory Group noted that there would be an opportunity to seek further input and advice from other agencies and individuals in New Plymouth District once the needs assessment report had been completed.

Developing a consultation task checklist

A checklist was developed for the consultation project outlining each of the key tasks involved, the person/s responsible for managing these tasks, and a task-specific timeline.

Developing an interview schedule

The research team developed an interview schedule (see Appendix B). This contained mainly open-ended questions and was developed in consultation with the Injury Safe Advisory Group, pre-tested and revised. Topics covered in the schedule included:

- personal information (name, position, organisation and professional knowledge and involvement with injuries)
- most common injuries believed to occur in the New Plymouth District
- groups perceived to be prone to injury (e.g. children, the elderly)
- why, how and where injuries were thought to occur
- injury priorities
- suggested approaches to reducing these type of injuries
- perceived value of a community-based, intersectoral injury prevention approach
- availability and access to local / regional injury-related data.

Arranging the interviews

Members of the Injury Safe Advisory Group organised the interviews with the agencies and individuals selected for consultation and explained the researcher's role. Copies of an information sheet summarising the objectives of the consultation and the researcher's background and role were faxed to consultation participants prior to interview, where requested.

Conducting the interviews

The consultation interviews were carried out in two separate phases.

In the *first* phase, the interviews focused on identifying what people considered to be the most commonly occurring injuries, the groups most affected, factors leading to these types of injuries, and what might be done to prevent them. Participants were also asked which injuries and groups they thought should be priorities for targeting in future injury prevention initiatives. They were then asked to identify other people who could be consulted to further clarify the topics and issues raised.

In the *second* phase, the interviews centred on talking in more detail about the injuries and issues identified as priorities in the first round. In addition, during the second phase, interviews were held with people identified as currently delivering 'successful' safety promotion and injury prevention interventions in the district. These people were asked to identify possible future approaches and options for reaching priority groups to prevent injuries.

One member of the research team (VMc) conducted all the consultation interviews. Interviewing commenced in April 2001 and was completed in November 2001.

Number and types of groups consulted

A total of 45 face-to-face interviews were conducted for the consultation programme. The interviews included two focus groups, the first consisting of five rural women and the second involving six Mäori rangatahi.

The individuals and groups consulted were drawn from a broad spectrum of sectors and the community. These included:

The Health Sector: for example health care providers from general medical practice; the Taranaki Base Hospital's emergency department; specialist health fields such as health promotion, child and adolescent health; injury prevention including ACC, the Ambulance Service, mental health, gerontology, the Arthritis Foundation and Plunket.

The Industrial Sector: including health and safety spokespeople from the oil, port, transport and timber merchant industries, as well as officials from the Department of Labour's Occupational Health and Safety Division.

The Agricultural Sector: primarily rural women living on farms.

Road Safety: mainly the Police, Land Transport Authority, the New Plymouth District Council and the Roadsafe Taranaki Coordinator.

Sports: WestpacTrust Sport Taranaki.

Mäori-specific services and programmes: including Te Puni Kokiri (the Ministry of Mäori Development), Piki Te Ora Nursing Service, Kaiwhakahere, Mäori Sports Coordinator, Manaaki Oranga Health Services Provider of Waitara (which includes an Injury Prevention Coordinator), and He Whakaruru Hau Elder Protection Services Coordinator.

Other: the Police Sexual and Child Abuse Team, The Department of Child Youth and Family, The Fire Service, Aged Concern, Taranaki Women's Refuge, and New Plymouth District Safer Community Council.

School staff were not included in this consultation.

3

HISTORY OF THE DEVELOPMENT OF COMMUNITY INJURY PREVENTION PROGRAMMES

This section provides a brief introduction to the history of the development of community injury prevention programmes, both overseas and in New Zealand.[3]

What is community-based injury prevention?

Community-based injury prevention is when people and organisations located in a district, city, town or neighbourhood work together to design and implement strategies to reduce the incidence or severity of injury in their population.

Building on the social work tradition of community development (Bjaras 1992), community injury prevention emphasises the use of *intersectoral collaboration* and *community participation.* Community members define the injury problems they consider important. They then build awareness and enthusiasm amongst other local people and organisations to take ownership of the problems and their solutions (Simpson 1999; Coggan and Simpson 1999).

This contrasts with other approaches to injury prevention that rely on centralised, top-down approaches, such as laws and regulations (e.g. compulsory seat belt wearing) or national education or media campaigns (Moller 1995).

International developments

The first community injury prevention programmes began in Sweden during the mid-1970s, starting with the Accident Prevention Programme in Falköping, a semi-rural district of 32,000 people. The aim of the programme was to reduce injuries not so much through creating new structures or organisations, but by mobilising *existing* organisations and community groups (i.e. local authorities and non-government organisations) to work more closely together.

In 1979, following the creation of a comprehensive local injury surveillance and monitoring system, the Falköping programme implemented a range of strategies to reduce the prevalence and severity of injury in the community.

[3] More detail on aspects of New Zealand and overseas programmes are provided in Chapter Seven.

The key strategy was providing injury safety education programmes for large numbers of health and social service professionals, including child care centre staff and pre-school teachers, municipal district nurses, industrial safety officers and work supervisors.

Armed with this knowledge, these professionals then took responsibility for promoting injury prevention and safety practices in the community as part of their normal work. For example, district nurses ran through home safety checklists with their clients, while pre-school teachers held parent meetings to discuss accident prevention and plan initiatives to improve the safety of the pre-school environment (Ozanne-Smith et al 1998).

Three years later, injury surveillance data from Falköping showed a 27 percent reduction in injuries (mostly minor) resulting from accidents in the workplace, at home and on the roads (Ozanne-Smith et al 1998).

The WHO Safe Communities model

During the 1980s, in parallel with other developments such as the Healthy Cities movement and the release of the Ottawa Charter on Health Promotion, the community injury prevention approach pioneered in Falköping was further refined, evolving into what is today known as the "Safe Communities" model for community injury prevention.

Key organisations and individuals involved in this work included the World Health Organization (WHO), programme managers in the various Swedish community-based injury initiatives, public health specialists from the Karolinska Institutet at the Department of Social Medicine in Stockholm, and Dr Jerry Moller from Australia.

In 1989 in Stockholm, at the First World Conference on Accident and Injury Prevention, which included 500 delegates from 50 countries, the Manifesto For Safe Communities was issued (Moller 1995) and, in 1991, the First International Conference on Safe Communities was held in Falköping.

The WHO Collaborating Centre

The WHO has continued to take the lead in supporting the development of the Safe Communities concept internationally. Today, the WHO Collaborating Centre on Community Safety Promotion, based at Stockholm's Karolinska Institutet, sponsors the Safe Communities network. This network consists of all communities around the world designated as WHO Safe Communities.

A key responsibility of the Collaborating Centre is assessing applications from communities that wish to become a WHO designated Safe Community. Communities must send information supporting their application to the Collaborating Centre, including information showing the extent to which their community injury prevention programme meets the following 12 Safe Community criteria (WHO Collaborating Centre on Community Safety Promotion 1997):

- form a cross sectoral group responsible for injury prevention

- involve the local community network
- address all ages, surroundings and situations
- address the concerns of high-risk groups (such as children and the elderly), high-risk environments and aim to ensure equity for vulnerable groups
- have a mechanism to document the frequency and causes of injuries
- take a long-term approach
- undertake evaluations that include indicators showing effects and provide information on the process as it advances
- identify relevant organisations in the community and assess their potential for participation in the programme
- ensure the participation of the health care community in both the registration of injuries and the injury prevention programme
- aim to involve all levels of the community in solving the injury problem
- disseminate information on the experience both nationally and internationally
- be willing to contribute to the overall network of Safe Communities.

Following this, representatives from the Collaborating Centre undertake a site visit to discuss the application. If an application is accepted, an agreement is signed between the Collaborating Centre and the community.

Apart from assessing applications, other responsibilities of the WHO Collaborating Centre include:

- organising annual international Safe Community conferences
- co-ordinating training courses
- publishing a newsletter ("Safe Community News")
- methodological development and technology transfer
- organising networks for community programmes
- undertaking research.

Safe Communities worldwide

Worldwide there are now over 60 formally designated WHO Safe Communities members. They include programmes in comparatively small rural or semi-rural communities (e.g. Vaeroy and Harstad in Norway, Wang Khoi in Thailand, Wood Buffalo in Canada) as well as programmes in larger urban centres (e.g. Dallas, Rotterdam, Johannesburg, Sydney, Melbourne and Auckland).

The Collaborating Centre's website (http://www.phs.ki.se/csp/safecom/) contains useful information on virtually all of these Safe Communities, most of it seemingly quite up to date. Listed below are the Safe Communities for which information was available on the website as at 1 September 2001.

TABLE 3.1: SAFE COMMUNITIES LISTED ON THE WHO COLLABORATING CENTRE ON COMMUNITY SAFETY PROMOTION'S WEBSITE

	Year Designated	Pop
Sweden		
Lidköping	1989	37,000
Motala	1990	43,000
Falköping	1991	32,000
Falun	1995	55,000
Krokom	1996	14,800
Skövde	1996	50,000
Arjeplog	1997	3,650
Tidaholm	1998	13,000
Uddevalla	1998	49,500
Borås	1998	96,000
Mariestad	1999	24,000
Katrineholm	2000	32,500
Ludvika	2000	27,000
Nacka	2000	75,000
Norway		
Årdal	2000	5,850
Harstad	1994	22,500
Rakkestad	2000	7,000
Os	2000	2,150
Stovner	2001	20,908
Denmark		
Vejle	2001	345,000
Fyn	2001	500,000
Austria		
Vorarlberg	1998	65,000
The Netherlands		
Rotterdam	1998	600,000
Thailand		
Wang Khoi	1989	1,000
United Kingdom		
Corkerhill, Glasgow,	1992	2,000
Safe Castlemilk, Glasgow	1992	19,000
United States		
Dallas	1996	1,988,000
Anchorage	1998	260,000
Canada		
Wood Buffalo	1995	36,000
Brockville	2001	22,000
South Africa		
Eldorado Park	1997	85,000
Australia		
Hume City	1996	106,000
Noarlunga	1996	94,300
La Trobe	1996	73,000
Parkes	1996	15,000
SHOROC	1999	251,000
Ryde	1999	93,000
Denmark	2000	4,500
Melbourne	2000	45,000
New Zealand		
Waitakere	1999	167,400
Waimakariri	1999	35,000

Australian Safe Community programmes

A well-documented example of an urban Safe Community programme in Australia is the City of Hume Safe Living Programme (previously known as the Shire of Bulla Safe Living Programme) (Ozanne-Smith et al.1998).

In December 1990, the Victorian Health Promotion Foundation and Vic Roads provided funding (AU$304,000 over three years) for a community-based injury prevention programme in the Shire of Bulla (population 51,313 in 1996), an outer metropolitan municipality to the north west of Melbourne, Victoria.

Council officers in the Shire of Bulla were given responsibility for the overall management of the programme, including programme development, employment of staff, budget and administration.

A local Advisory Group was established (the Safe Living Programme Committee, consisting of city councillors, representatives from local organisations, community representatives, funding bodies and the research team evaluating the programme).

Two project officers were employed, with these two staff members responsible for co-ordinating and driving most of the activities of the programme.

At various stages throughout the programme, a number of Working Groups were set up to focus on developing interventions in specific areas such as traffic safety, sport safety, child safety and seniors safety. The groups included individual community members, representatives from local organisations, as well as representatives from organisations outside the community.

A marketing strategy was developed for the programme and publicity was circulated using mail-outs, press releases, a newsletter, information sheets, fridge magnets and bumper stickers.

From 1991 to 1994, over 100 specific interventions were developed and implemented by the programme. These included:

- traffic safety education programmes for schools
- small farm management courses (including safety)
- smoke detector subsidies for older people
- a child safety harness rebate scheme
- safety audits of main roads
- footpath-cycling and helmet-wearing promotions
- school playground equipment safety audits

- a personal alarm call system for older community members.

In 1994, following local government restructuring, the Shire of Bulla was incorporated into the City of Hume, a much larger metropolitan municipality (total population 121,504). The Safe Living Programme was expanded to cover this new area and population. Funding for continuing the programme was provided jointly by the City of Hume and the Victorian Health Promotion Foundation. In 1996, the City of Hume Safe Living Programme became a designated WHO Safe Community (the Shire of Bulla Safe Living Programme became a designated Safe Community in 1994).

More details on the types of injury prevention activities adopted in other Australian programmes are provided in Chapter Seven.

New Zealand programmes

To date, sustained community injury prevention programmes have been developed and evaluated in five New Zealand locations:

- Waitakere City (in the west of the Auckland metropolitan area)
- Waimakariri District (in North Canterbury)
- Kawerau (in the central North Island)
- Gisborne City
- Ruatoria (on the East Coast of the North Island).

The Gisborne and Ruatoria programmes were both specifically Mäori-focused initiatives.

In all five New Zealand programmes, the initial stimulus for action was the Public Health Commission making funding available for a period of three years for organisations to establish pilot injury prevention programmes. Both the Public Health Commission and the Plunket Society were also responsible for taking the first steps towards initiating local community action. This included advertising for tenders from interested communities, consulting with representatives of local organisations and holding public meetings.

The initial design of all five programmes reflected the 1994 guidelines for community injury prevention issued by the Public Health Commission. As such, the programmes generally shared the following common elements:

- identification of a **single agency that took legal and fiscal responsibility** for the programme

- establishment of an **intersectoral Advisory Group** (sometimes known as a Steering Committee or Management Committee) made up of representatives from local organisations and community people with a stake in injury prevention.

- establishment of one or more **Working Groups** that focused on identifying suitable activities for reducing particular kinds of injuries, or injuries commonly experienced by particular groups in the community (e.g. children or older people).

- employment of one or more full or part-time programme **Co-ordinators** to service the Advisory Group and Working Groups, develop local networks and take responsibility for implementing specific activities aimed at reducing injury.

The Safe Waitakere Injury Prevention project

What has come to be known as the Safe Waitakere Injury Prevention project (SWIP) began in Waitakere City in 1994. At the time Waitakere had a population of approximately 150,000 people, including 10 percent Mäori and 10 percent Pacific people (Williams 1996).[4]

The Waitakere City Council decided to apply to the PHC for funding for the project because it viewed community injury prevention as consistent with its principles of partnership and intersectoral development. The Council persuaded Safekids and the Henderson branch of the ACC to become partners in its bid (Coggan et al. 1998c).

The programme proposal submitted to the PHC was developed through intersectoral collaboration, with staff from the Council's Strategy and Development Unit taking overall responsibility for managing the process (Williams 1996). Waitakere City Council already had structures in place for consulting with Mäori and Pacific populations.

The bid was successful, leading to the setting up of governance and administrative structures, including an intersectoral Management Group.

While the Management Group was without a chairperson at the beginning of the programme, causing some delays, council staff and an elected Council member had a great deal of involvement with it. This was seen as positive, as well as the presence of the researchers who helped with development of the programme.

Seven priority injury areas were identified for the programme as a whole:

- Mäori

- Pacific

- children

[4] Documentation on the Safe Waitakere Injury Prevention project includes the reports of the various formative, process and outcome evaluations conducted on the project from 1994 to 1997 (Coggan et al. 1997; Coggan et al. 1998a; Coggan et al. 1998b; Coggan et al. 1998c). In addition, the report by Williams (1996) provides useful detail on activities undertaken as part of the programme from April 1994 until July 1996.

- young people
- older people,
- alcohol-related injuries
- road-related injuries.

Three key sub-projects were formed:

- a Mäori project (Puriri)
- a Pacific project
- a general population project.

Each of these projects had their own committee and a paid co-ordinator.

Puriri aimed to provide an approach to injury prevention for Mäori that was uniquely Mäori and ensure that "… Mäori would maintain a level of rangatiratanga of the Mäori component of the Waitakere CIPP through its establishment as a separate organisation and project in its own right" (Williams 1996: 25).

Te Pikiora Mäori Health Trust, based at Hoani Waititi Marae in Henderson, West Auckland, was selected to deliver the Mäori component of this service. The Trust reported to the Waitakere City Council through the Management Committee.

Processes and systems for the Pacific project were initially identified by members of an interim subcommittee set up by the Waitakere City Council's Pacific Islands Advisory Board. Meetings and workshops were held to inform and consult with the wider Pacific Islands communities and to develop a draft strategy for community injury prevention among Waitakere's various Pacific communities.

The broad injury prevention strategies adopted by the Waitakere programme as a whole included (Coggan et al. 1998c):

- health promotion
- education and training
- advocacy and action for hazard reduction and environmental change
- advocacy within the Waitakere City Council to emphasise adoption of safety policies and practices
- advocacy within Hoani Waititi Marae to emphasise adoption of safety policies and practices.

Initially most of these strategies focused on injury prevention among children and older people, as there were not enough resources to cover all age groups.

The main activities used for increasing awareness of injury prevention amongst Mäori in the district were hui, a mural, a child restraint campaign, initiatives for kaumatua, a tamariki safety day, and the development of a marae safety checklist (Coggan et al. 1998c, Coggan et al. 1998a).

The Pacific component of the programme focused on falls, burns / scalds, and sports and intentional injuries among young people. It undertook a large number of activities including: education kits on burns and scalds; displays at Pasifika Healthcare and shopping malls during Kidsafe Week; education sessions; development of injury prevention brochures; rap song and art competitions; and a community survey of falls among local preschool children (Coggan et al. 1998a).

In 1996, the disestablishment of the PHC meant that new funders, the four regional health authorities and ACC, took over the programme. These funders had different requirements for the programme, so that the road safety priority was removed.

In 1999, the project was accredited as an official WHO Safe Community.

Today the programme remains largely externally funded (including funding from ACC) and the Waitakere City Council continues to provide support in the form of workspace, support services and officer time from other Council staff (e.g. community consultation; policy advice) (Patterson and Coggan 2001).

Recent years have seen the development of the "Safe Waitakere" concept or "brand name", which is used to refer to the four inter-agency safety projects operating in Waitakere under the umbrella of the City Council:

- SWIP
- the Waitakere Safer Community Council (funded by the Crime Prevention Unit)
- the Road Safety Project (funded by Waitakere City Council, the LTSA and sponsors)
- the Safe Waitakere Alcohol Project (funded by the Health Funding Authority).

In 2000, the Injury Prevention Research Centre, based at the Auckland Medical School, became a WHO affiliated Safe Community Support Centre.

Patterson and Coggan (2001) report on the findings of a study looking at the extent to which the presence of SWIP has led to the institutionalisation of safety concepts within the Council and Waitakere City more generally.

Injury Prevention Waimakariri

The Waimakariri District is situated several kilometres north of Christchurch City and includes the towns of Rangiora and Kaiapoi plus surrounding rural areas and townships. The area is generally middle income, with a population of about 35,000 people, including approximately seven per cent Mäori.

Like the Waitakere programme, Injury Prevention Waimakariri started in 1994 (originally under the name "Safe Rangiora").[5] Following the appointment of a co-ordinator and the setting up of a Steering Committee, several activities focusing on child safety were implemented including "Keep Kids Safe Near Water", "Fun in the Sun", Poisons Awareness, playground safety and use of car restraints.

In the early years the programme was managed externally by the Plunket Society, but in 1996 this responsibility was handed over to the Waimakariri District Council, in whose offices the programme was based. The local council was very supportive of the programme, regarding injury prevention as compatible with its commitment to "Agenda 21" (sustainable development).

With the change to council management, the focus of the programme was broadened beyond just children to include all age groups and injury-related situations. Working groups were developed within the programme to deal with specific injury issues and raise the profile of the programme and injury prevention issues. The Steering Committee was renamed the "Advisory Committee" and various duties and responsibilities were allocated among members. As well, the programme staff and committee members began to work more closely alongside other council-managed programmes, such as those focusing on road safety and crime prevention (e.g. Safer Community Council). The council provided accommodation and administrative support for the project.

In 1999, Injury Prevention Waimakariri was formally designated as a WHO Safe Community.

Today the Injury Prevention Waimakariri project continues to employ a co-ordinator and makes up part of the District Council's Safe Waimakariri Community Team, which also includes projects focusing on road safety and crime prevention. The work of the project is supported by a network of local agencies and community organisations, including an Injury Prevention Waimakariri Advisory Group, made up of representatives from various local health, education and government agencies, as well as community organisations. This Advisory Group meets regularly to share information, provide expertise and support, and design and implement injury prevention strategies. The project co-ordinator makes regular presentations on injury prevention themes at community meetings, seminars and conferences, as well as sharing information with other Safe Communities in New Zealand and overseas.

[5] Main sources of information about the Injury Prevention Waimakariri programme are the evaluation reports completed by staff from the University of Otago's Injury Prevention Research Unit (Simpson and Morrison 1998; Simpson 1999). The programme has also produced information relevant to its application to become an accredited Safe Community, and the WHO Collaborating Centre's website contains useful summary information. Another evaluation of the project focusing on recent activities has just been completed by IPRU, but ACC, who funded the evaluation, have not yet publicly released the report.

Up to 2002, priority areas for project activities will be;

- children's safety
- safety issues of concern to Mäori
- safe sport and recreation
- family safety on farms
- safety of older adults.

Safe Kawerau Injury Prevention Project

In 1994, when the Safe Kawerau Injury Prevention Project (SKIP) began, the Kawerau District had a population of about 8,000 people, over half of whom were Mäori. There was also high unemployment in the district, a downturn in the local economy and a high population turnover.

Initially the project was managed by the Plunket Society. However, this responsibility was eventually transferred to the Eastern Bay of Plenty Rural Education Activities Programme (REAP), based in Whakatane.[6]

In the beginning, the main focus of the project was injury prevention among children. A project co-ordinator was appointed and a Steering Committee established, made up of local people and representatives from the local district council. The co-ordinator had an office in the Kawerau township.

Issues for possible action were identified by the co-ordinator and Steering Committee, based on data from community surveys and injury data from doctors (from ACC forms). The issues included cycle helmet wearing, broken glass, playground safety. Burns and scalds, poisons, and Kidsafe weeks were also added to the list later on. Activities related to some of these priority issues were implemented.

When evaluation results for the Kawerau project were compared with results for the Waimakariri project (see above), the Waimakariri project was found to have worked well, but the Kawerau project slightly less so.

Reasons for this difference were thought to include the Kawerau community not regarding injury prevention as a high priority (there were other more pressing problems) and having insufficient community capacity to put energy into activities related to injury prevention.

[6] Key sources of information on the Safe Kawerau Injury Prevention Project are the evaluation reports prepared by the University of Otago's Injury Prevention Research Unit (IPRU) staff, which followed the project's progress from 1993, just prior to its establishment, through until April 1998 (Simpson and Morrison 1998; Simpson 1999).

As well, the local Kawerau District Council did not regard supporting community injury prevention to be part of its core business.

Turanganui a Kiwa community injury prevention project

The Turanganui a Kiwa community injury prevention project began in 1995 as a collaboration between Tairawhiti Healthcare (East Coast of the North Island) and Turanganui a Kiwa runanga, based in Gisborne City. Initial funding came from the Public Health Commission (PHC), and later from the Regional Health Authority.[7]

An intersectoral Management Committee was set up to oversee the project (and also the Ngati Porou project in Ruatoria - see below) and a coordinator was appointed. The co-ordinator was Mäori with strong links to the local community and skilled in the philosophy and techniques of community development and health promotion.

A needs assessment was carried out at the start of the project and from this the following injury issues were identified as priorities:

- road traffic child safety
- family violence
- alcohol-related harm
- environmental hazards (with a focus on tamariki road safety and smoke alarms for kaumatua).

Work in these areas mainly centred on integrating new injury prevention activities into existing programmes and initiatives through a number of organisations (including sports groups). Promotional activities included using various media and holding hui at schools, marae and sports clubs. Specific topics focused on included:

- use of seatbelts
- drink driving
- sports safety and use of safety equipment
- child road safety
- smoke alarm installation.

[7] Information on the Turanganui a Kiwa community injury prevention project comes mainly from a series of evaluation reports undertaken by staff from the University of Auckland's Injury Prevention Research Centre (e.g. Brewin et al. 1997). The main findings from these have been summarised in Coggan and Simpson (1999).

Positive results of the initiative identified in evaluations include:

- an increased public awareness and knowledge of injury prevention
- an improved use of seatbelts
- improved feelings of personal safety
- a decrease in drink driving (and travelling in cars with drivers who had been drinking)
- an increased use of safety equipment by sports participants
- improved road safety behaviour among children
- the installation of 120 smoke alarms in homes of kaumatua.

Factors thought to contribute to the success of the programme included (Coggan and Simpson 1999):

- good consultation with the local community about priority areas
- a Mäori co-ordinator who had strong links to the local community and who was skilled in the areas of community development and health promotion
- implementing only a manageable number of intervention strategies
- using resources that were culturally appropriate for Mäori (e.g. use of the Mäori language)
- integrating programme activities into other community development and health promotion programmes
- achieving a good level of publicity for the programme and a high profile in the community.

Ngati Porou community injury prevention project

The Ngati Porou community injury prevention project was a collaborative venture between Tairawhiti Healthcare and local Mäori; in this case Ngati Porou runanga in Ruatoria township.

Like the Turanganui a Kiwa project, this project ran between 1995 and 1998, with funding from the PHC and the Regional Health Authority. It also had the same Management Committee as the Turanganui a Kiwa project.[8]

[8] As with the Turanganui a Kiwa project, the most comprehensive information on the Ngati Porou community injury prevention project comes from a series of formative and process evaluation reports prepared by staff from the University of Auckland's Injury Prevention Research Centre (e.g. Brewin et al. 1997), the main points from which are summarised in Coggan and Simpson (1999).

A needs assessment at the start of the project identified the following injury prevention issues that needed addressing:

- road traffic safety
- family violence
- alcohol and drug related harm
- environmental hazards (playground safety, forestry road safety).

Most project activities were centred on or near marae and aimed to improve the knowledge and skills of iwi members. Examples included:

- marae-based driver licence training
- obtaining and using car child restraints
- speeding on the road.

Instead of having a single co-ordinator, the Ngati Porou project had a team of three. Membership of this team changed at the start of the project, but became more stable later on with the recruitment of two team leaders. The programme included ongoing collaboration with and support from the Land Transport Safety Authority and the Police.

Community surveys conducted for the evaluation of the programme identified an increase in the awareness and knowledge of injury prevention among the target population. Participants in the marae-based drivers licence initiative also reported improved feelings of well-being, and there were increases in the proportions of people who said they always or mostly made sure their vehicles were safe; always used child restraints; and never exceeded the speed limit.

The commitment and leadership of the project team were seen to be two of the main strengths of the project, along with the support of the management group. Consulting with the community about injury prevention needs, and the holistic, marae-based approach were also positive features. The initiative was judged to be sensitive to local Mäori needs, providing culturally appropriate resources, activities, training and "empowerment" in the area of injury prevention.

Collaboration with and support from the Land Transport Safety Authority and the Police was also found to be important to the success of the project, along with a high level of media publicity (Coggan and Simpson 1999).

Further information on the types of injury prevention activities adopted in the five New Zealand pilot programmes is provided in Chapter Seven.

4

PROFILE OF NEW PLYMOUTH DISTRICT

Introduction

This chapter provides an introduction to the geographic, demographic and socio-economic features of New Plymouth District.[9] This is intended to set the scene for later chapters that look more specifically at factors influencing the type, incidence and severity of injuries in the District.

Location

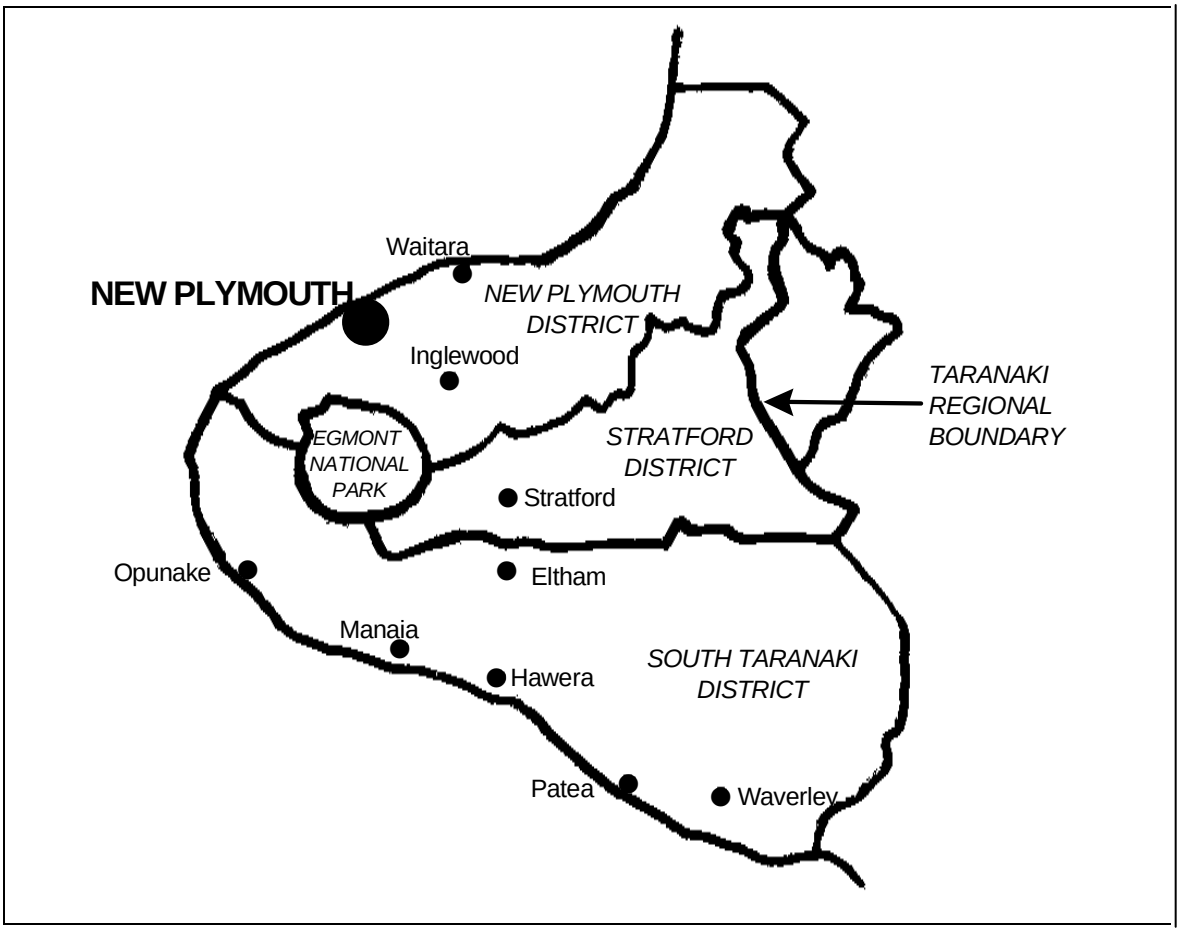
New Plymouth District is situated on the west coast of the North Island of New Zealand. It is the northernmost of three Territorial Local Authorities (TLAs) in the Taranaki region; the others being Stratford and South Taranaki Districts (Figure 4.1).

New Plymouth, Waitara and Inglewood are the three largest population centres in New Plymouth District. Much of the District is rural.

Significant geographic features of the District include the coastline along its northwestern boundary and Mount Taranaki and Egmont National Park on the southern boundary.

[9] Other more detailed profiles of the District and Taranaki region have been prepared by the New Plymouth District Council (2000) and Venture Taranaki (2001)

FIGURE 4.1: NEW PLYMOUTH DISTRICT AND SURROUNDINGS



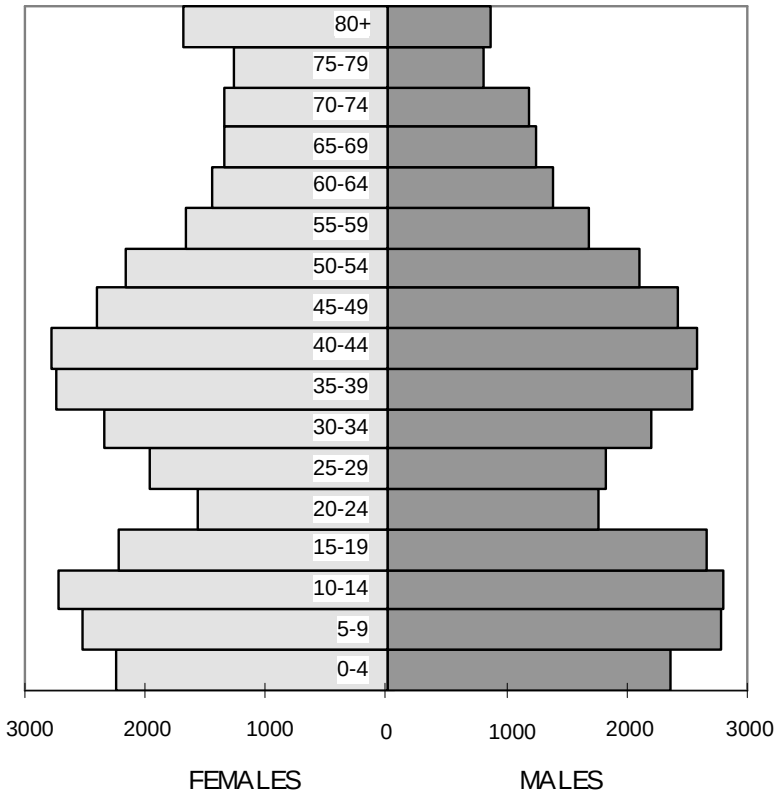
Source: Map prepared by authors.

Population

Estimates for the year 2000 indicate that the resident population of New Plymouth District is around 67,700. This is nearly two percent of the population of New Zealand, and two-thirds of the Taranaki regional population.[10]

The age-sex distribution of the New Plymouth District population is similar to that of New Zealand as a whole, except the District has a relatively low proportion of young adults (aged 20-34) and a higher proportion of elderly people (aged 70+) (Figure 4.2, Appendix Table A.1).

FIGURE 4.2: DISTRIBUTION OF AGE GROUPS IN NEW PLYMOUTH DISTRICT BY SEX, ESTIMATED RESIDENT POPULATION 2000



Source: Data from Statistics New Zealand (see Appendix Table A.1).

At the 1996 census, Mäori made up 15 percent of the population of New Plymouth District - two percent less than New Zealand as a whole. Also, there were much smaller percentages of Pacific and Asian peoples in New Plymouth District compared with the national average (Statistics New Zealand, Supermap).

[10] The provisional population figure for New Plymouth District on census night 2001 was 66,165 (Statistics NZ website htpp://www.stats.govt.nz). Final 2001 census results are not yet available.

Several iwi - Te Atiawa, Ngati Tama, Ngati Mutunga, Ngati Maru and Taranaki are located in the District.

Industries and occupations

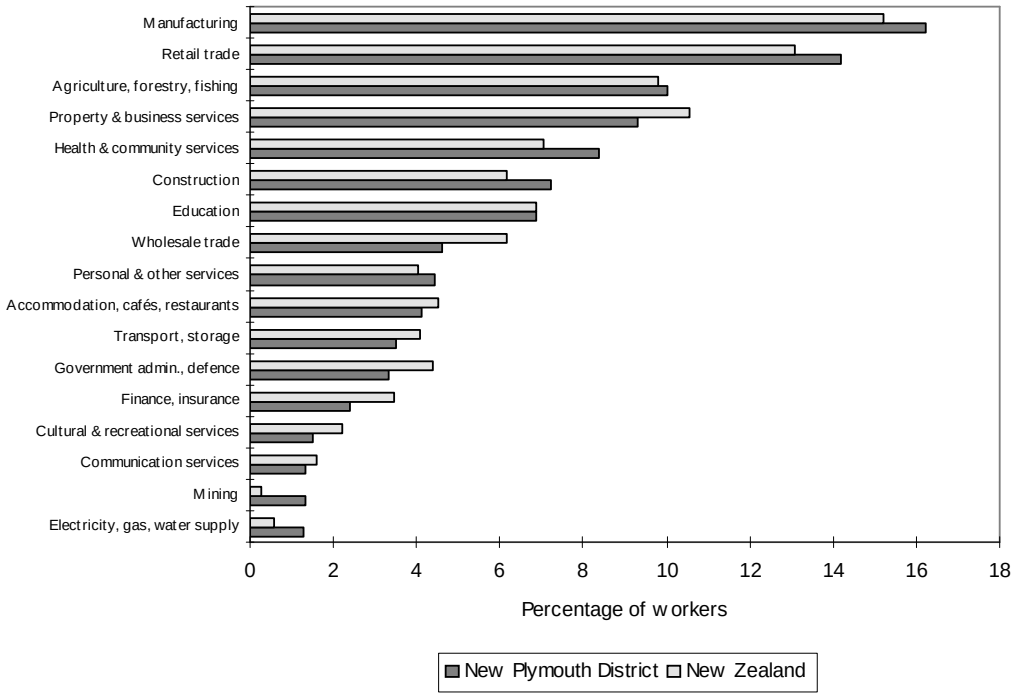
At the 1996 census, the industries in which the New Plymouth District people most often worked were:

- manufacturing
- retail trade
- agriculture / forestry / fishing.

Compared with the New Zealand as a whole, higher percentages of New Plymouth District people worked in the following industries (Figure 4.3):

- manufacturing
- retail trade
- health and community services
- construction
- mining
- electricity / gas / water supply.

FIGURE 4.3: EMPLOYMENT IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS, BY INDUSTRY

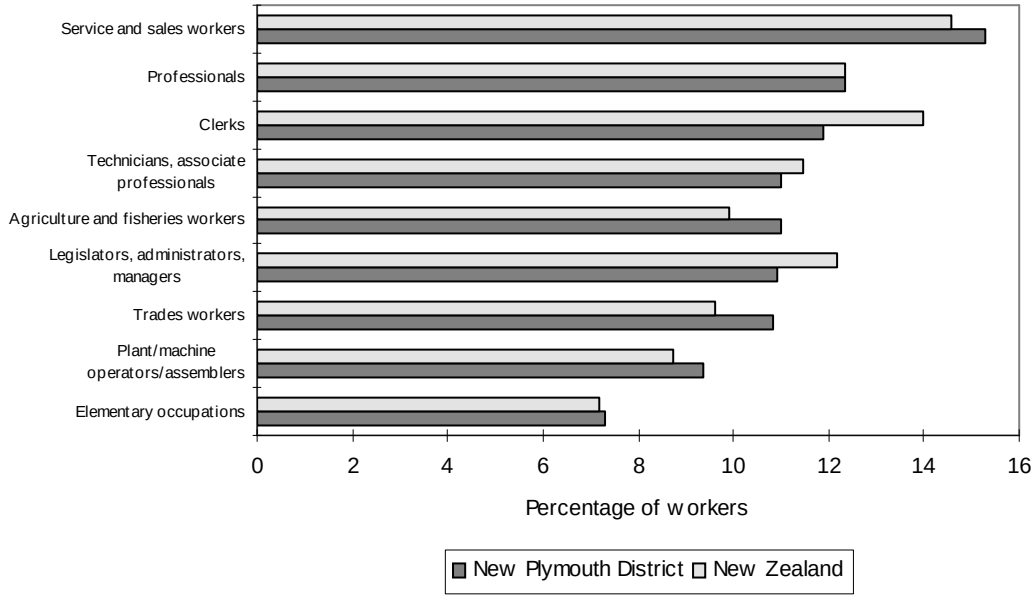


Source: Data from Statistics New Zealand 2001 (see Appendix Table A.2).

Note: Excludes industry unidentifiable, not specified.

In New Plymouth District in 1996, the three most common occupational groups were service and sales workers (15 percent), professionals (12 percent) and clerks (12 percent) (Figure 4.4). In comparison with the national average, more people in the District were service and sales workers, agriculture and fisheries workers, trades workers and plant and machine operators or assemblers.

FIGURE 4.4: EMPLOYMENT IN DIFFERENT OCCUPATIONAL GROUPS IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS



Source: Data from Statistics New Zealand 2001 (see Appendix Table A.3).

Note: Excludes occupation unidentifiable, not specified, not applicable.

Employment status

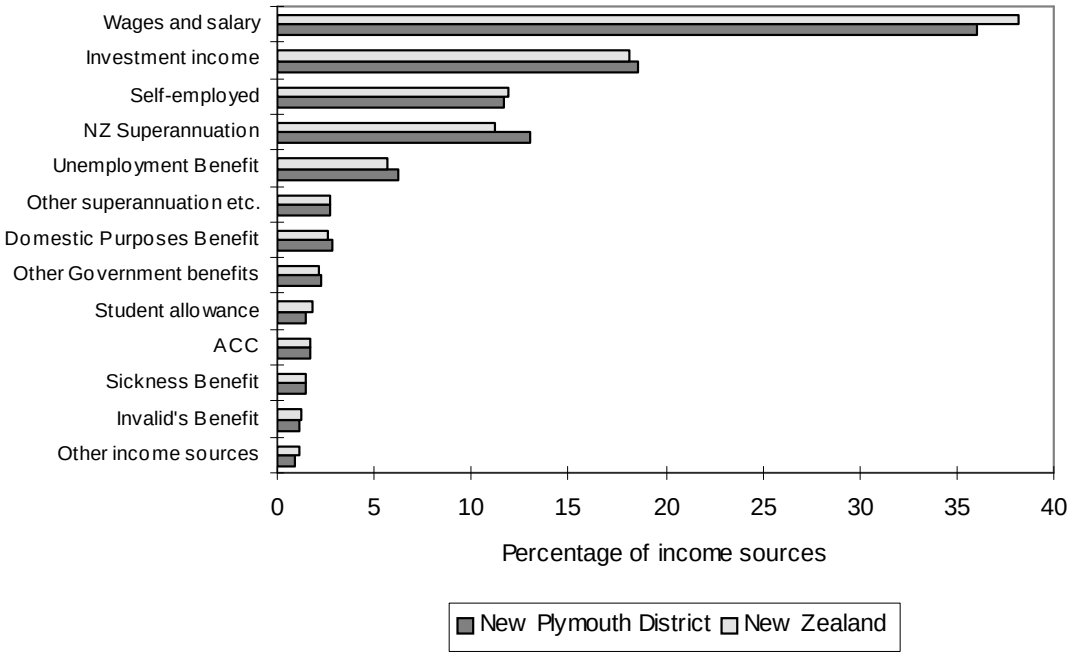
At the 1996 census, 43 percent of New Plymouth District people aged 15 and older were employed full-time and 14 percent were employed part-time. Five percent stated they were unemployed and 35 percent were not in the local labour force. At this time it was estimated that 8.5 percent of the District's labour force was unemployed, compared with 7.7 percent of the national labour force (Statistics New Zealand 2001).

More recent estimates suggest that the unemployment rate for New Plymouth District in the September 2000 quarter was 7.5 percent (New Plymouth District Council 2000). For Taranaki as a whole, in the June 2001 quarter, the unemployment rate was estimated to be 4.6 percent (compared with the national average of 5.2 percent) (Statistics New Zealand 2001).

Income

In 1996, the most frequent types of income sources in New Plymouth District (for people aged 15+) were wages and salaries, investments and self-employment. A higher proportion of income sources was from New Zealand Superannuation compared with the country as a whole, which is consistent with the District's comparatively high proportion of people in the 70+ age bracket (Figure 4.5).

FIGURE 4.5: INCOME SOURCES IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

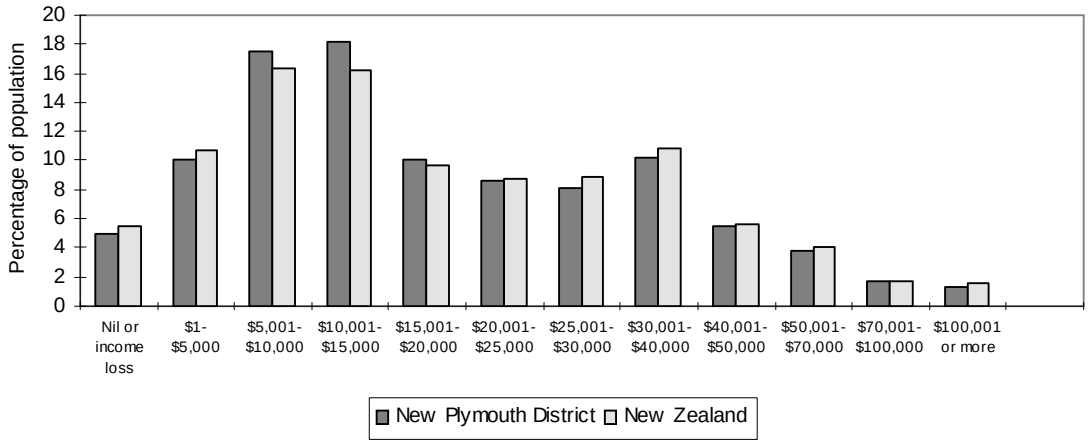


Source: Data from Statistics New Zealand 2001 (see Appendix Table A.4).

Note: Excludes income source not specified.

In 1996, New Plymouth District residents were more likely to have moderate incomes ($5,000-$20,000) than New Zealanders overall. That is, they were less likely to have very low or very high incomes (Figure 4.6). In 1996, the median annual income for New Plymouth District males was $22,027, and for females it was $12,155 (Statistics New Zealand 2001).

FIGURE 4.6: LEVELS OF PERSONAL ANNUAL INCOME FOR PEOPLE AGED 15+ IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS



Source: Data from Statistics New Zealand 2001 (see Appendix Table A.5).

Note: Excludes income not specified.

Home ownership

At the 1996 census, nearly 74 percent of New Plymouth District private dwellings were owned by their occupants, either with a mortgage (37 percent) or without a mortgage (35 percent). This compares with a lower 71 percent of occupant-ownership for New Zealand as a whole. In New Plymouth District, 21 percent of dwellings were rented, and a further four percent were provided rent-free (Statistics New Zealand 2001, Appendix Table A.6).

Access to telephones and motor vehicles

Access to telephone and motor vehicles are also considered to be indicators of socio-economic resources. Only four percent of households in private dwellings in New Plymouth District did not have access to telephones at the time of the 1996 census (compared with five percent for New Zealand as a whole) (see Appendix Table A.7). Twelve percent of the District's households had no access to a motor vehicle (the same proportion as New Zealand). Households in the District generally had access to fewer motor vehicles than the average New Zealand household (Statistics New Zealand 2001, Appendix Table A.8).

Education

There are indications that, in the Taranaki region, Mäori children aged 0-4 years are significantly more likely to participate in early childhood education than the national average. However, non-Mäori children living in the region are significantly *less* likely to participate than New Zealand non-Mäori overall (New Plymouth District Council 2000).

The level of higher educational qualifications in New Plymouth District at the 1996 census was also relatively low, with five percent of the District's residents aged 15+ having a tertiary qualification compared with eight percent of all New Zealanders aged 15+. Likewise, New Plymouth District residents aged 15+ were slightly more likely than all New Zealanders to have no qualifications (43 percent compared with 41 percent) (ibid.).

Relative deprivation index (NZDep96)

The New Zealand deprivation index based on 1996 census data (NZDep96) classifies small geographic areas (meshblocks[11]) under 10 categories of socio-economic deprivation (with 1 being the least deprived and 10 being the most deprived) (Howden-Chapman and Tobias 2000; Maré et al. 2001). The index is derived from nine indicators as follows:

Variable	Description
Communication	No access to telephone
Income	Aged 18-59 receiving means-tested benefit
Employment	Aged 18-59 unemployed
Income	Living in households with equivalised income below an income threshold
Transport	No access to a car
Support	Aged less than 60 years living in single-parent family
Qualifications	Aged 18-59 years without any qualifications
Owned home	Not living in own home
Living space	Living in households below equivalised bedroom occupancy threshold

(Source: Howden-Chapman and Tobias 2000)

Note: "equivalised" = adjusted for household composition.

[11] Meshblocks vary in both the physical area and number of people they cover, but have a median population of 90 and in urban areas cover approximately one "block" (Maré et al. 2001).

Summary deprivation scores have also been developed for larger geographic areas than meshblocks. Table 3.1 shows deprivation index rankings for 1996 for area units[12] in the New Plymouth District. Carrington, Highlands Park, Fernleigh and Barrett were in the least deprived areas (ranked as category 1), and Waitara West and Marfell were in the most deprived (10).

TABLE 4.1: NEW PLYMOUTH DISTRICT AREA UNITS BY NZDEP96 RANKINGS

Area unit	NZDep96	Area unit	NZDep96	Area unit	NZDep96
Carrington	1	Paraite	4	Urenui	7
Highlands Park	1	Mangaoraka	4	Marshland Hill	7
Fernleigh	1	Okoki-Okau	5	Frankleigh	7
Barrett	1	Glen Avon	5	Inglewood	7
Oakura	2	Spotswood	5	Kawaroa	8
Omata	2	Merrilands	5	Okato	9
Lepperton	2	Bell Block	6	Waitara East	9
Egmont Village	2	Lynmouth	6	Moturoa	9
Bowden	3	Westown	6	New Plymouth Central	9
Kaitake	3	Mount Bryan	6	Waitara West	10
Upper Westown	3	Fitzroy	6	Marfell	10
Kaimata	3	Welbourn	6		
		Struan Park	6		

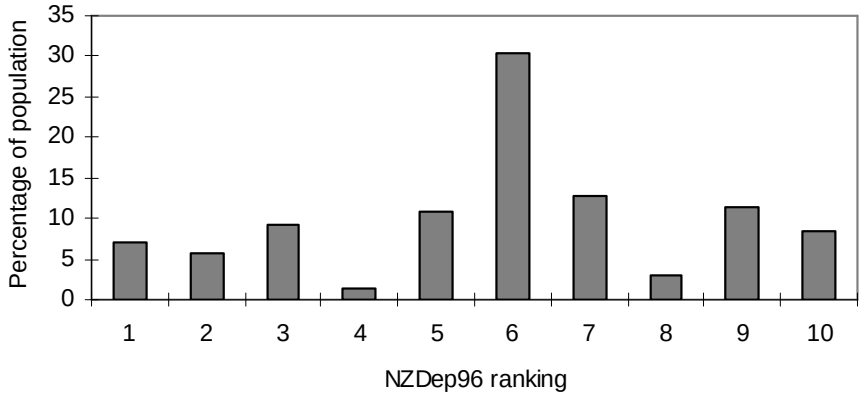
Source: New Plymouth District Council 2000.

Using this method of defining area units under the NZDep96 categories, it appears that around two-thirds (66 percent) of New Plymouth District residents live in area units that are categorised as NZDep96 6-10, and one-third (34 percent) live in *area units* in categories 1-5 (Figure 4.7). This suggests that a relatively high proportion of New Plymouth District residents live in area units that are comparatively deprived (although only eight percent live in the most deprived area units in NZDep96 category 10). A particularly large proportion (30 percent) of the District's population live in area units ranked as NZDep96 category 6.[13]

[12] Equivalent to suburbs in urban areas.

[13] Other authors have used meshblocks, rather than area units, to assess the proportion of local populations living in relative deprivation. Data were not available by meshblocks for the current report.

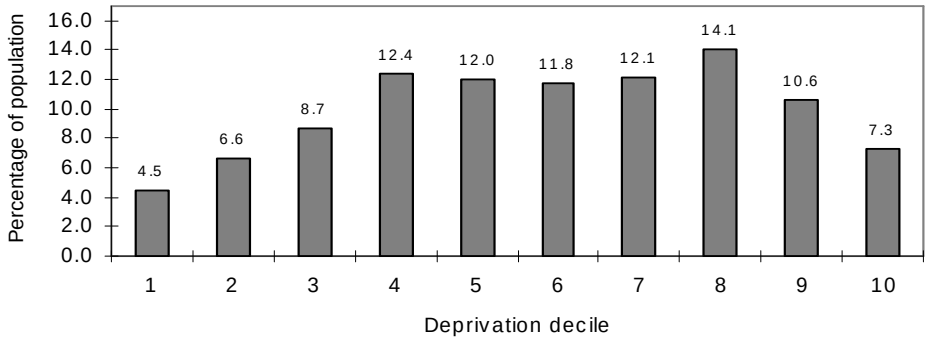
FIGURE 4.7: PROPORTION OF NEW PLYMOUTH DISTRICT POPULATION LIVING IN AREA UNITS BY NZDEP96 CATEGORIES, AT 1996 CENSUS



Source: Area unit NZDep96 ranking categories from New Plymouth District Council 2000, population from Statistics New Zealand 2001 (see Appendix Table A.9).

A different method of examining NZDep96 categories (summarised for regional councils) was used by Treasury to compare socioeconomic disadvantage of people living in different parts of New Zealand (Maré et al. 2001). The results for the Taranaki region showed that more than half (56 percent) of the population lived in deprivation deciles 6-10, and less than half (44 percent) lived in deciles 1-5. Compared with the national average, lower proportions of Taranaki people lived in areas that were the most deprived (category 10) or most privileged (categories 1-3), i.e. Taranaki residents were more likely than all New Zealanders to live in the less extreme deprivation deciles 4-9 (ibid.) (Figure 4.8).

FIGURE 4.8: PROPORTION OF TARANAKI REGIONAL POPULATION LIVING IN EACH DEPRIVATION DECILE, AT 1996 CENSUS



Source: Data from Maré et al. 2001.
Note: 10 percent of the whole New Zealand population lives in each of deprivation deciles.

5

PATTERNS OF INJURY IN NEW PLYMOUTH DISTRICT

Deaths from injury

Introduction

The most serious injury events in the community result in deaths. In this section we analyse injury mortality data for New Plymouth District TLA and compare these data with those for all New Zealanders.

Where possible, data have been analysed by different types of injuries and various demographic factors. However, due to small numbers of deaths in the region (as expected from the relatively small population), it has been necessary to aggregate data for many of the analyses (thus losing some degree of detail).

All analyses of death statistics in this section have examined "E-code" injury data, and have excluded "medical misadventure" and "adverse reactions to therapeutic agents" such as drugs (E-codes 870-879 and 930-949).[14] The reason for excluding these two causes is because they relate to risk factors in hospitals and in other health-care settings, rather than in the wider community. As the purpose of this analysis is to provide background information for a *community* injury prevention programme, these causes were felt to have little relevance.

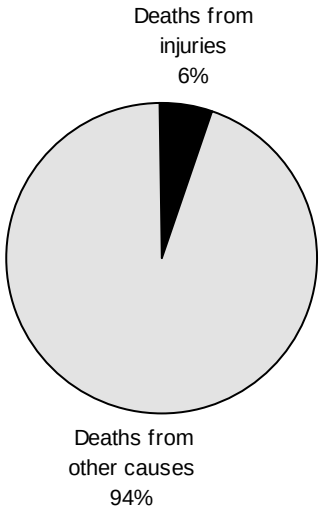
[14] Injuries were classified using "E-codes" as included in the International Classification of Diseases (ICD) coding system. E-codes classify various environmental events, circumstances and conditions as "external causes" of injuries and poisonings. The 9th revision of the ICD coding system applies to both the mortality and hospitalisation data included in this report.

Proportion of all deaths

In the period 1996-1998, the last three years for which mortality data are available, injuries contributed to five-and-a-half percent of all deaths among residents of New Plymouth District. This is an annual average of nearly 30 injury deaths (Figure 5.1). This is the same as the pattern for New Zealand, where just over six percent of all deaths were due to injury over the same period.

FIGURE 5.1: PERCENTAGE OF DEATHS FROM INJURIES AND OTHER CAUSES, NEW PLYMOUTH DISTRICT 1996-1998

(N=1,619)



Source: Data from New Zealand Health Information Service (see Appendix Table A.10).

Deaths from different types of injuries

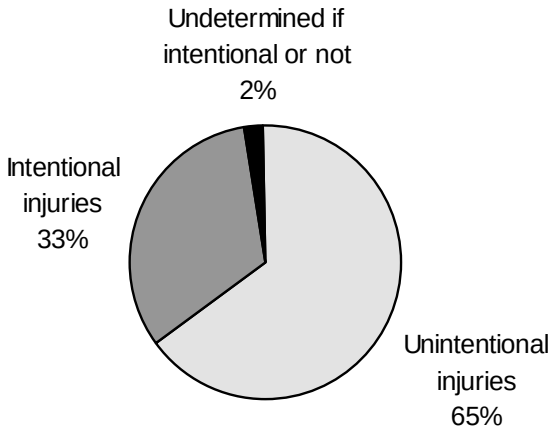
In the three years 1996-98, nearly two out of three (64 percent) of all injury deaths among New Plymouth District residents were due to *unintentional* causes. One in three (34 percent) were due to *intentional* causes (Figure 5.2).

Each year, this is equivalent to approximately:

- 19 unintentional injury deaths
- 10 intentional injury deaths.

This is very similar to the national pattern for the same period when slightly less than two out of three (63 percent) of injury deaths were due to *unintentional* causes, and slightly more than one in three (36 percent) were due to *intentional* causes.

FIGURE 5.2: PERCENTAGE OF DEATHS FROM INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 1996-1998 (N=89)



Source: Data from New Zealand Health Information Service (see Appendix Table A.11).

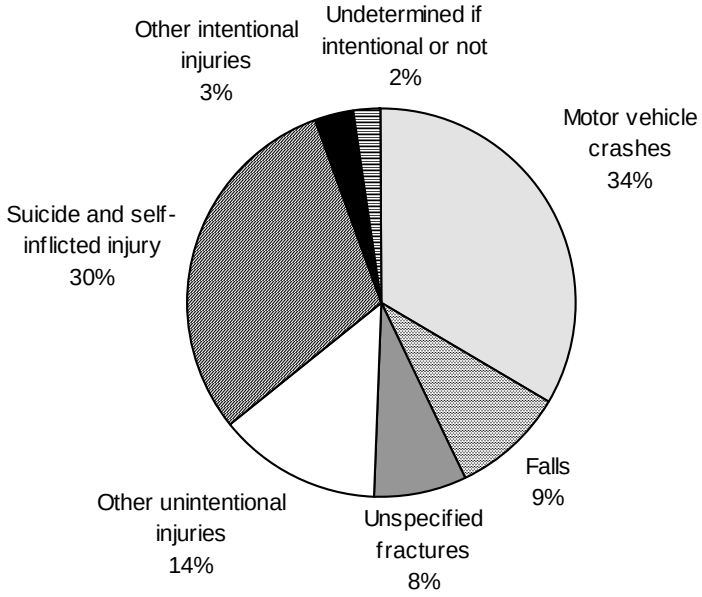
In 1996-98, most of the deaths due to unintentional injuries involved:

- motor vehicle crashes (10 per year)
- falls (3 per year)
- unspecified fractures[15] (2 per year).

Together these three groups of injuries contributed to just over half of all injury deaths. The vast majority of deaths due to *intentional* injury were caused by suicide and other types of self-inflicted injury (9 per year) (Figure 5.3).

FIGURE 5.3: PERCENTAGE OF DEATHS FROM DIFFERENT TYPES OF INJURIES, NEW PLYMOUTH DISTRICT 1996-1998

(N=89)



Source: Data from New Zealand Health Information Service (see Appendix Table A.12).

[15] These may include some fractures caused by falls.

Table 5.1 below lists the specific causes of injury death among New Plymouth District residents for the years 1994-98. Grouping the causes this way shows that suicide and self-inflicted injury was the most common single cause of death (9 per year). This was followed by:

- deaths of drivers and passengers of motor vehicles (7 per year)
- unspecified fractures (3 per year)
- motor cyclist deaths (nearly 2 per year)
- falls from one level to another (also nearly 2 per year).

TABLE 5.1: DEATHS FOR SPECIFIC TYPES OF INJURIES, NEW PLYMOUTH DISTRICT 1994-1998, RANKED IN ORDER OF FREQUENCY

E-Code	Description	Average annual number	Total for 5 years 1994-1998
950-959	Suicide and self inflicted injury	9.0	45
810-819 0 and 1	Motor vehicles drivers and passengers	7.6	38
887-888	Fractures cause unspecified	3.4	17
810-819 2 and 3	Motor vehicles - motorcycles	1.6	8
8841-8849	Other falls from one level to another	1.6	8
810-819 6	Motor vehicles - pedal cycles	0.6	3
840-845	Air and space transport accidents	0.6	3
910	Accidental drowning and submersion	0.6	3
929	Late effects of injury	0.6	3
880	Fall from steps or stairs	0.4	2
919	Accidents caused by machinery	0.4	2
920	Cutting and piercing instruments	0.4	2
961-964 + 968	Assault by other means	0.4	2
980-989	Undetermined whether intentional or unintentional	0.4	2
800-807	Railway accidents	0.2	1
810-819 7	Motor vehicles - pedestrians	0.2	1
820-825	Motor Vehicle - non traffic	0.2	1
850-858	Accidental poisoning - drugs, medicines, biologicals	0.2	1
860-864, 866	Accidental poisoning - gases and vapors	0.2	1
867-869	Accidental poisoning by poisonous gases	0.2	1
881	Fall from ladders scaffolding	0.2	1
882	Fall from building or other structure	0.2	1
885	Falls - slipping tripping stumbling	0.2	1
890-891	Uncontrolled fire in private dwellings	0.2	1
902-909	Other accidents due natural or environmental factors	0.2	1
911-912	Respiratory obstruction suffocation	0.2	1
916	Struck by falling object	0.2	1
925	Electric current	0.2	1
960	Fight, brawl, rape	0.2	1
965	Assault by firearm explosives	0.2	1
966	Assault by cutting piercing instrument	0.2	1
	TOTAL	**31.2**	156

Source: Data from New Zealand Health Information Service.

Injury deaths among different age groups

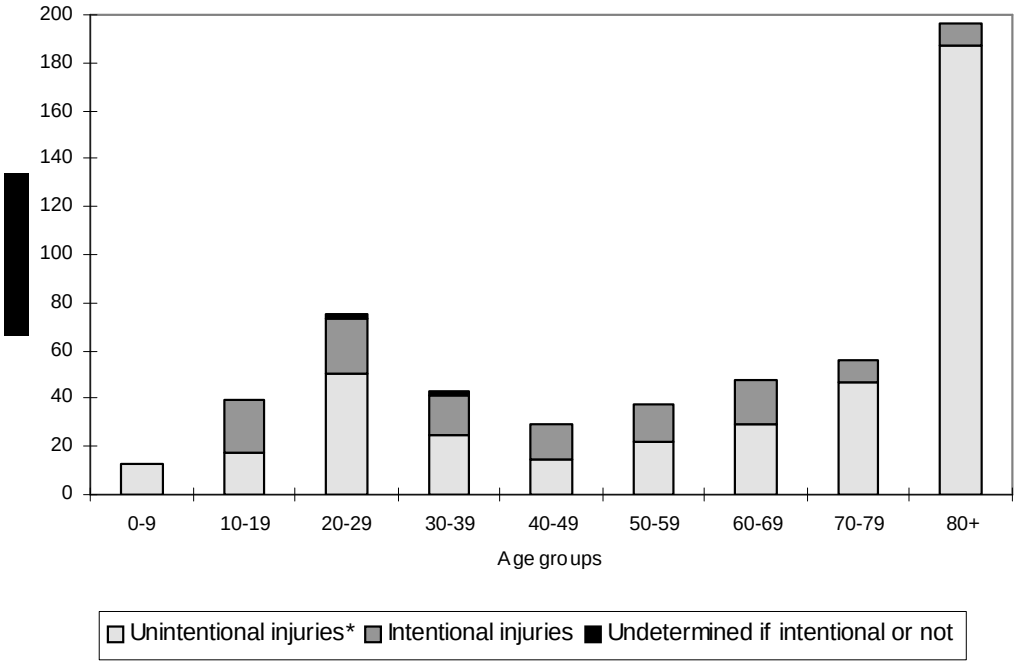
Overall, the average annual age-standardised mortality rate for injury among New Plymouth District residents was slightly lower during 1996-1998 than for New Zealand as a whole (38 compared with 44 per 100,000).

In New Plymouth District for the five years 1994-1998, injury mortality rates were lowest for the youngest 10-year age group (0-9 years), and highest for the oldest age group (80+)(Figure 5.4). Another (lower) peak in rates occurred for 20-29 year olds.

Intentional injuries (predominantly suicide and other self-inflicted injuries) contributed to half or more of all injury deaths among 10-19 year olds (55 percent) and 40-49 year olds (50 percent). This contrasts with the pattern for other age groups where *unintentional* causes were far more common than *intentional* causes (Figure 5.4).

During the same period, there were very similar age-specific injury mortality patterns for all New Zealanders.

FIGURE 5.4: MORTALITY FROM INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 1994-1998, BY AGE GROUPS, AVERAGE ANNUAL RATES PER 100,000 POPULATION



Source: Data from New Zealand Health Information Service (see Appendix Table A.13).

In the five-year period 1994-1998, suicide and self-inflicted injury was the most frequent cause of injury deaths in New Plymouth District among five of the nine age groups (10-19, 30-39, 40-49, 50-59, 60-69) (Table 5.2 overleaf).

TABLE 5.2: DEATHS FOR SPECIFIC TYPES OF INJURIES, NEW PLYMOUTH DISTRICT 1994-1998, RANKED IN ORDER OF FREQUENCY, BY AGE GROUPS

0-9		10-19		20-29	
Injury type	**No.**	**Injury type**	**No.**	**Injury type**	**No.**
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	2	Suicide and self inflicted injury (E950-959)	9	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	12
Motor vehicles Pedal cycles (E810-819 6)	1	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	5	Suicide and self inflicted injury (E950-959)	9
Motor vehicles Pedestrians (E810-819 7)	1	Motor vehicles Motorcycles (E810-819 2 and 3)	1	Motor vehicles Motorcycles (E810-819 2 and 3)	4
Motor Vehicle Non Traffic (E820-825)	1	Fall from building or other structure (E882)	1	Other Falls from one level to another (E8841-8849)	2
Air and Space transport accidents (E840-845)	1	Other Falls from one level to another (E8841-8849)	1	Railway Accidents (E800-807)	1
Late effects of injury (E929)	1	Accidental drowning and submersion (E910)	1	Fall from ladders scaffolding (E881)	1
		Fight Brawl rape (E960)	1	Other accidents due natural or environmental factors (E902-909)	1
		Assault by other means (E 961-964 + 968)	1	Accidental drowning and submersion (E910)	1
				Assault by firearm explosives (E965)	1
				Undetermined whether intentional or unintentional (E980-989)	1
30-39		**40-49**		**50-59**	
Injury type	**No.**	**Injury type**	**No.**	**Injury type**	**No.**
Suicide and self inflicted injury (E950-959	8	Suicide and self inflicted injury (E950-959)	6	Suicide and self inflicted injury (E950-959)	5
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	5	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	4	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	3
Motor vehicles Motorcycles (E810-819 2 and 3)	1	Motor vehicles Motorcycles (E810-819 2 and 3)	1	Motor vehicles Motorcycles (E810-819 2 and 3)	1
Accidental poisoning drugs medicines biologicals (E850-858)	1	Accidental poisoning by poisonous gases (E867-869)	1	Air and Space transport accidents (E840-845)	1
Accidental Poisoning Gases and Vapors (E860-864, 866)	1	Accidents caused by machinery (E919)	1	Fractures cause unspecified (E887-888)	1
Other Falls from one level to another (E8841-8849)	1	Assault by other means (E961-964 + 968)	1	Struck by falling object (E916)	1
Uncontrolled fire in Private dwellings (E 890-891)	1				
Accidental drowning and submersion (E910)	1				
Cutting and piercing instruments (E920)	1				
Electric current (E925)	1				
Assault by cutting piercing instrument (E966)	1				
Undetermined whether intentional or unintentional (E980-989)	1				
60-69		70-79		80+	
Injury type	**No.**	**Injury type**	**No.**	**Injury type**	**No.**
Suicide and self inflicted injury (E950-959)	5	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	4	Fractures cause unspecified (E887-888)	12
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	3	Fractures cause unspecified (E887-888)	3	Other Falls from one level to another (E8841-8849)	4
Motor vehicles Pedal cycles (E810-819 6)	1	Suicide and self inflicted injury (E950-959)	2	Motor vehicles Pedal cycles (E810-819 6)	1
Fall from steps or stairs (E880)	1	Air and Space transport accidents (E840-845)	1	Falls slipping tripping stumbling (E885)	1
Fractures cause unspecified (E887-888)	1	Fall from steps or stairs (E880)	1	Cutting and piercing instruments (E920)	1
Respiratory obstruction suffocation (E911-912)	1	Late effects of injury (E929)	1	Late effects of injury (E929)	1
Accidents caused by machinery (E919)	1			Suicide and self inflicted injury (E950-959)	1

Source: Data from New Zealand Health Information Service

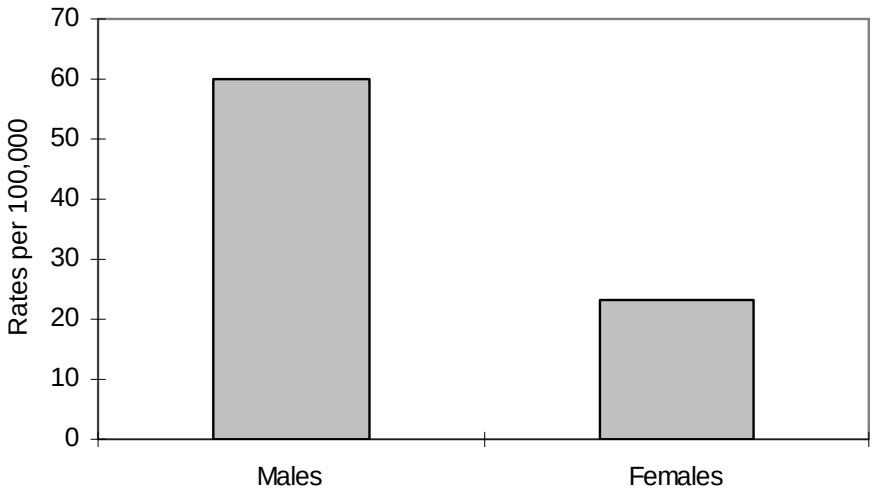
Injury deaths among males and females

New Plymouth District men are more likely than New Plymouth District women to die from injury.

Over the period 1994-1998, the age-standardised mortality injury rate for males living in the New Plymouth District was around two-and-a-half times higher than the female rate (age-standardised mortality rates of 60 and 23 per 100,000 respectively) (Figure 5.5). These rates are very similar to those for New Zealand as a whole - in 1998 national age-standardised injury mortality rates were 62 per 100,000 for males and 22 for females.

From 1994-1998, 61 percent of all injury deaths among males were due to *unintentional* causes and 38 percent were caused *intentionally*. A higher proportion of female injury deaths were due to *unintentional*, rather than *intentional* injury (79 percent vs. 19 percent).

FIGURE 5.5: MORTALITY FROM INJURY, NEW PLYMOUTH DISTRICT 1994-1998 BY SEX, AVERAGE ANNUAL AGE-STANDARDISED RATES PER 100,000



Source: Data from New Zealand Health Information Service. Age standardised using Segi's world population (see Appendix Table A.14).

In the five-year period 1994-1998, the three most common specific causes of injury deaths among New Plymouth District males were (in order of frequency) suicide and self-inflicted injury, motor vehicle crashes involving drivers and passengers, and unspecified fractures. Among females, the same three causes were most common, although in order of frequency they were: motor vehicle crashes involving drivers and passengers, unspecified fractures, and suicide and self-inflicted injury (Table 5.3).

TABLE 5.3: DEATHS FOR SPECIFIC TYPES OF INJURIES, NEW PLYMOUTH DISTRICT 1994-1998, RANKED IN ORDER OF FREQUENCY, BY SEX

Males		Females	
Injury type	**No.**	**Injury type**	**No.**
Suicide and self inflicted injury (E950-959)	37	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	15
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	23	Fractures cause unspecified (E887-888)	9
Fractures cause unspecified (E887-888)	8	Suicide and self inflicted injury (E950-959)	8
Other Falls from one level to another (E8841-8849)	7	Motor vehicles Motorcycles (E810-819 2 and 3)	2
Motor vehicles Motorcycles (E810-819 2 and 3)	6	Fall from steps or stairs (E880)	2
Motor vehicles Pedal cycles (E810-819 6)	3	Late effects of injury (E929)	2
Air and Space transport accidents (E840-845)	2	Motor vehicles Pedestrians (E810-819 7)	1
Accidental drowning and submersion (E910)	2	Motor Vehicle Non Traffic (E820-825)	1
Accidents caused by machinery (E919)	2	Air and Space transport accidents (E840-845)	1
Railway Accidents (E800-807)	1	Other Falls from one level to another (E8841-8849)	1
Accidental poisoning drugs medicines biologicals (E850-858)	1	Falls slipping tripping stumbling (E885)	1
Accidental Poisoning Gases and Vapors (E860-864, 866)	1	Accidental drowning and submersion (E910)	1
Accidental poisoning by poisonous gases (E867-869)	1	Cutting and piercing instruments (E920)	1
Fall from ladders scaffolding (E881)	1	Assault by other means (E961-964 + 968)	1
Fall from building or other structure (E882)	1	Undetermined whether intentional or unintentional (E980-989)	1
Uncontrolled fire in Private dwellings (E890-891)	1		
Other accidents due natural or environmental factors (E902-909)	1		
Respiratory obstruction suffocation (E911-912)	1		
Struck by falling object (E916)	1		
Cutting and piercing instruments (E920)	1		
Electric current (E925)	1		
Late effects of injury (E929)	1		
Fight Brawl rape (E960)	1		
Assault by other means (E961-964 + 968)	1		
Assault by firearm explosives (E965)	1		
Assault by cutting piercing instrument (E966)	1		
Undetermined whether intentional or unintentional (E980-989)	1		

Source: Data from New Zealand Health Information Service

Injury deaths among Mäori and non-Mäori

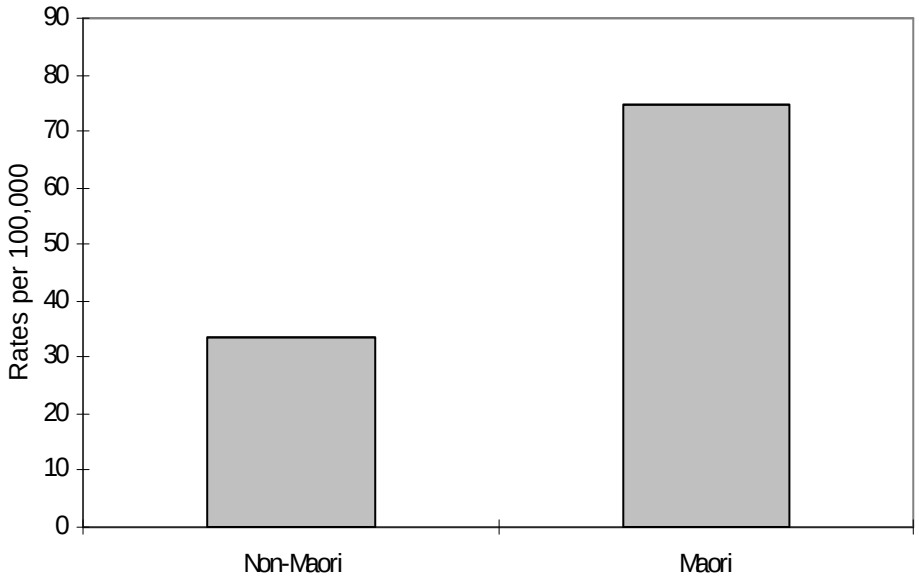
Mäori in New Plymouth District are more likely than non-Mäori to die as a result of injury.

For the three-year period 1996-1998, Mäori living in New Plymouth District had age-standardised rates of injury deaths just over twice those of non-Mäori (75 and 34 per 100,000 respectively) (Figure 5.6).

In 1998, comparative figures for all New Zealanders were 64 per 100,000 for Mäori and 37 per 100,000 for non-Mäori. This suggests there may be a wider discrepancy between Mäori and non-Mäori injury rates in the New Plymouth District than the national average, although small numbers in some age groups in New Plymouth District make calculating such rates somewhat unreliable.

In New Plymouth District, from 1996-1998, 59 percent of Mäori and 65 percent of non-Mäori injury deaths were due to *unintentional* causes. Forty-one percent of Mäori and 32 percent of non-Mäori injury deaths were *intentionally* caused. Again it should be noted that these calculations are based on only a small number of Mäori cases.

FIGURE 5.6: MORTALITY FROM INJURY, NEW PLYMOUTH DISTRICT 1996-1998 BY ETHNICITY, AVERAGE ANNUAL AGE-STANDARDISED RATES PER 100,000



Source: Data from New Zealand Health Information Service. Age standardised using Segi's world population (see Appendix Table A.15).

Note mortality data by ethnicity not available before 1996 (due to changes in coding for ethnicity in 1995). Also note Mäori rates based on small numbers.

For the three-year period 1996-1998, suicide and self-inflicted injury and injuries to motor vehicle drivers and passengers were the most frequent fatal injuries among both Mäori and non-Mäori living in New Plymouth District (Table 5.4).

TABLE 5.4: DEATHS FOR SPECIFIC TYPES OF INJURIES, NEW PLYMOUTH DISTRICT 1996-1998, RANKED IN ORDER OF FREQUENCY, BY ETHNICITY

Mäori		Non-Mäori	
Injury type	**No.**	**Injury type**	**No.**
Suicide and self inflicted injury (E950-959)	5	Suicide and self inflicted injury (E950-959)	22
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	4	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	16
Motor vehicles Pedal cycles (E810-819 6)	2	Fractures cause unspecified (E887-888)	7
Motor Vehicle Non Traffic (E820-825)	1	Other Falls from one level to another (E8841-8849)	6
Fall from steps or stairs (E880)	1	Motor vehicles Motorcycles (E810-819 2 and 3)	5
Fall from building or other structure (E882)	1	Late effects of injury (E929)	2
Cutting and piercing instruments (E920)	1	Undetermined whether intentional or unintentional (E980-989)	2
Assault by firearm explosives (E965)	1	Motor vehicles Pedal cycles (E810-819 6)	1
Assault by cutting piercing instrument (E966)	1	Motor vehicles Pedestrians (E810-819 7)	1
		Air and Space transport accidents (E840-845)	1
		Accidental poisoning drugs medicines biologicals (E850-858)	1
		Accidental poisoning by poisonous gases (E867-869)	1
		Other accidents due natural or environmental factors (E902-909)	1
		Accidental drowning and submersion (E910)	1
		Struck by falling object (E916)	1
		Accidents caused by machinery (E919)	1
		Cutting and piercing instruments (E920)	1
		Electric current (E925)	1
		Assault by other means (E961-964 + 968)	1

Source: Data from New Zealand Health Information Service.

Note: mortality data by ethnicity not available before 1996.

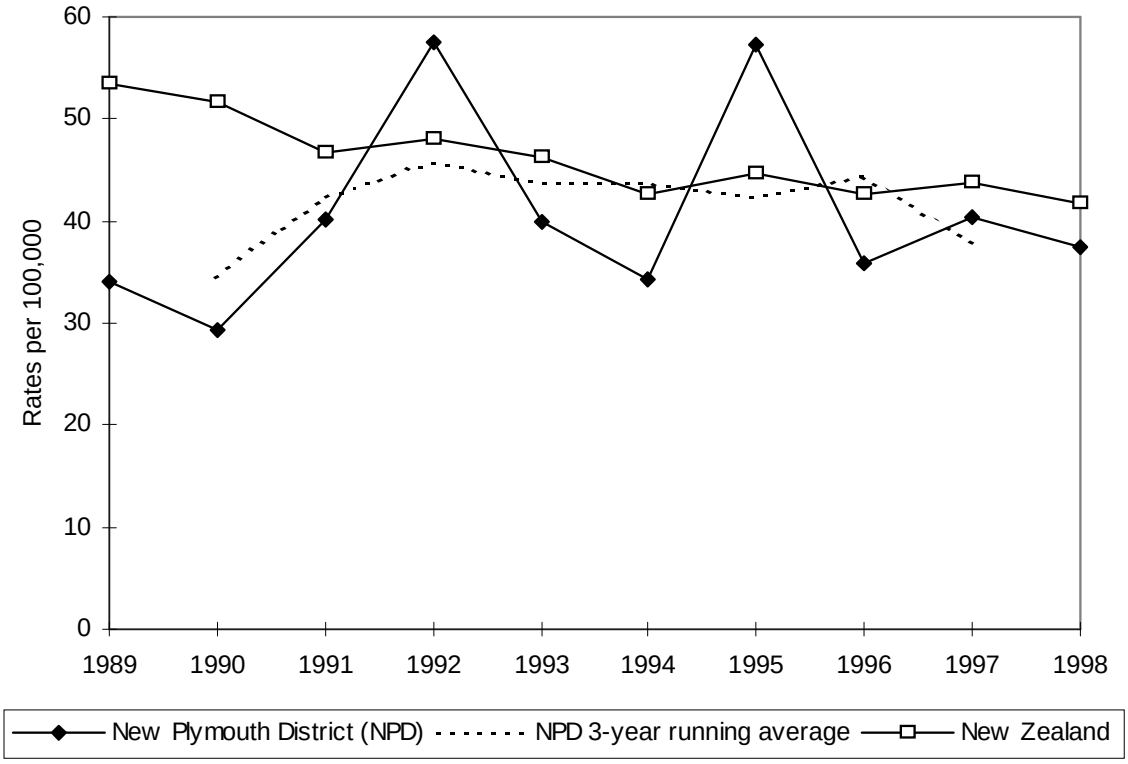
Trends in injury deaths

Trends in age-standardised injury death rates from 1989-1998 for New Plymouth District and for New Zealand are presented below (Figure 5.7). Rates for New Zealand have gradually declined over the period.

When examined year by year, rates for New Plymouth District have fluctuated quite widely, due to the small numbers of deaths from injury in the region. When three-year running averages are calculated, it appears that New Plymouth rates were below the national average in the early 90s, were very similar in the mid 1990s, and in the late 1990s again appeared to be heading to a level slightly below that of New Zealand as a whole.

FIGURE 5.7: TRENDS IN MORTALITY FOR INJURY, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1989-1998

ANNUAL AGE-STANDARDISED RATES PER 100,000



Source: Data from New Zealand Health Information Service. Age standardised using Segi's world population (see Appendix Table A.16).

Hospitalisations for injury

Introduction

The following section examines New Zealand Health Information Service data relating to admissions[16] of New Plymouth District residents to New Zealand public hospitals. These data concern serious injuries that require people to be admitted to hospital, either as day-patients or inpatients.

Like mortality data in the previous section, ICD E-codes have been examined, excluding medical misadventure and adverse reactions to therapeutic agents.[17] Aggregation of data has not been necessary for many of the hospitalisation analyses because of the much larger number of cases involved.

Again, hospitalisation data have been analysed by the demographic characteristics of patients and the types of injury causes, and have been compared with New Zealand data where appropriate.

It should be noted that hospitalisation rates depend on a number of factors, including the true incidence of injuries, people's treatment-seeking behaviour, as well as administrative factors such as admission policies of hospitals (which can change over time).

[16] More precisely "separations" which are discharges, transfers and deaths.

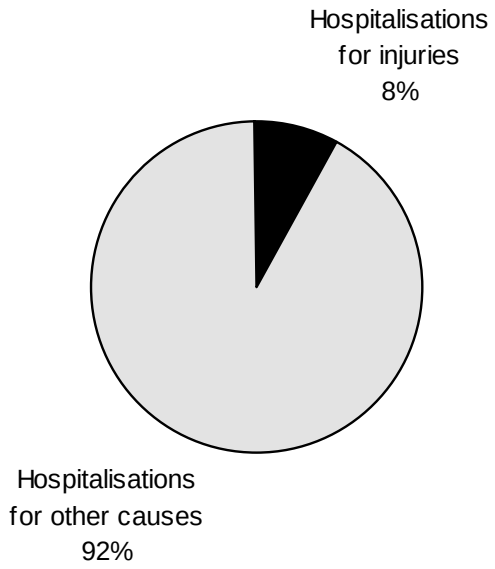
[17] Injuries were classified using "E-codes" as included in the International Classification of Diseases (ICD) coding system. E-codes classify various environmental events, circumstances and conditions as "external causes" of injuries and poisonings. The 9th revision of the ICD coding system applies to both the mortality and hospitalisation data included in this report.

Proportion of all hospitalisations

Of the nearly 16,500 hospitalisations for New Plymouth District residents in the last calendar year (2000), 1,374 (8 percent) were due to injuries (Figure 5.8). In the same year a slightly higher proportion (10 percent) of all hospitalisations in New Zealand were because of injuries.

FIGURE 5.8: PERCENTAGE OF HOSPITALISATIONS FOR INJURIES AND OTHER CAUSES FOR NEW PLYMOUTH DISTRICT 2000

(N=16,439)



Source: Data from New Zealand Health Information Service (see Appendix Table A.17).

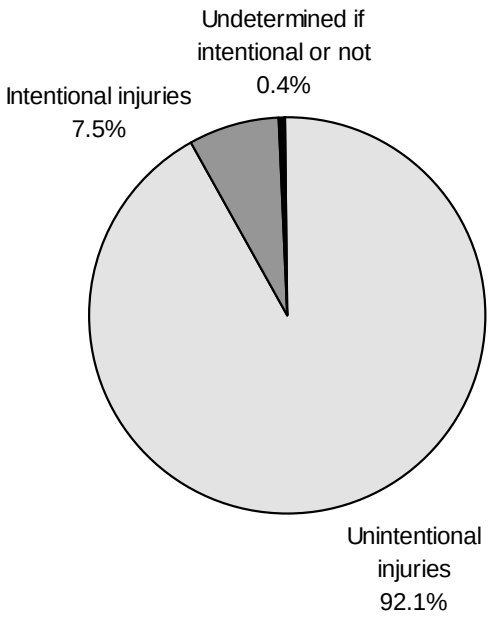
Hospitalisations for different types of injuries

For New Plymouth District residents in 2000, the vast majority (92 percent) of their hospitalisations for injury were due to *unintentional* causes, and a minority (8 percent) were *intentional* (Figure 5.9). Compared with injury deaths (34 percent), a much lower proportion of hospitalisations are due to *intentional* injury.

These local hospitalisation patterns for injury were similar to the national situation in 2000, when around 90 percent of hospitalisations for injury were due to *unintentional* causes and around 10 percent resulted from *intentional* incidents.

FIGURE 5.9: PERCENTAGE OF HOSPITALISATIONS FOR INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 2000

(N=1,374)

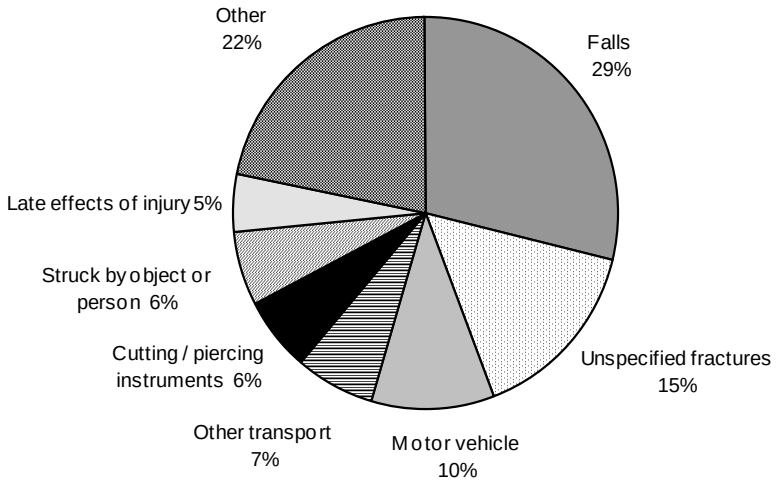


Source: Data from New Zealand Health Information Service (see Appendix Table A.18).

Looking at the groups of *unintentional* injuries which contributed to five percent or more of hospitalisations among New Plymouth District residents (Figure 5.10), it can be seen that the most common groups of causes were:

- falls and unspecified fractures (44 percent between them)
- motor vehicle and other transport accidents (17 percent altogether).

FIGURE 5.10: PERCENTAGE OF HOSPITALISATIONS FOR DIFFERENT TYPES OF UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 2000 (N=1,265)

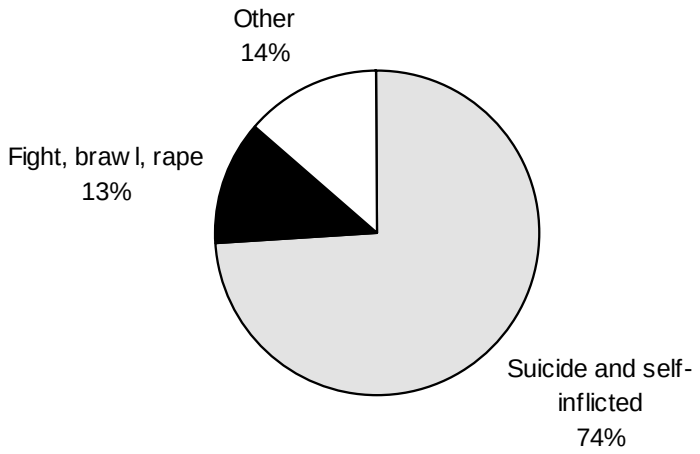


Source: Data from New Zealand Health Information Service (see Appendix Table A.19).

In 2000, suicide attempts and other self-inflicted injuries made up three out of every four (74 percent) of hospitalisations for *intentional* injuries among patients from New Plymouth District. The other most common causes were injuries resulting from fights, brawls and rapes (Figure 5.11).

FIGURE 5.11: PERCENTAGE OF HOSPITALISATIONS FOR DIFFERENT TYPES OF INTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 2000

(N=103)



Source: Data from New Zealand Health Information Service (see Appendix Table A.20).

Table 5.5 lists the specific causes of injuries for hospitalisations during the period 1998-2000 in New Plymouth District. The most common causes were:

- unspecified fractures
- falls - slipping , tripping, stumbling
- falls - from one level to another
- motor vehicle crashes -drivers and passengers
- injuries from “cutting and piercing instruments”
- suicide attempts / other self-inflicted injury.

TABLE 5.5: HOSPITALISATIONS FOR SPECIFIC TYPES OF INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, RANKED IN ORDER OF FREQUENCY

E-Code	E-codes	Average annual number	Total for 3 years 1998-2000
887-888	Fractures cause unspecified	122.0	366
885	Falls slipping tripping stumbling	113.7	341
8841-8849	Other Falls from one level to another	88.0	264
810-819 0 and 1	Motor Vehicles Drivers and Passengers	68.3	205
920	Cutting and piercing instruments	66.0	198
950-959	Suicide and self inflicted injury	60.7	182
929	Late effects of injury	39.0	117
9171-9179	Struck by objects/persons other	37.0	111
928	Other environmental and accidental causes	35.7	107
8261	Pedal cycle - cyclist	33.7	101
8840	Fall from playground equipment	33.3	100
850-858	Accidental poisoning - drugs medicines biologicals	29.0	87
820-825	Motor Vehicle - non traffic	26.0	78
880	Fall from steps or stairs	25.3	76
927	Overexertion strenuous movement	24.3	73
810-819 2 and 3	Motor vehicles - motorcycles	23.7	71
883	Fall into hole	23.7	71
902-909	Other accidents due to natural or environmental factors	18.3	55
914-915	Foreign body	17.3	52
882	Fall from building or other structure	16.7	50
960	Fight, brawl, rape	16.0	48
881	Fall from ladders scaffolding	15.0	45
9170	Struck by objects/persons in sports	14.3	43
919	Accidents caused by machinery	13.3	40
980-989	Undetermined whether intentional or unintentional	13.3	40
918	Caught between two objects	13.0	39
827-829	Other road vehicles	12.7	38
8869	Falls - collision pushing shoving other	12.3	37

Table continued on next page

TABLE 5.5 (continued):

E-Code	E-codes	Average annual number	Total for 3 years 1998-2000
810-819 7	Motor vehicles - pedestrians	10.0	30
916	Struck by falling object	10.0	30
846-848	Vehicle accidents not elsewhere classified	9.7	29
810-819 4 5 8 and 9	Motor vehicles - other people	9.3	28
860-864, 866	Accidental Poisoning - gases and vapors	7.7	23
8860	Falls - collision pushing shoving in sports	7.7	23
9060	Dog bites	7.0	21
9240	Hot liquids and vapors	5.7	17
911-912	Respiratory obstruction suffocation	5.0	15
9241-9249	Caustic and corrosive substances	4.7	14
961-964 + 968	Assault by other means	4.3	13
865	Accidental poisoning - foodstuffs plants	3.7	11
923	Explosive material	3.3	10
8260	Pedal cycle - pedestrian	3.0	9
810-819 6	Motor vehicles - pedal cycles	2.7	8
867-869	Accidental poisoning by poisonous gases	2.7	8
966	Assault by cutting piercing instrument	2.7	8
830-838	Water transport accidents	2.3	7
840-845	Air and space transport accidents	2.3	7
894	Ignition of highly flammable material	2.0	6
910	Accidental drowning and submersion	2.0	6
925	Electric current	2.0	6
898-899	Other accidents caused by fire and flames	1.7	5
969	Late effects of injury inflicted by other person	1.7	5
9671-9679	Child battering etc by other person	1.3	4
897	Controlled fire in other places	1.0	3
890-891	Uncontrolled fire in private dwellings	0.7	2
901	Excessive cold	0.7	2
921	Explosions of pressure vessels	0.7	2
9670	Child battering and maltreatment by parent	0.7	2
8262-8269	Pedal cycle - other	0.3	1
892	Uncontrolled fire in other places	0.3	1
904	Hunger thirst and neglect	0.3	1
913	Mechanical suffocation	0.3	1
990-999	Injury from operations of war	0.3	1
	TOTAL	1131.3	3394.0

Source: Data from New Zealand Health Information Service

Note: Excludes specific causes for which there were no hospitalisations during the period 1998-2000.

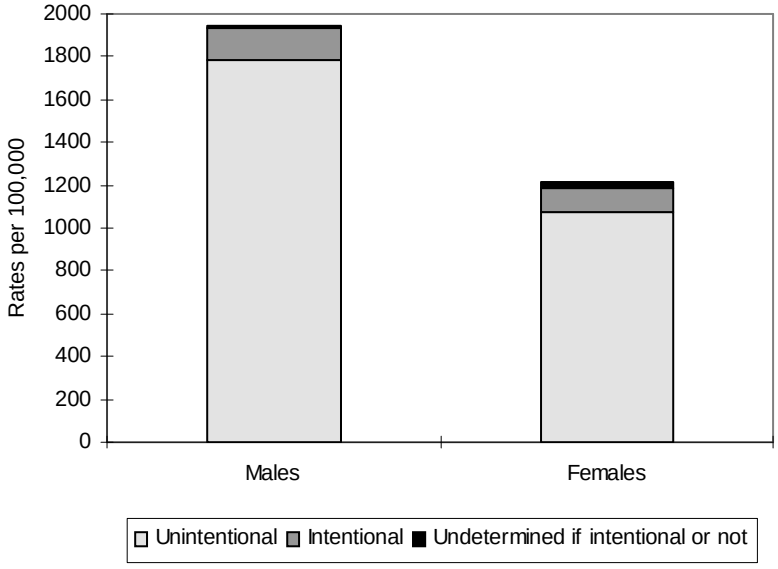
Hospitalisations among males and females

Compared to the total New Zealand population, people in the New Plymouth District are less likely to be hospitalised for injury. In the period 1998-2000, the average annual age-standardised hospitalisation rate for injury among New Plymouth District residents in the period 1998-2000 was 1,590 per 100,000. This was 11 percent lower than the rate of 1,768 per 100,000 for the country as a whole.

During this period, New Plymouth District males had injury hospitalisation rates around 60 percent higher than their female counterparts - with age-standardised rates of 1,946 per 100,000, compared with 1,215 per 100,000 for females. For both males and females, around eight percent of hospitalisations for injuries were due to intentional causes (Figure 5.12).

Comparative figures for New Zealand in 1998-2000 also show that males had hospitalisation rates for injury around 60 percent higher than females - with age-standardised rates of 2,358 and 1,472 per 100,000 respectively. For both males and females, 10 percent of injury hospitalisations were due to intentional causes.

FIGURE 5.12: HOSPITALISATIONS FOR INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, BY SEX, AVERAGE ANNUAL AGE-STANDARDISED RATES PER 100,000



Source: Data from New Zealand Health Information Service. Age-standardised using Segi's world population (see Appendix Table A.21).

For the three-year period 1998-2000, the most common specific types of injuries for which New Plymouth District males were hospitalised were unspecified fractures, injuries from cutting and piercing instruments, falls and motor vehicle crashes. For females, falls, fractures and suicide attempts and self-inflicted injury were most frequent (Table 5.6).

TABLE 5.6: HOSPITALISATIONS FOR TOP TWENTY SPECIFIC TYPES OF INJURIES IN NEW PLYMOUTH DISTRICT 1998-2000, BY SEX, RANKED IN ORDER OF FREQUENCY

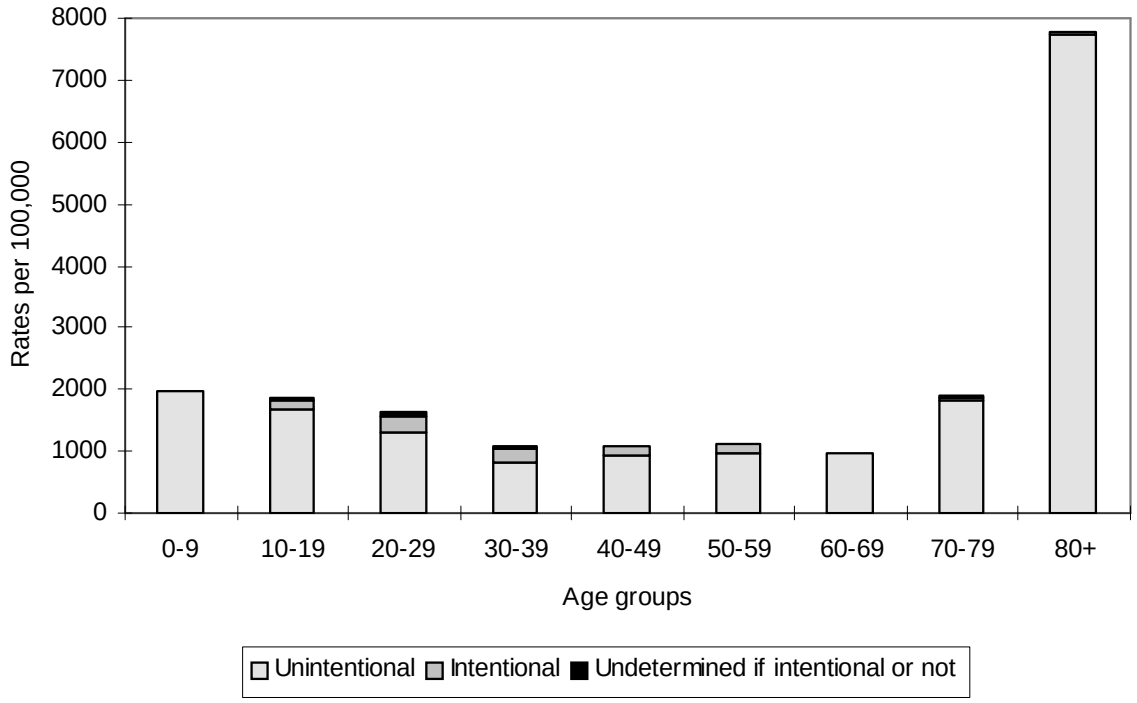
Males		Females	
Injury type	**No.**	**Injury type**	**No.**
Fractures cause unspecified (E887-888)	148	Falls slipping tripping stumbling (E885)	248
Cutting and piercing instruments (E920)	139	Fractures cause unspecified (E887-888)	218
Other Falls from one level to another (E8841-8849)	131	Other Falls from one level to another (E8841-8849)	133
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	112	Suicide and self inflicted injury (E950-959)	100
Falls slipping tripping stumbling (E885)	93	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	93
Suicide and self inflicted injury (E950-959)	82	Cutting and piercing instruments (E920)	59
Late effects of injury (E929)	77	Fall from steps or stairs (E880)	58
Pedal cycle Cyclist (E8261)	72	Other environmental and accidental causes (E928)	49
Struck by objects/persons other (E9171-9179)	72	Fall from playground equipment (E8840)	44
Motor vehicles Motorcycles (E810-819 2 and 3)	65	Late effects of injury (E929)	40
Other environmental and accidental causes (E928)	58	Struck by objects/persons other (E9171-9179)	39
Motor Vehicle Non Traffic (E820-825)	56	Accidental poisoning drugs medicines biologicals (E850-858)	36
Fall from playground equipment (E8840)	56	Pedal cycle Cyclist (E8261)	29
Fall into hole (E883)	52	Other road Vehicles (E827-829)	28
Accidental poisoning drugs medicines biologicals (E850-858)	51	Undetermined whether intentional or unintentional (E980-989)	27
Overexertion strenuous movement (E927)	50	Other accidents due natural or environmental factors (E902-909)	23
Fall from building or other structure (E882)	41	Overexertion strenuous movement (E927)	23
Fight Brawl rape (E960)	41	Motor Vehicle Non Traffic(E820-825)	22
Accidents caused by machinery (E919)	38	Fall into hole (E883)	19
Struck by objects/persons in sports (E9170)	35	Foreign body (E914-915)	18

Hospitalisations among different age groups

During 1998-2000, annual hospitalisation rates for injuries (both *intentional* and *unintentional*) among New Plymouth District residents decreased with age from nearly 2,000 per 100,000 for the youngest age group (0-9 years) to a low of just over 800 per 100,000 among 30-39 year olds (Figure 5.13). The rates then remained relatively steady across the middle age groups, then increased significantly again to reach the highest rates among 80+ year olds (with rates of 7,734 per 100,000)

Intentional injury hospitalisation rates were highest among 10-19 and 20-29 year olds (with *intentional* injuries accounting for 17 and 19 percent of all injury hospitalisations in each of these age groups, respectively). Very low proportions of injury hospitalisations were due to *intentional* injuries among the youngest and oldest age groups.

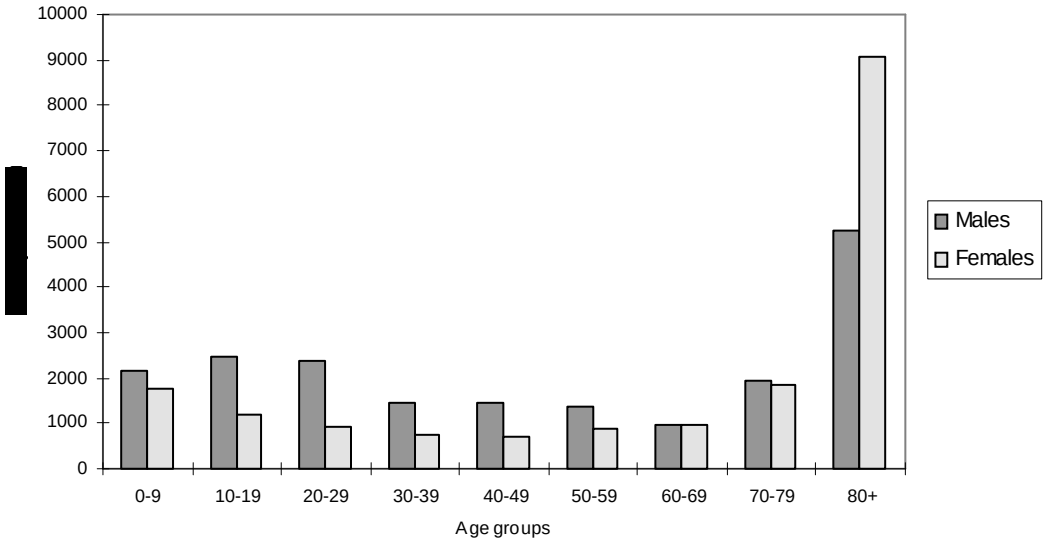
FIGURE 5.13: HOSPITALISATIONS FOR UNINTENTIONAL AND INTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, BY AGE GROUPS, AVERAGE ANNUAL RATES PER 100,000



Source: Data from New Zealand Health Information Service (see Appendix Table A.21).

Figure 5.14 shows age-specific hospitalisation rates, for all types of injuries, for New Plymouth District males and females over the three-year period 1998-2000. For both sexes, rates are slightly higher in the youngest age groups compared with the middle adult years, and then climb to by far the highest rates in the oldest age group (80+). Males have higher injury rates than females in all age groups except 80+.

FIGURE 5.14: HOSPITALISATIONS FOR INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, BY AGE GROUPS AND SEX, AVERAGE ANNUAL RATES (PER 100,000)



Source: Data from New Zealand Health Information Service (see Appendix Table A.21).

When hospitalisations for specific types of injury are examined in more detail, it can be seen that different age groups have different hospitalisation patterns (Table 5.7, overleaf). Young children (aged 0-9) are most likely to be hospitalised for falls, whereas older children and teenagers (aged 10-19) are most likely to be injured on bicycles or in motor vehicle crashes. For young adults aged 20-29, suicide and self-inflicted injury and injuries from cutting and piercing instruments are most common. Suicide and self inflicted injury and motor vehicle crashes are the two most frequent types of injury for which mid-aged adults are hospitalised (aged 30-39, 40-49, 50-59); whereas falls and unspecified fractures are the commonest cause of hospitalisation among older people (60-69, 70-79, 80+).

TABLE 5.7: HOSPITALISATIONS FOR TOP TEN SPECIFIC TYPES OF INJURIES IN NEW PLYMOUTH DISTRICT 1998-2000, BY AGE, RANKED IN ORDER OF FREQUENCY

0-9		10-19		20-29	
Injury type	**No.**	**Injury type**	**No.**	**Injury type**	**No.**
Other Falls from one level to another (E8841-8849)	99	Pedal cycle Cyclist (E8261)	52	Suicide and self inflicted injury(E950-959)	54
Fall from playground equipment (E8840)	76	Motor Vehicles Drivers and Passengers(E810-819 0 and 1)	43	Cutting and piercing instruments (E920)	52
Accidental poisoning drugs medicines biologicals (E850-858)	57	Other Falls from one level to another (E8841-8849)	38	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	36
Cutting and piercing instruments (E920)	37	Fractures cause unspecified (E887-888)	31	Motor vehicles Motorcycles (E810-819 2 and 3)	26
Struck by objects/persons other (E9171-9179)	30	Cutting and piercing instruments (E920)	30	Late effects of injury (E929)	26
Fractures cause unspecified (E887-888)	29	Struck by objects/persons other(E9171-9179)	28	Motor Vehicle Non Traffic (E820-825)	18
Fall into hole (E883)	27	Falls slipping tripping stumbling (E885)	23	Undetermined whether intentional or unintentional (E980-989)	18
Foreign body (E914-915)	24	Suicide and self inflicted injury(E950-959)	23	Fractures cause unspecified (E887-888)	17
Pedal cycle Cyclist (E8261)	22	Motor Vehicle Non Traffic (E820-825)	21	Overexertion strenuous movement (E927)	13
Falls slipping tripping stumbling (E885)	20	Fall from playground equipment (E8840)	21	Other environmental and accidental causes (E928)	12
30-39		**40-49**		**50-59**	
Injury type	**No.**	**Injury type**	**No.**	**Injury type**	**No.**
Suicide and self inflicted injury (E950-959)	42	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	36	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	25
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	29	Suicide and self inflicted injury (E950-959)	32	Suicide and self inflicted injury (E950-959)	20
Late effects of injury (E929)	21	Cutting and piercing instruments (E920)	30	Cutting and piercing instruments (E920)	16
Motor vehicles Motorcycles (E810-819 2 and 3)	19	Late effects of injury (E929)	19	Fractures cause unspecified (E887-888)	15
Cutting and piercing instruments (E920)	17	Falls slipping tripping stumbling (E885)	17	Late effects of injury (E929)	15
Fight Brawl rape (E960)	16	Fractures cause unspecified (E887-888)	17	Fall from ladders scaffolding (E881)	12
Motor Vehicle Non Traffic (E820-825)	12	Overexertion strenuous movement (E927)	17	Falls slipping tripping stumbling (E885)	12
Pedal cycle Cyclist (E8261)	12	Motor vehicles Motorcycles (E810-819 2 and 3)	12	Other environmental and accidental causes (E928)	11
Overexertion strenuous movement (E927)	12	Motor Vehicle Non Traffic (E820-825)	11	Other accidents due natural or environmental factors (E902-909)	8
Other environmental and accidental causes (E928)	12	Fall from ladders scaffolding (E881)	9	Struck by objects/persons other (E9171-9179)	8
60-69		70-79		80+	
Injury type	**No.**	**Injury type**	**No.**	**Injury type**	**No.**
Falls slipping tripping stumbling (E885)	24	Fractures cause unspecified (E887-888)	56	Falls slipping tripping stumbling (E885)	178
Fractures cause unspecified (E887-888)	17	Falls slipping tripping stumbling (E885)	49	Fractures cause unspecified (E887-888)	173
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	15	Other Falls from one level to another (E8841-8849)	24	Other Falls from one level to another (E8841-8849)	54
Other Falls from one level to another (E8841-8849)	14	Fall from steps or stairs (E880)	18	Other environmental and accidental causes (E928)	17
Fall from steps or stairs (E880)	12	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	10	Fall from steps or stairs (E880)	13
Overexertion strenuous movement (E927)	11	Late effects of injury (E929)	9	Struck by objects/persons other (E9171-9179)	8
Fall from ladders scaffolding (E881)	9	Overexertion strenuous movement (E927)	8	Motor vehicles Pedestrians (E810-819 7)	7
Fall from building or other structure (E882)	6	Foreign body(E914-915)	7	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	6
Cutting and piercing instruments (E920)	6	Struck by objects/persons other (E9171-9179)	7	Motor Vehicle Non Traffic (E820-825)	5
Other environmental and accidental causes (E928)	6	Accidental poisoning drugs medicines biologicals (E850-858)	6	Cutting and piercing instruments (E920)	5

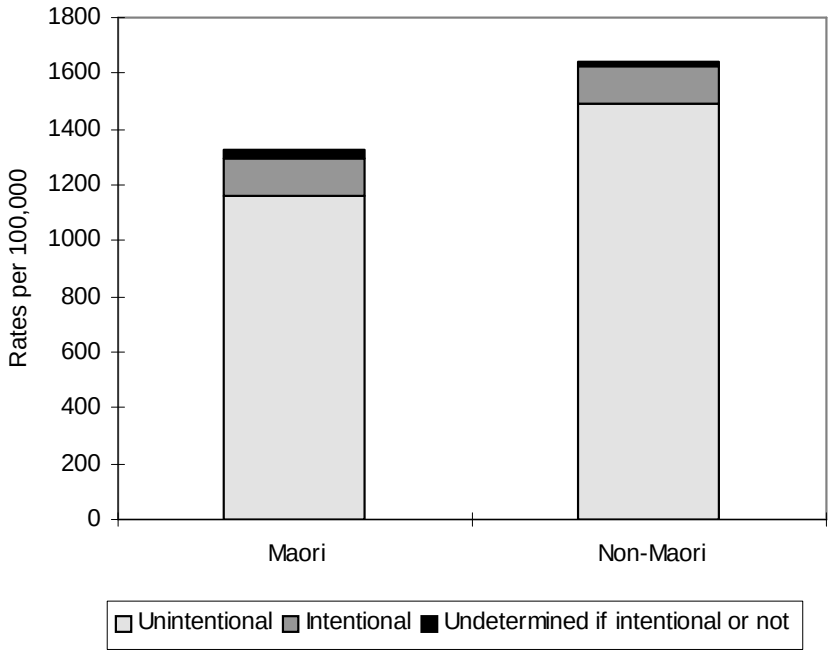
Source: Data from New Zealand Health Information Service

Hospitalisations among Maori and non-Maori

Overall, Maori living in New Plymouth District had lower age-standardised injury hospitalisation rates during 1998-2000 than non-Maori (1,325 compared with 1,642 per 100,000) (Figure 5.15). This is the reverse of the situation for New Zealand Maori as a whole, where Maori had higher injury hospitalisation rates (2,164 per 100,000) compared to non-Maori (1,768 per 100,000).

Non-Maori in the New Plymouth District had a slightly higher proportion (91 percent) of hospitalisations due to *unintentional* injuries compared to Maori (88 percent) (Figure 5.15).

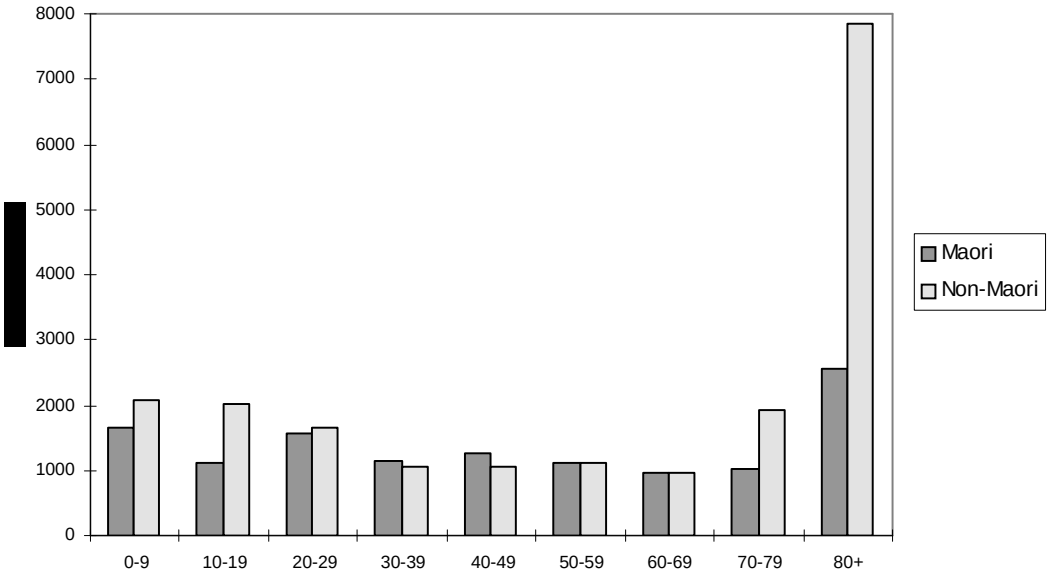
FIGURE 5.15: HOSPITALISATIONS FOR INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, BY ETHNICITY, AVERAGE ANNUAL AGE-STANDARDISED RATES (PER 100,000)



Source: Data from New Zealand Health Information Service (see Appendix Table A.22).

Figure 4.9 compares 1998-2000 hospitalisation rates for injury among New Plymouth District Maori and non-Maori by age. This shows that Maori had lower hospitalisation rates than non-Maori in the youngest and oldest age groups, and similar, or slightly higher rates than non-Maori in the middle age groups (Figure 5.16).

FIGURE 5.16: HOSPITALISATIONS FOR INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, BY AGE GROUPS AND ETHNICITY, AVERAGE ANNUAL RATES PER 100,000



Source: Data from New Zealand Health Information Service (see Appendix Table A.22).
Note: small numbers of Maori in oldest age groups

In the three-year period 1998-2000, Maori were most likely to be hospitalised for motor vehicle crashes (drivers and passengers), injuries from cutting and piercing instruments and falls (from one level to another). For non-Maori, unspecified fractures and falls were most common (Table 5.8).

TABLE 5.8: HOSPITALISATIONS FOR TOP TWENTY SPECIFIC TYPES OF INJURIES IN NEW PLYMOUTH DISTRICT 1998-2000, BY ETHNICITY, RANKED IN ORDER OF FREQUENCY

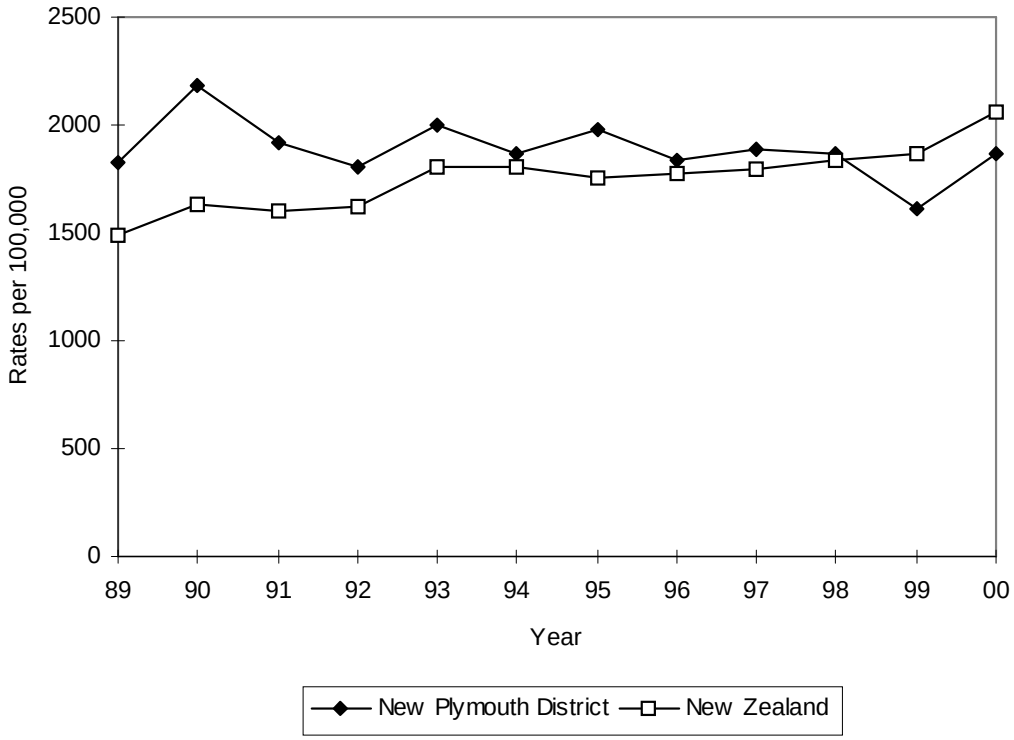
Maori		Non-Maori	
Injury type	No.	Injury type	No.
Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	34	Fractures cause unspecified (E887-888)	351
Cutting and piercing instruments (E920)	25	Falls slipping tripping stumbling (E885)	331
Other Falls from one level to another (E8841-8849)	24	Other Falls from one level to another (E8841-8849)	240
Other environmental and accidental causes (E928)	19	Cutting and piercing instruments (E920)	173
Fall from playground equipment (E8840)	16	Motor Vehicles Drivers and Passengers (E810-819 0 and 1)	171
Suicide and self inflicted injury (E950-959)	16	Suicide and self inflicted injury (E950-959)	166
Pedal cycle Cyclist (E8261)	15	Late effects of injury (E929)	104
Fractures cause unspecified (E887-888)	15	Struck by objects/persons other (E9171-9179)	98
Struck by objects/persons other (E9171-9179)	13	Other environmental and accidental causes (E928)	88
Late effects of injury (E929)	13	Pedal cycle Cyclist (E8261)	86
Accidental poisoning drugs medicines biologicals (E850-858)	12	Fall from playground equipment (E8840)	84
Fall into hole (E883)	11	Accidental poisoning drugs medicines biologicals (E850-858)	75
Falls slipping tripping stumbling (E885)	10	Motor Vehicle Non Traffic (E820-825)	74
Fight Brawl rape (E960)	10	Fall from steps or stairs (E880)	70
Caught between 2 objects (E918)	8	Overexertion strenuous movement (E927)	67
Undetermined whether intentional or unintentional (E980-989)	8	Motor vehicles Motorcycles (E810-819 2 and 3)	65
Accidental Poisoning Gases and Vapors (E860-864, 866)	7	Fall into hole (E883)	60
Motor vehicles Motorcycles(E 810-819 2 and 3)	6	Other accidents due natural or environmental factors (E902-909)	51
Vehicle accidents not elsewhere classified (E846-848)	6	Fall from building or other structure (E882)	46
Fall from steps or stairs (E880)	6	Foreign body (E914-915)	46
Foreign body (E914-915)	6		
Caustic and corrosive substances(E9241-9249)	6		
Overexertion strenuous movement (E927)	6		

Trends in hospitalisations for injury

Hospitalisation rates for injury among New Plymouth District residents have fluctuated a little over the last 12 years, with rates for the year 2000 being only slightly above those of 1989.

By contrast, hospitalisation rates for injury for all New Zealanders have steadily increased over this period. In the early 1990s, New Plymouth hospitalisation rates for injury tended to be higher than rates for New Zealand as a whole. However, in the last two calendar years (1999 and 2000) hospitalisation rates for New Plymouth have been lower than New Zealand as a whole (in 2000 the rates were 1,864 per 100,000 for New Plymouth and 2,058 for New Zealand) (Figure 5.17).

FIGURE 5.17: TRENDS IN HOSPITALISATIONS FOR INJURY, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1989-2000, ANNUAL AGE-STANDARDISED RATES PER 100,000



Source: Data from New Zealand Health Information Service. Age-standardised using Segi's world population (see Appendix Table A.23).

Emergency Department attendances for injury

Introduction

The following section examines injury data relating to attendances of New Plymouth District residents at Taranaki Health Emergency Departments.

Emergency Department (ED) data covers some serious injuries that result in hospital admission and deaths. However, most ED visits are for less serious injuries that are treated by ED staff , with patients returning home to recover rather than being admitted to hospital.

It should be noted that similar types of these less-serious injuries are also likely to be treated by other health services in the region, such as private accident and emergency clinics (such as the White Cross Accident and Medical Centre and the New Plymouth Doctors Accident and Medical Clinic) and other general practitioners. These data are not readily available, so have not been included in this report.

National data for emergency department attendances are also not available, so no comparisons with the rest of New Zealand can be made.

Despite these limitations, it is useful to look at characteristics and patterns of ED attendances for injury, as they have some important implications for injury prevention.

Proportion of all visits

In the year 2000, there were 18,160 attendances at Taranaki Health EDs by New Plymouth District residents. Of these, 36 percent were for injuries (6,531 visits).

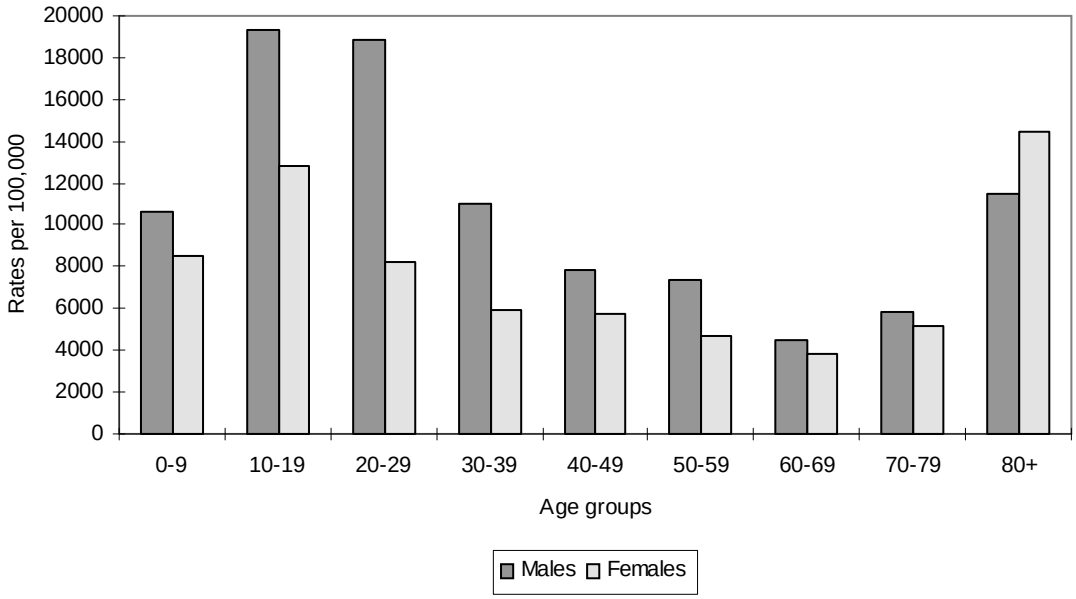
Who attends emergency departments for injury

Of the 6,531 visits to emergency departments made for injury by New Plymouth District residents in the year 2000, 60 percent were by males, and 40 percent were by females. Age-standardised attendance rates for males were 56 percent higher than for females - 12,357 per 100,000 compared with 7,898 per 100,000.

Looking at ED attendance rates across different age groups for the same year, males had higher attendance rates than females in all age groups except 80+ (Figure 5.18). This gender difference was particularly marked in the teenage and young adult age groups (ages 10-19, 20-29, and 30-39).

Overall, the highest ED attendance rates occurred among 10-19 year olds of both sexes, 20-29 year old males and 80+ year old females.

FIGURE 5.18: TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES FOR INJURY, NEW PLYMOUTH DISTRICT RESIDENTS, 2000, BY AGE GROUPS AND SEX, RATES PER 100,000

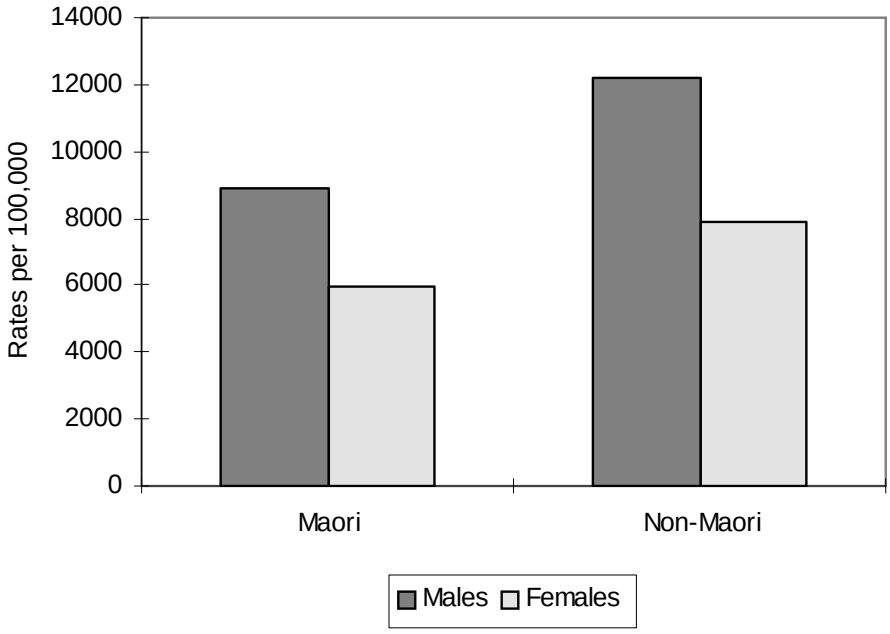


Source: Data supplied by Taranaki Health (see Appendix Table A.24).

In 2000, 11 percent of New Plymouth District residents who attended EDs were Maori and 84 percent were non-Maori (five percent were of unknown ethnicity). Age-standardised attendance rates were 35 percent higher for non-Maori compared with Maori (10,046 and 7,432 per 100,000 respectively). This is in line with the hospitalisation patterns for injuries described in the previous section, where non-Maori were 24 percent more likely to be hospitalised than Maori.

Age-standardised ED attendance rates were higher for both non-Maori males and non-Maori females compared with their Maori counterparts (Figure 5.19).

FIGURE 5.19: TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES FOR INJURY, NEW PLYMOUTH DISTRICT RESIDENTS, 2000, BY SEX AND ETHNICITY, AGE-STANDARDISED RATES PER 100,000

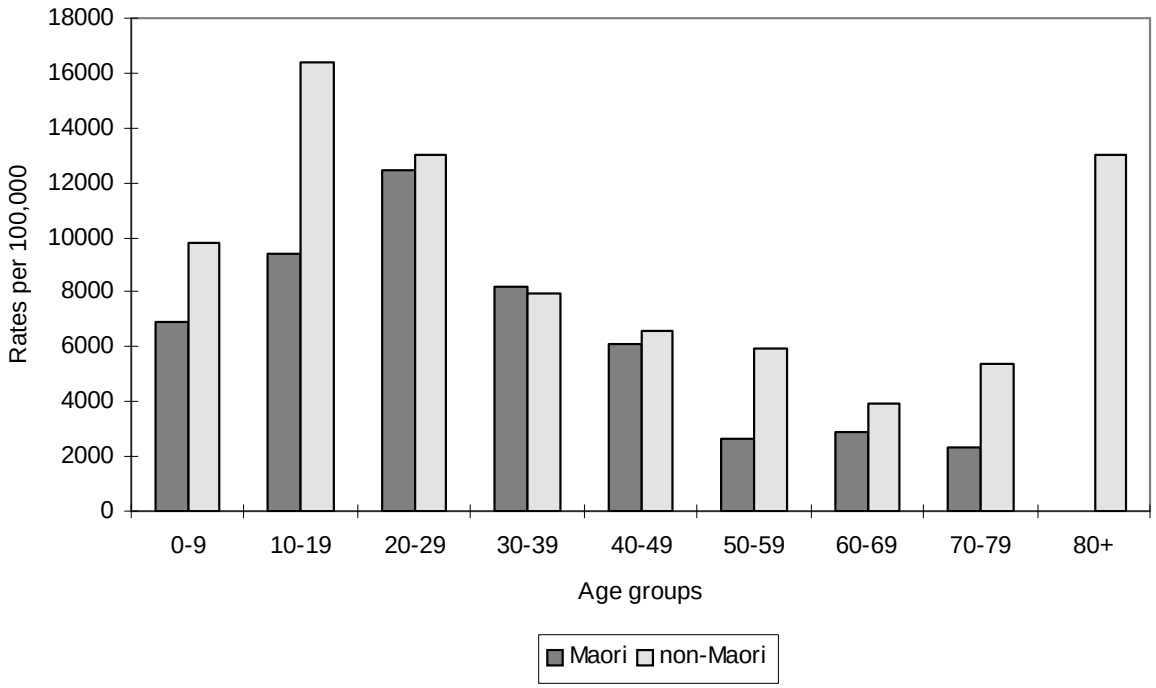


Source: Data supplied by Taranaki Health (see Appendix Table A.25).

Note: Excludes data for people of unknown ethnicity.

Non-Maori ED attendance rates were also higher than those for Maori in all age groups except 30-39 (Figure 5.20).

FIGURE 5.20: TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES FOR INJURY, NEW PLYMOUTH DISTRICT RESIDENTS, 2000, BY AGE GROUPS AND ETHNICITY, RATES PER 100,000



Source: Data supplied by Taranaki Health (see Appendix Table A.26).

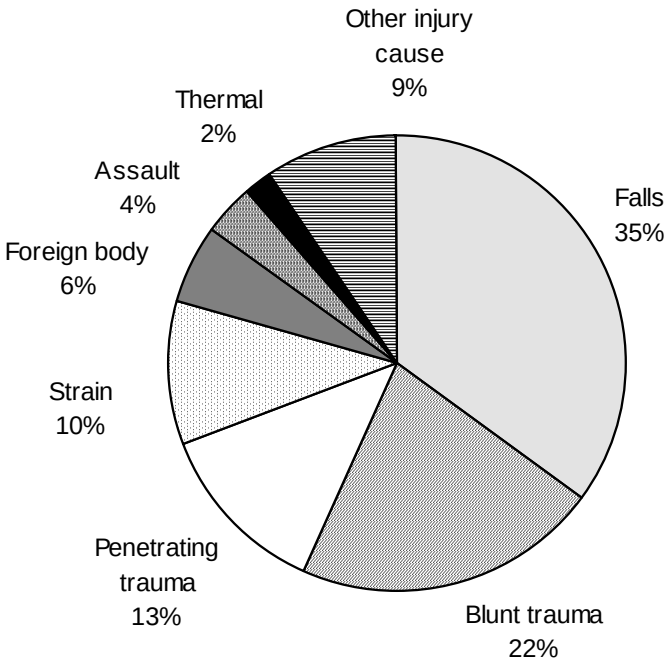
Note: Rates based on small numbers of Maori in oldest age groups (60+). Also excludes data for people of unknown ethnicity.

Causes of injury

The three leading causes of injury for which New Plymouth District people attended EDs in 2000 (Figure 5.21) were:

- falls (34 percent of all attendances for injuries)
- blunt trauma (22 percent)
- penetrating trauma (13 percent).

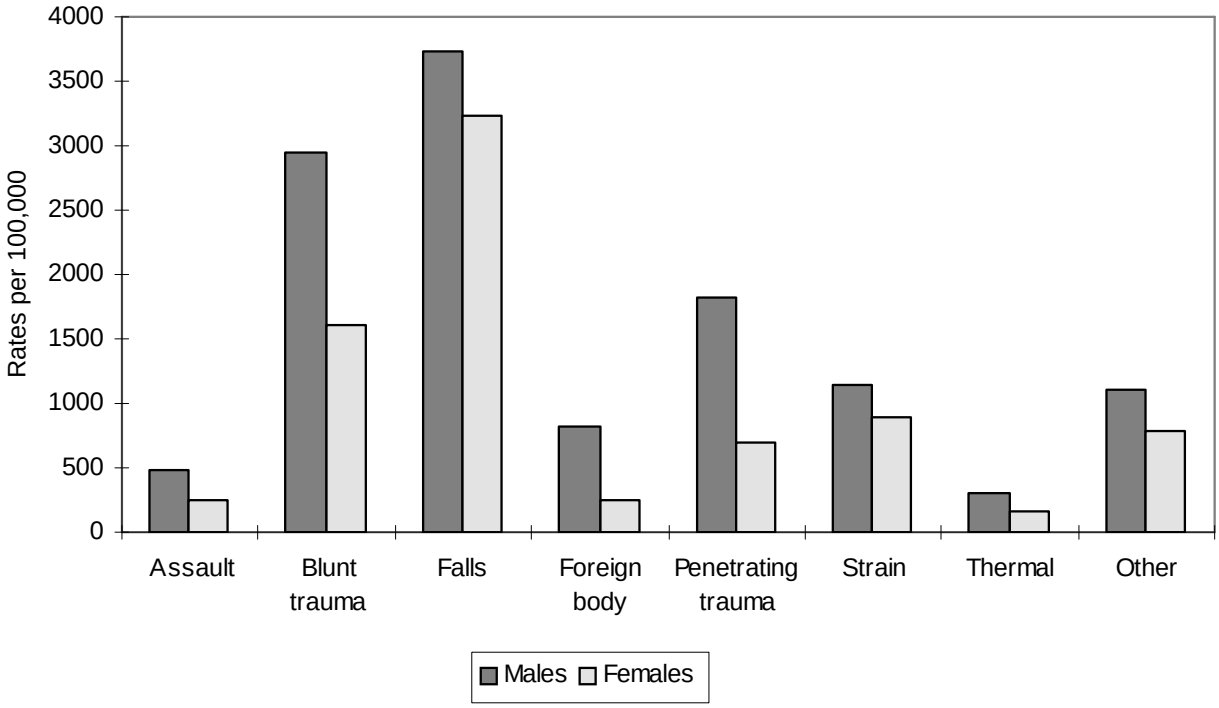
FIGURE 5.21: PERCENTAGES OF TARANAKI HEALTH EMERGENCY DEPARTMENT INJURY ATTENDANCES, NEW PLYMOUTH DISTRICT RESIDENTS, 2000, BY CAUSE OF INJURY (N=6,531)



Source: Data supplied by Taranaki Health (see Appendix Table A.27).

Males had higher age-standardised ED attendance rates than females for all types of injuries. These gender differences were most marked for injuries caused by assaults, blunt and penetrating trauma, and foreign bodies (Figure 5.22).

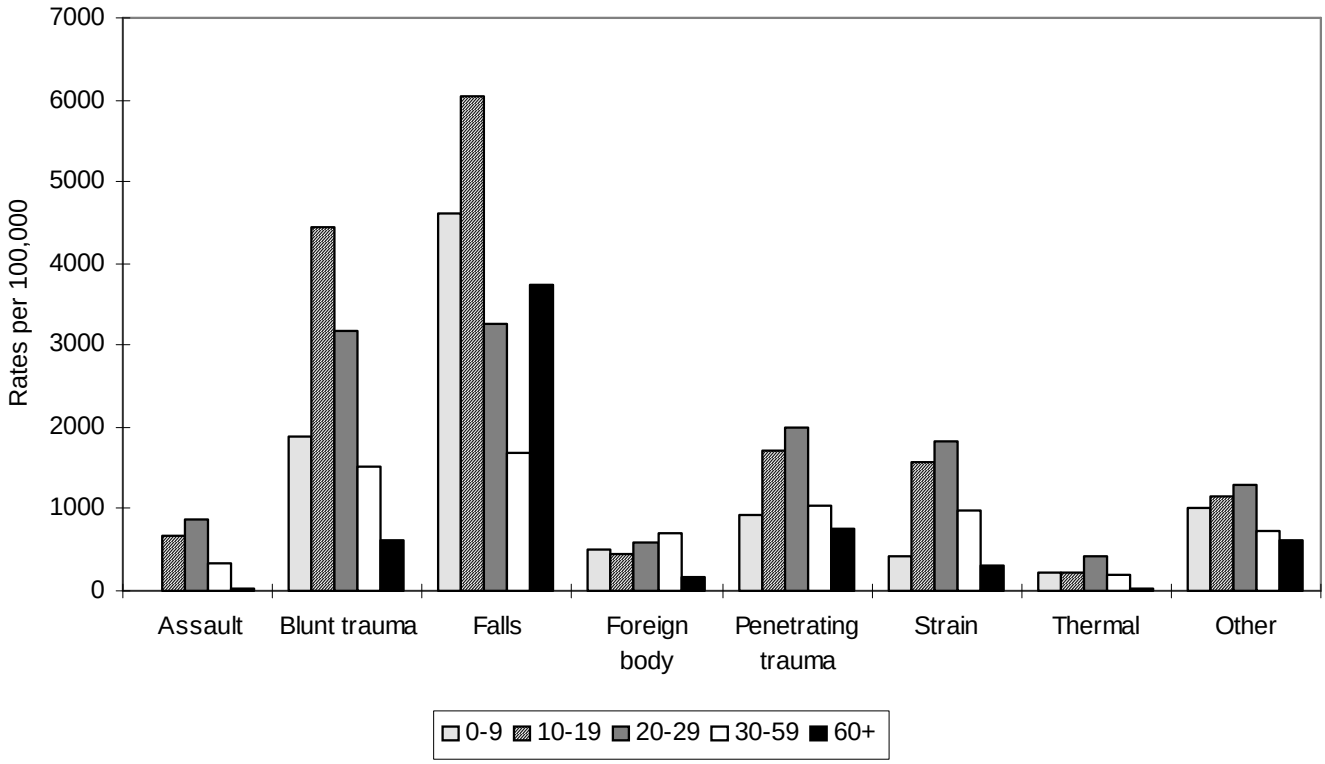
FIGURE 5.22: TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES FOR INJURY, NEW PLYMOUTH DISTRICT RESIDENTS, 2000, BY SEX AND CAUSE OF INJURY, AGE-STANDARDISED RATES PER 100,000



Source: Data supplied by Taranaki Health (see Appendix Table A.28).

Looking at ED attendance rates by age groups, it can be seen that there are different patterns for different injury causes. Falls are most likely to result in attendances among the youngest and oldest age groups, whereas assaults, blunt and penetrating trauma and strains are most likely to occur among 10-19 and 20-29 year olds (Figure 5.23).

FIGURE 5.23: TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCEFOR NEW PLYMOUTH DISTRICT RESIDENTS IN 2000 BY AGE GROUPS AND CAUSE OF INJURY, AGE-SPECIFIC RATES PER 100,000

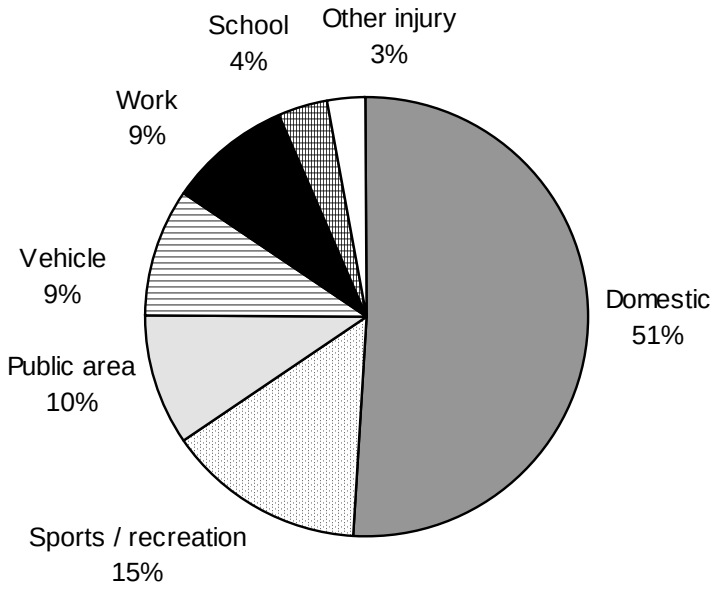


Source: Data supplied by Taranaki Health (see Appendix Table A.29).

Locations where injury occurred

In the year 2000, half (51 percent) of ED injury attendances were for injuries sustained in domestic situations (for instance, in ED clients' own homes). The second and third most common injury locations were sports / recreation venues (15 percent) and public areas (10 percent) (Figure 5.24).

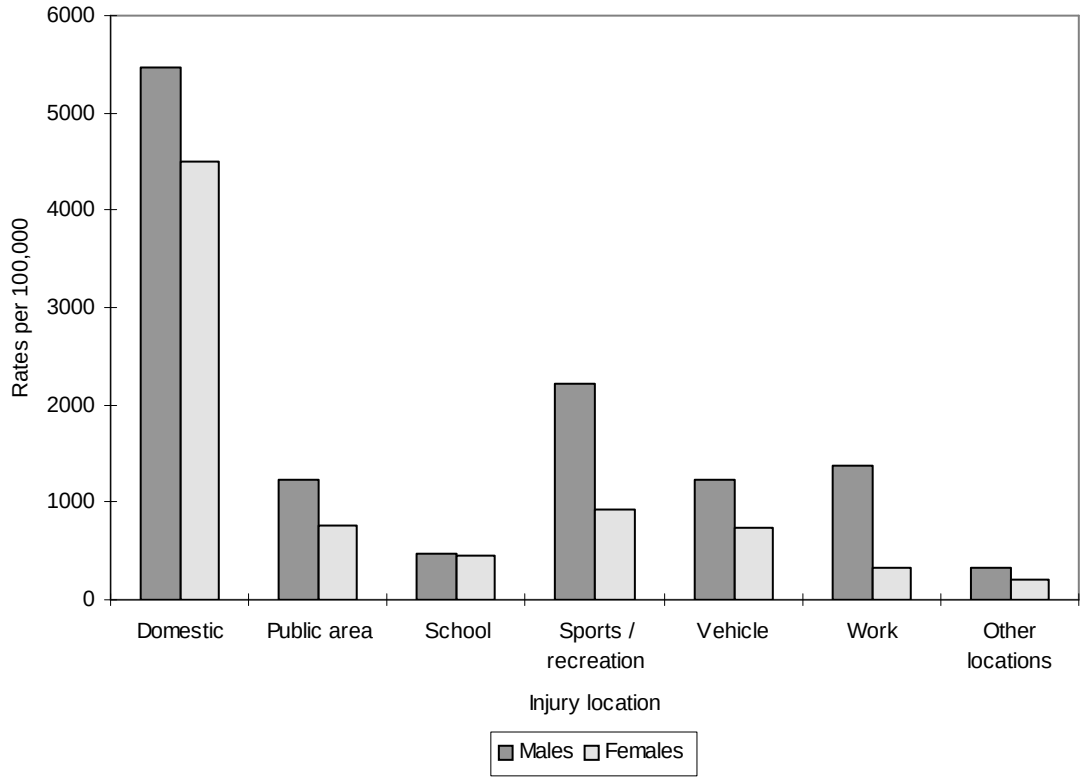
FIGURE 5.24: PERCENTAGES OF TARANAKI HEALTH EMERGENCY DEPARTMENT INJURY ATTENDANCES, NEW PLYMOUTH DISTRICT RESIDENTS, 2000, BY INJURY LOCATION (N=6,531)



Source: Data supplied by Taranaki Health (see Appendix Table A.30).

For all types of location, New Plymouth District males were more likely to attend emergency departments for injuries than New Plymouth District females. In particular, males were substantially more likely than females to attend for injuries that occurred in sports / recreation situations and at work (Figure 5.25).

FIGURE 5.25: TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES FOR NEW PLYMOUTH DISTRICT RESIDENTS IN 2000 BY INJURY LOCATION AND SEX, AGE-STANDARDISED RATES PER 100,000



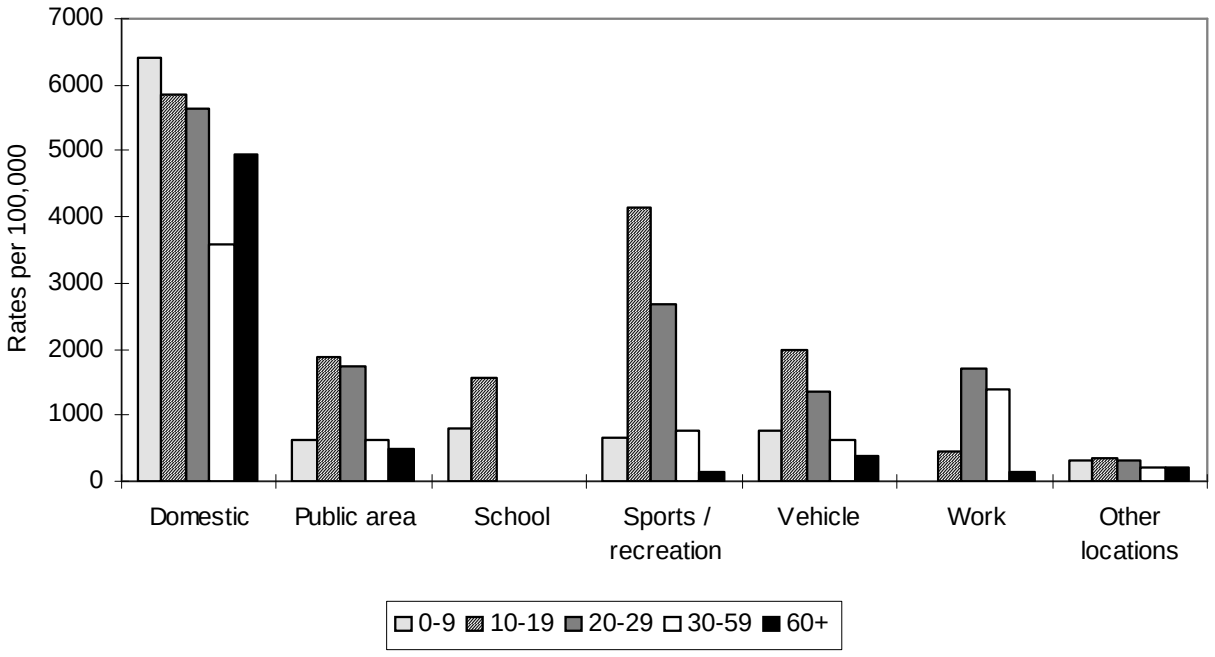
Source: Data supplied by Taranaki Health (see Appendix Table A.31).

In the year 2000, Emergency Department attendance rates for injuries sustained in public areas, sports / recreation situations and vehicles were highest among New Plymouth residents aged 10-19 and 20-29 years.

Attendance rates for injuries that occurred in domestic situations decreased with age until the age 30-59, then increased again for people aged 60+.

As might be expected, children and teenagers aged 0-9 and 10-19 are the only age groups to attend EDs for injuries that occur at school, and working-aged people (20-29 and 30-59) have the highest attendance rates for work injuries (Figure 5.26).

FIGURE 5.26: TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES FOR NEW PLYMOUTH DISTRICT RESIDENTS IN 2000 BY INJURY LOCATION AND AGE GROUPS, RATES PER 100,000



Source: Data supplied by Taranaki Health (see Appendix Table A.32).

ACC injury claim statistics

Introduction

The Accident Compensation Corporation (ACC) collects data on financial claims made to it by New Zealanders who experience various types of injuries. These claims include requests for contributions to medical expenses, weekly compensation for loss of income, and rehabilitation costs. These claims are financed from various separate ACC funds, depending on the circumstances of the injury and characteristics of the claimant (e.g. whether they are an income earner or not) (ACC 2000a).

The following section presents ACC claims data for New Plymouth District for the most recent financial year (i.e. 1 July 2000 to 30 June 2001). It covers all *new* "entitlements" claims, including weekly compensation, vocational and social rehabilitation, independence allowance, death benefits and elective surgery. However, it excludes "minor" claims for medical fees only (of which there are a large number each year), dental-only claims and ongoing claims.

When interpreting these ACC data, it should be noted that the information is collected primarily for administrative, rather than epidemiological purposes (i.e. it is not attempting to accurately record the true incidence of injury in the community). This means the information has limitations, particularly in that it does not include cases of injury that are not eligible for financial compensation. For instance, weekly compensation is not available to non-earners (e.g. children and retired people) or to people whose injury affects their ability to attend work for one week or less (ACC 2000a).

However, despite these limitations, it is still useful to look at the patterns of injury evident in the ACC data, particularly if these are interpreted in conjunction with the other statistics examined in this report.

Total entitlement claims made

In the 2000 / 2001 financial year in New Plymouth District, a total of 2,350 ACC new entitlement claims were made. This is equivalent to over three-quarters (78 percent) of the 3,025 claims made for the Taranaki region, and 1.7 percent of the 136,794 entitlement claims made for the whole country (ACC Scheme Reporting and Forecasting Unit 2001).

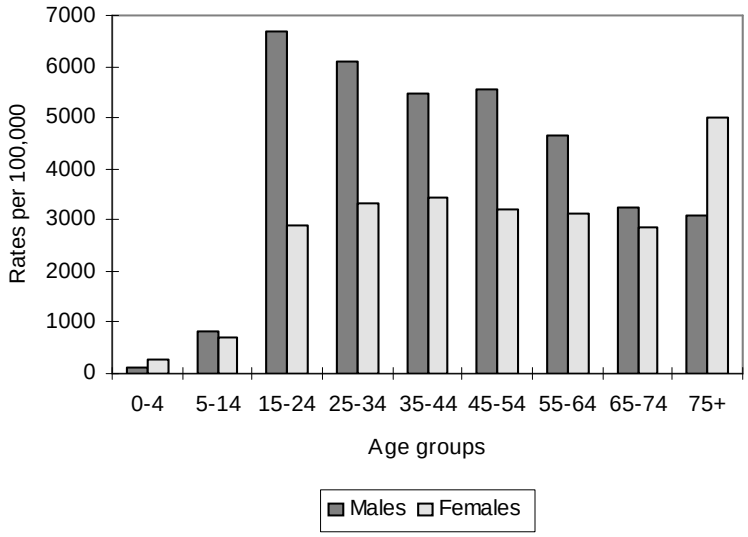
In 2000 / 2001 only a very small number of all entitlements in New Plymouth District were for "serious" claims relating to irreversible injuries requiring ongoing support from ACC (19 cases - 0.8 percent). In the same year, 0.5 percent (696 cases) of entitlements for the whole country were for serious claims (Appendix Table A.33).

During the same period, there were 24 ACC claims for deaths in New Plymouth District (one percent of all the District's entitlement claims). For all New Zealand, there were 966 death entitlement claims (0.7 percent of all entitlement claims) (Appendix Table A.33).

Age and sex of claimants

In 2000 / 2001, 59 percent of ACC entitlement claimants in New Plymouth District were male and 41 percent were female (1,396 and 954 cases respectively). Overall, males had 69 percent higher claim rates than females. Males had higher claim rates than females in all age groups except the youngest (0-4) and oldest (75+) age groups. For males, the highest claim rates occurred among 15-24-year-olds, while for females the highest claim rate occurred among 75+-year-olds. Claims among 0-4 and 5-14-year-olds were low compared with older age groups, probably at least in part because children are not eligible for income-related weekly compensation (Figure 5.27).

FIGURE 5.27: ACC ENTITLEMENT CLAIMS IN NEW PLYMOUTH DISTRICT, BY AGE AND SEX, YEAR ENDING 30 JUNE 2001, RATES PER 100,000



Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Table A.34).

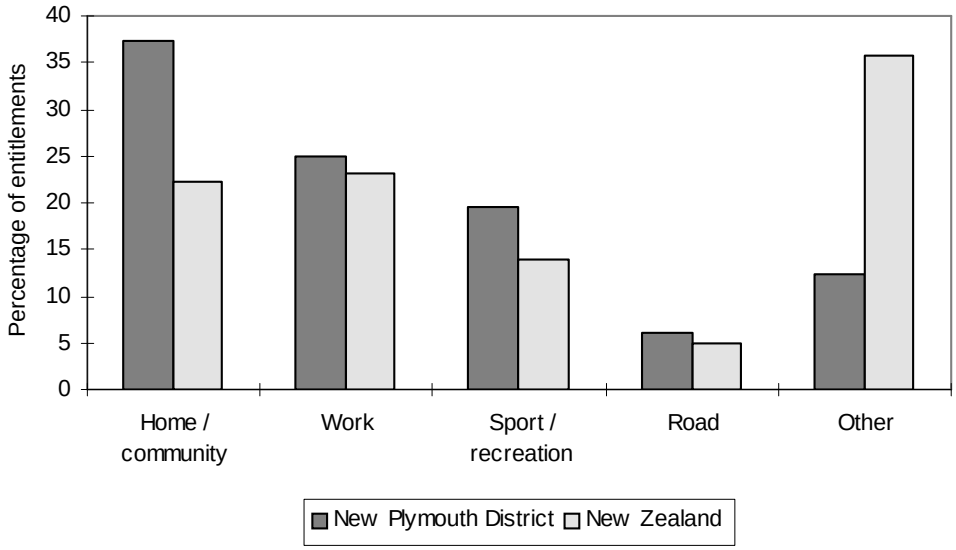
Injury locations

In New Plymouth District in 2000 / 2001, ACC entitlement claims were most commonly made for injuries occurring at home (or in other community locations) (37 percent of claims), followed by work (25 percent) and sports / recreation venues (20 percent) (Figure 5.28).

The proportion of all claims that were made for injuries sustained at home / community locations in New Plymouth District (37 percent) was substantially higher than New Zealand as a whole (22 percent) as well as other parts of the Taranaki region (South Taranaki and Stratford TLAs). Injuries that occurred at local sports / recreation venues also contributed to a higher percentage of all claims (20 percent) than the national average (14 percent) (Figure 5.28; ACC Scheme Reporting and Forecasting Unit 2001).

In New Plymouth District, there was a significantly lower proportion of claims made for injuries that occurred in "other" locations than for New Zealand overall (Figure 5.28). Additionally, there was a lower proportion of work-related claims in the District compared with South Taranaki and Stratford TLAs (ACC Scheme Reporting and Forecasting Unit 2001).

FIGURE 5.28: PERCENTAGE OF ACC ENTITLEMENT CLAIMS IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY LOCATION OF INJURY, YEAR ENDING 30 JUNE 2001



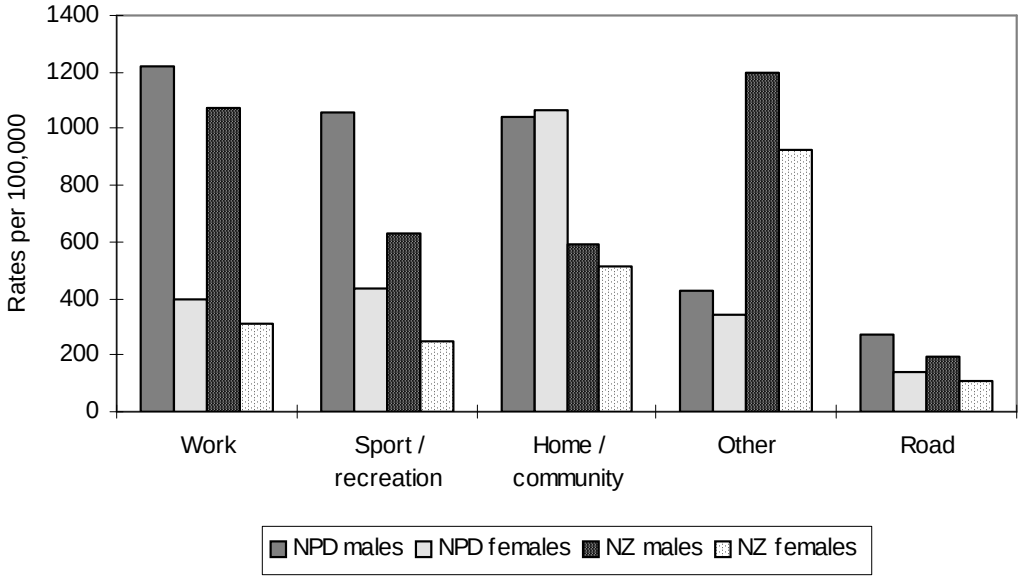
Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Tables A.34 and A.35).

Overall, New Plymouth District residents have age-standardised claim rates around 12 percent higher than the national average. In fact, local residents have higher claim rates than all New Zealanders for every type of injury location except the "other" category. In particular New Plymouth District people have much higher claim rates

for home / community and sports / recreation injuries than the general population (1.9 and 1.7 times higher respectively) (Appendix Tables A.34 and A.35).

For both New Plymouth District and New Zealand, males have higher age-standardised claim rates than females (69 percent higher). In particular, they have considerably higher workplace and sports / recreation injury claim rates than females and also higher road injury claim rates. However, home / community injury claim rates are similar for both males and females (Figure 5.29).

FIGURE 5.29: ACC ENTITLEMENT CLAIMS, NEW PLYMOUTH DISTRICT, BY LOCATION OF INJURY AND SEX, YEAR ENDING 30 JUNE 2001, AGE-STANDARDISED RATES PER 100,000



Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Tables A.34 and A.35).

Serious claims and deaths

In New Plymouth District, nine of the 19 "serious" entitlement claims during the 2000 / 2001 financial year were for road injuries and six were for injuries sustained at home / in community settings.

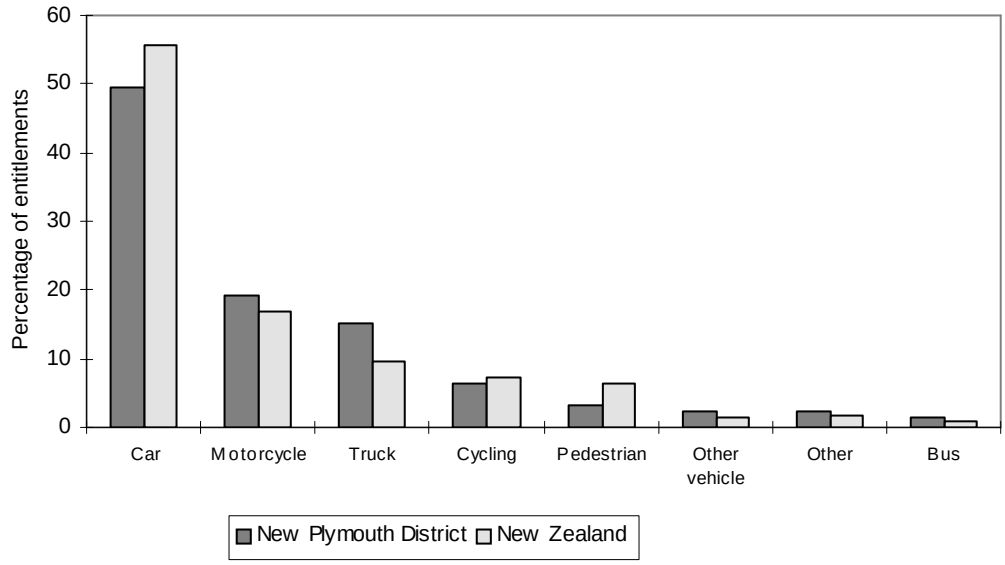
Eleven of the 24 claims for deaths were for road injuries and five were for home / community injuries.

Road injuries

Cars were by far the most common type of vehicle in which New Plymouth District people making road-injury entitlement claims were injured in the 2000 / 2001 financial year. Motorcycles and trucks were the next most common.

A higher percentage of claims in New Plymouth District were for injuries that occurred in motorcycles and trucks compared with New Zealand as a whole. Compared with the national average, a lower percentage of New Plymouth District road-injury entitlement claims were for injuries in cars and for pedestrians (Figure 5.30).

FIGURE 5.30: PERCENTAGE OF ACC ENTITLEMENT CLAIMS FOR ROAD INJURIES IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY TYPE OF VEHICLE, YEAR ENDING 30 JUNE 2001



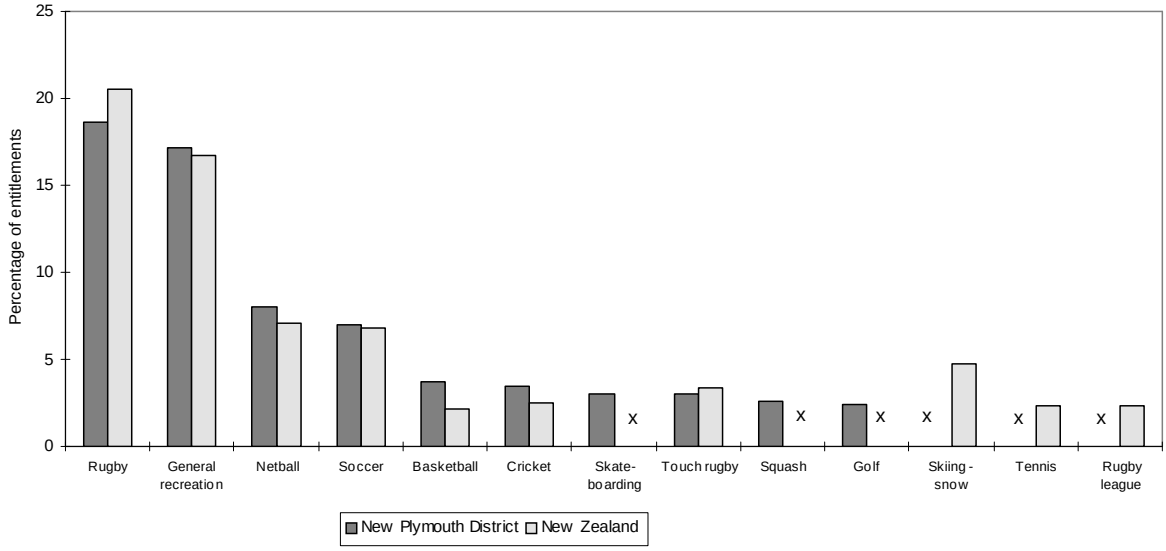
Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Table A.36).

Sports injuries

For both New Plymouth District and New Zealand as a whole, the most common sports / recreation injuries for which ACC claims were made in 2000 / 2001 were rugby and "general recreation" followed by netball and soccer.

Compared with New Zealand overall, a higher percentage of New Plymouth District sports / recreation injury entitlement claims were for netball, basketball and cricket. Skateboarding, squash and golf also featured in the top ten sports activities for which claims were made in New Plymouth District, although not in New Zealand as a whole (Figure 5.31).

FIGURE 5.31: PERCENTAGE OF ACC ENTITLEMENT CLAIMS FOR TOP TEN SPORT / RECREATION INJURIES IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY TYPE OF SPORT, YEAR ENDING 30 JUNE 2001



Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Table A.37).

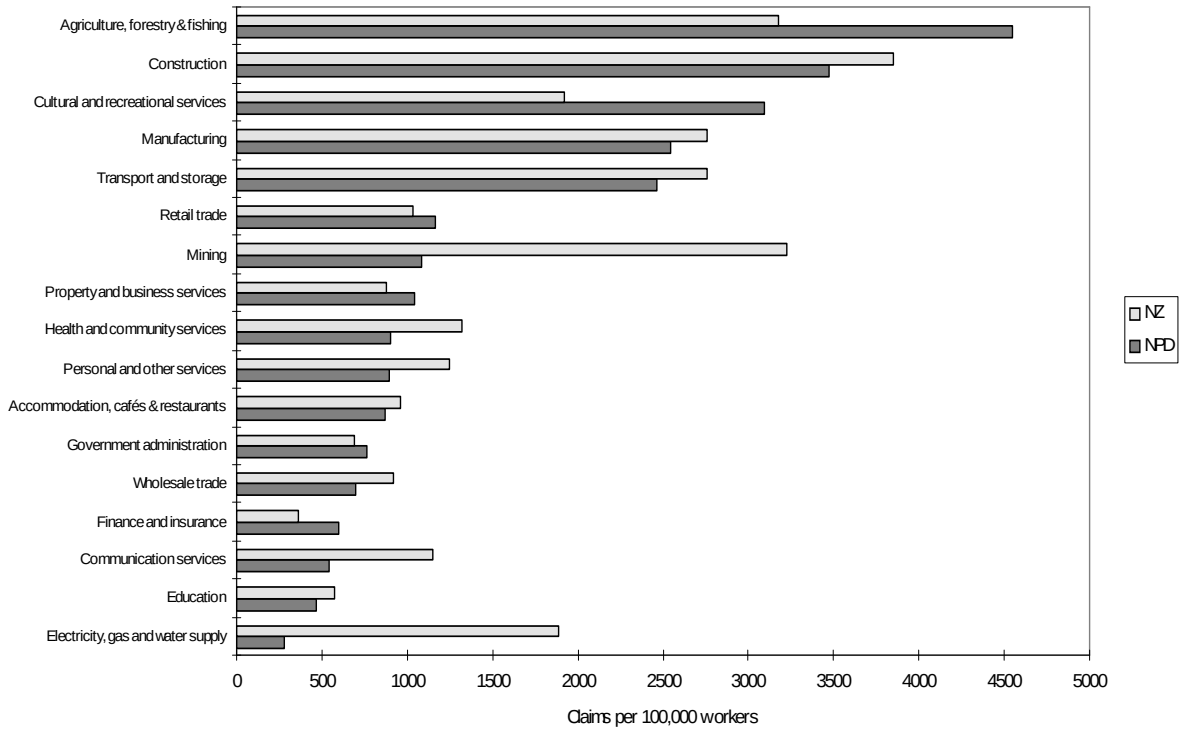
x = not in top ten sports in the region.

Work injuries

In New Plymouth District in 2000 / 2001, agriculture / forestry / fishing was the most common industry for which workplace ACC entitlement claims were made (127 - 22 percent - of the total of 586 workplace claims). The industries with the next highest number of workplace claims in the District were manufacturing and construction with 115 (20 percent) and 70 claims (12 percent) respectively (Appendix Table A.38). For New Zealand as a whole, manufacturing was the most common industry for which workplace claims were made (20 percent of claims), followed by agriculture / forestry / fishing (15 percent) and construction (11 percent).

Because there are different proportions of workers employed in different industries in New Plymouth District compared with New Zealand as a whole, it is also useful to look at claim rates per numbers of workers in these different industries. In 2000 / 2001, agriculture / forestry / fishing had the highest rate of claims per 100,000 workers in New Plymouth District, followed by construction and cultural and recreational services (Figure 5.32). Compared with the New Zealand average, New Plymouth District workers in agriculture / forestry / fishing and cultural and recreational services had much higher entitlement claim rates.

FIGURE 5.32: ACC ENTITLEMENT CLAIM RATES (PER 100,000 WORKERS) FOR WORKPLACE INJURIES BY INDUSTRY, YEAR ENDING 30 JUNE 2001



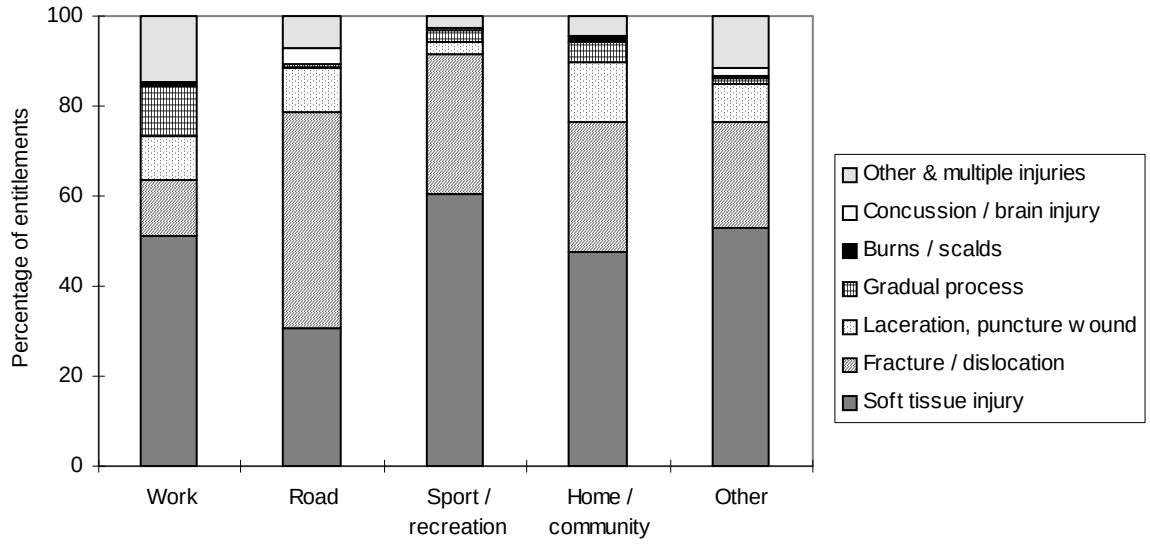
Source: Claims data from ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Table A.38). Industry data from Statistics New Zealand 2001 (1996 census data).
Note: NPD = New Plymouth District, NZ = New Zealand.

Injury diagnoses

Overall, the most frequent injury diagnoses for which entitlement claims were made in 2000 / 2001 in New Plymouth District were soft tissue injuries (51 percent), fracture / dislocations (26 percent), and lacerations / puncture wounds (10 percent). This pattern is very similar to that of New Zealand as a whole (Appendix Table A.39 and A.40).

Different injury diagnoses are more common in certain injury locations than others. For example, a higher-than-average percentage of sports / recreation injuries are soft tissue injuries, a relatively high percentage of road injuries are fracture / dislocations, and a relatively high percentage of work injuries are due to gradual processes (Figure 5.33). Similar patterns are found in New Zealand entitlement claims overall (Appendix Table A.39 and A.40).

FIGURE 5.33: ACC ENTITLEMENT CLAIMS BY INJURY DIAGNOSES AND LOCATION, NEW PLYMOUTH DISTRICT, YEAR ENDING 30 JUNE 2001



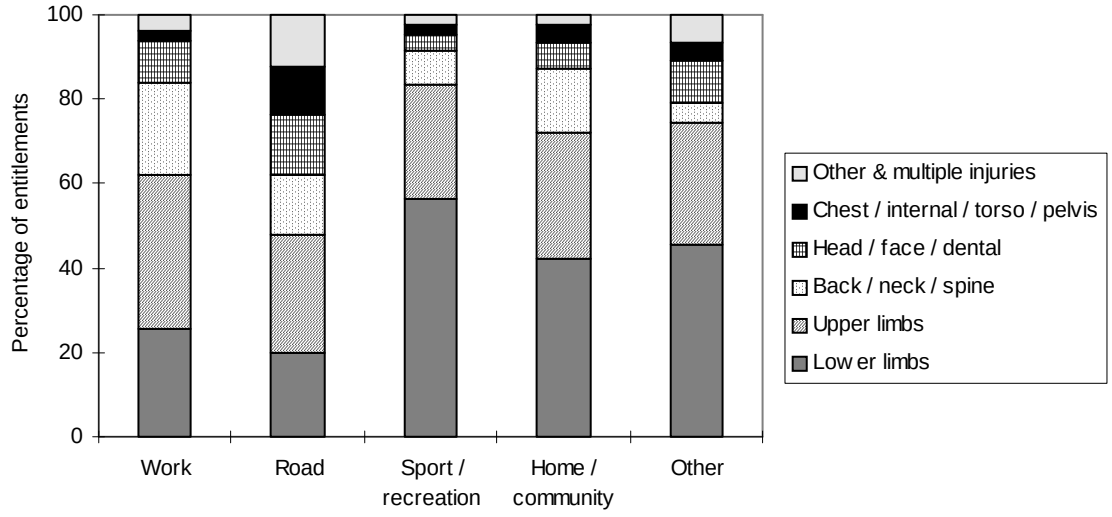
Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Table A.39).

Injury sites

Among ACC entitlement claims for New Plymouth District in 2000 / 2001, by far the most common injury body sites were lower limbs (40 percent of claims), and upper limbs (31 percent). Injuries to backs / necks / spines were the next most frequent (14 percent), followed by head / face / dental injuries (eight percent). This was very similar to the injury sites related to entitlement claims for the whole of New Zealand (Appendix Tables A.41 and A.42).

A relatively high percentage of sports / recreation injuries were to lower limbs, whereas a relatively high percentage of road injuries were chest / internal injuries, head / facial injuries or other / multiple injuries. A comparatively high proportion of work injuries were to backs / necks / spines and upper limbs (Figure 5.34). Again, these patterns were similar to those for national entitlement claims (Appendix Tables A.41 and A.42).

FIGURE 5.34: ACC ENTITLEMENT CLAIMS BY INJURY SITES AND LOCATION, NEW PLYMOUTH DISTRICT, YEAR ENDING 30 JUNE 2001



Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Table A.41).

Injury "causes"

For all entitlement claims, ACC assesses what was the "cause" of the injury. "Other loss of balance / personal control" was in the top four causes for all five injury locations. It was the most common cause of injury in sports / recreation venues, in home /community settings, and in "other" locations).

"Lifting / carrying / strain" was the most frequent cause of work injuries, and also featured in the top four causes of injuries at sports / recreation and home / community locations.

Slipping or skidding on foot was frequently the cause of injuries at work, sports / recreation, home / community, and "other" locations.

Road injuries were usually associated with "loss of control of a vehicle", "collision with / knocked over by object", and "driving into hole / object / animal etc." (Table 5.3 overleaf).

Activities preceding injuries

As well as assessing the "causes" of injuries for which entitlement claims are made, ACC collects information about the type of activities that claimants are engaged in before they are injured.

As would be expected: for work injuries, claimants are most likely to be carrying out employment tasks. For road injuries they are most likely to be "driving / riding"; and for sports / recreation injuries they are most likely to be engaged in "recreation or sporting activities".

Walking and running are the most common activities preceding home / community injuries, and lifting / lowering / loading / unloading are frequently undertaken before both work and home / community injuries (Table 5.4 overleaf two pages).

TABLE 5.9: TOP TEN "CAUSES" OF INJURY FOR ACC ENTITLEMENT CLAIMS IN NEW PLYMOUTH DISTRICT, BY LOCATION, YEAR ENDING 30 JUNE 2001

WORK	No.	%	ROAD	No.	%
Lifting / carrying / strain	131	22.4	Other loss of control of vehicle	48	34.3
Other loss of balance / personal control	122	20.8	Collision with / knocked over by object	22	15.7
Work property or characteristics	91	15.5	Driving into hole / object / animal / etc.	21	15.0
Slipping, skidding on foot	59	10.1	Other loss of balance / personal control	19	13.6
Collision with / knocked over by object	25	4.3	Swerving / evasive action	3	2.1
Struck by person / animal	23	3.9	Inadvertent machine / vehicle movement	2	1.4
Tripping or stumbling	18	3.1	Skid	2	1.4
Object coming loose / goods shifting	15	2.6	Work property or characteristics	1	0.7
Struck by hand-held tool / implement	12	2.0	Loss of hold	1	0.7
Misjudgement of support	12	2.0	Lurching / jerks in vehicles etc.	1	0.7
Other or unclear cause	78	13.3	Other or unclear cause	20	14.3
Total	586	100.0	Total	140	100.0
SPORT / RECREATION	**No.**	**%**	**HOME / COMMUNITY**	**No.**	**%**
Other loss balance / personal control	172	37.3	Other loss balance / personal control	250	28.6
Struck by person / animal	70	15.2	Slipping, skidding on foot	137	15.7
Lifting / carrying / strain	51	11.1	Tripping or stumbling	120	13.7
Tripping or stumbling	37	8.0	Lifting / carrying / strain	97	11.1
Slipping, skidding on foot	36	7.8	Struck by person / animal	33	3.8
Collision with / knocked over by object	21	4.6	Collision with / knocked over by object	31	3.5
Loss of hold	8	1.7	Loss of hold	16	1.8
Other loss of control of vehicle	7	1.5	Misjudgement of support	13	1.5
Misjudgement of support	6	1.3	Pushed or pulled	13	1.5
Something giving way underfoot	6	1.3	Struck by hand-held tool / implement	10	1.1
Other or unclear cause	47	10.2	Other or unclear cause	154	17.6
Total	461	100.0	Total	874	100.0

OTHER	No.	%
Other loss balance / personal control	62	21.5
Slipping, skidding on foot	19	6.6
Medical treatment	17	5.9
Tripping or stumbling	16	5.5
Struck by person / animal	13	4.5
Lifting / carrying / strain	12	4.2
Pushed or pulled	9	3.1
Criminal Act	6	2.1
Collision with / knocked over by object	6	2.1
Other loss of control of vehicle	3	1.0
Other or unclear cause	126	43.6
Total	289	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

TABLE 5.10: TOP TEN ACTIVITIES OF INJURY FOR ACC ENTITLEMENT CLAIMS IN NEW PLYMOUTH DISTRICT, BY LOCATION, YEAR ENDING 30 JUNE 2001

WORK	No.	%	ROAD	No.	%
Employment tasks	313	53.4	Driving, riding	116	82.9
Lifting, lowering, loading, unloading	69	11.8	Travelling as passenger	9	6.4
Walking, running	36	6.1	Walking, running	4	2.9
Using, operating (not machine)	12	2.0	Employment tasks	2	1.4
Driving, riding	11	1.9	Other	6	4.3
Ascending / descending	11	1.9	Not obtainable	3	2.1
Getting on or off, in or out of	10	1.7	Total	140	100.0
Operating machine	9	1.5			
Carrying	7	1.2			
Preparing food or drink	2	0.3			
Other	27	4.6			
Not obtainable	79	13.5			
Total	586	100			

SPORT / RECREATION	No.	%	HOME / COMMUNITY	No.	%
Recreation or sporting activity	382	82.9	Walking, running	281	32.2
Walking, running	39	8.5	Lifting, lowering, loading, unloading	85	9.7
Driving, riding	5	1.1	Getting on or off, in or out of	64	7.3
Ascending / descending	4	0.9	Ascending / descending	57	6.5
Lifting, lowering, loading, unloading	4	0.9	Using, operating (not machine)	40	4.6
Children playing	3	0.7	Driving, riding	28	3.2
Carrying	2	0.4	Carrying	19	2.2
Fighting	1	0.2	Children playing	19	2.2
Adjusting machine or work	1	0.2	Operating machine	13	1.5
Getting on or off, in or out of	1	0.2	Fighting	11	1.3
Other	12	2.6	Other	202	23.1
Not obtainable	7	1.5	Not obtainable	55	6.3
Total	461	100.0	Total	874	100

OTHER	No.	%
Walking, running	63	21.8
Receiving medical treatment	17	5.9
Driving, riding	14	4.8
Ascending / descending	11	3.8
Lifting, lowering, loading, unloading	8	2.8
Fighting	7	2.4
Getting on or off, in or out of	6	2.1
Employment tasks	4	1.4
Using, operating (not machine)	3	1.0
Adjusting machine or work	2	0.7
Other	104	36.0
Not obtainable	50	17.3
Total	289	100

Source: ACC Scheme Reporting and Forecasting Unit 2001.

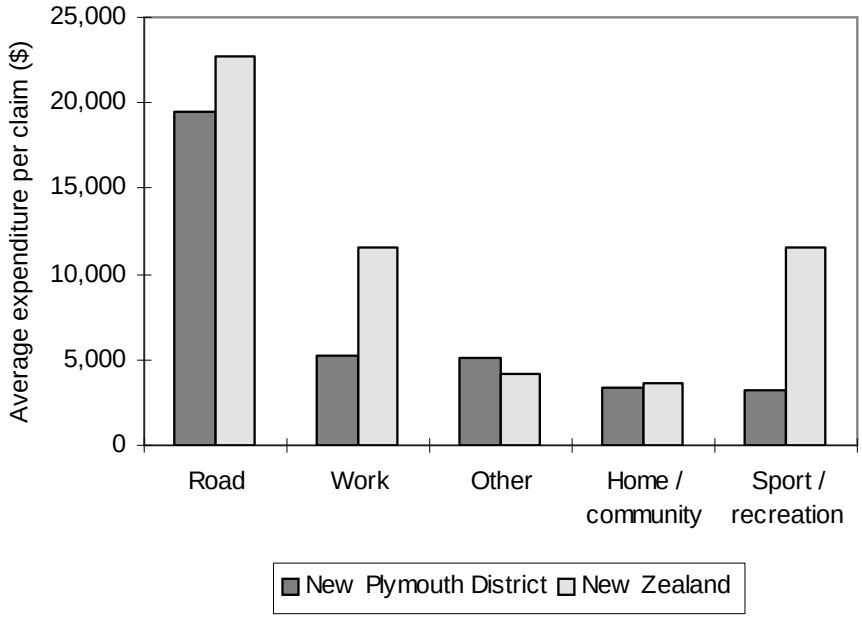
Cost of claims

In the 2000 / 2001 financial year, over $11 million was spent on ACC entitlement claims in New Plymouth District. This was around one percent of national expenditure (Appendix Table A.43).

Overall, local claims cost $4,990 on average. This was equivalent to 54 percent less than the national average of $7,691.

In most types of locations, the average cost of claims in New Plymouth District was lower than the New Zealand average (Figure 5.35). This could be because local injuries were less serious, people who were injured had a lower average income (making weekly compensation lower), and / or other factors.

FIGURE 5.35: ACC ENTITLEMENT CLAIMS EXPENDITURE IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY INJURY LOCATION, YEAR ENDING 30 JUNE 2001



Source: ACC Scheme Reporting and Forecasting Unit 2001 (see Appendix Table A.43).

Land Transport crash statistics

Introduction

The next section presents information about injury from road vehicle crashes. As mentioned in the previous sections, in the New Plymouth District, motor vehicle and other transport crashes are responsible for 34 percent of injury deaths, 17 percent of hospitalisations for unintentional injuries, nine percent of Emergency Department attendances and around six percent of new ACC claims in New Plymouth District.

The Land Transport Safety Authority (LTSA) compiles data from Police reports on crashes involving injury, along with some information on non-injury crashes. The following section presents injury crash statistics for New Plymouth District, taken from the most recent local *Road Safety Report* (LTSA 2001a). This information gives details on the numbers and rates of crashes and casualties (injuries and deaths) in New Plymouth District and details about the situations and causes of these crashes.

Because of differences in the nature of roading in various parts of New Zealand, the LTSA provides comparative data in local *Road Safety Reports* for similar areas of New Zealand as well as data for the whole of New Zealand. New Plymouth District is categorised under "Group C" - "Large Provincial Towns and Hinterland" (Population 35,000 - 75,000 and 20 - 50 percent of rural[18] crashes). Group C comprises:

- New Plymouth District
- Gisborne
- Hastings
- Kapiti Coast
- Porirua
- Rotorua
- Timaru
- Upper Hutt
- Wanganui
- Whangarei.

[18] "Rural" roads are defined as having speed limits of 80km/h or more. Urban roads have speed limits of less than 80km/h.

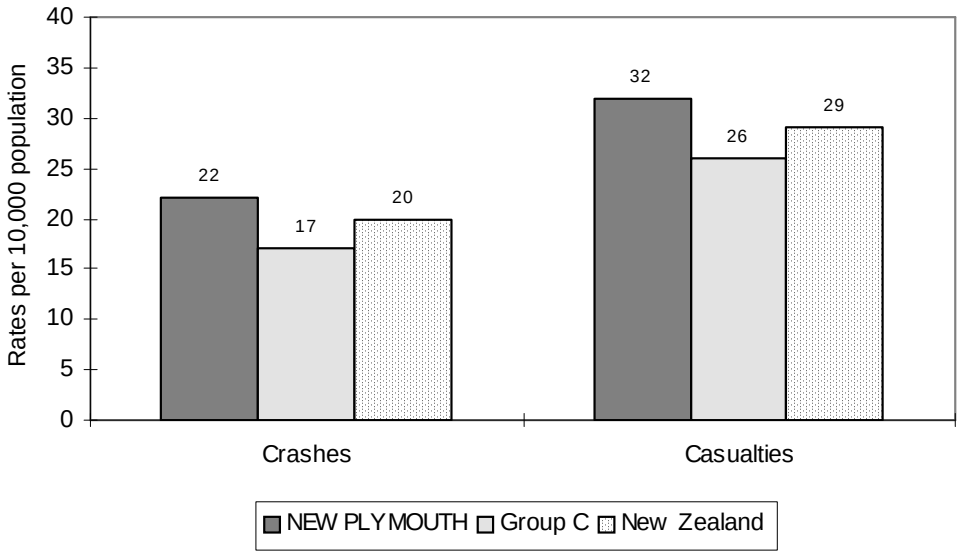
While it is known that not all injury crashes are reported to the Police, Taranaki appears to have a relatively high reporting rate compared with other parts of New Zealand. In the year 2000, the ratio of reported serious injuries to recorded hospital admissions for road vehicle crashes in Taranaki was 0.60. The ratio for the whole of New Zealand was 0.37. Note that this higher reporting rate could significantly contribute to some of the regional differences in crash and casualty rates reported below.

It should also be noted that people living *outside* New Plymouth District who are involved in crashes that take place *within* the District will be included in the statistics discussed below.

Crash and casualty rates

In the year 2000 in New Plymouth District, 149 crashes and 216 casualties were reported to the Police. This represented 22 injury crashes and 32 casualties per 10,000 population. These injury crash and casualty rates were slightly higher than the average for New Zealand as a whole, and slightly higher again than those for all Group C areas (Figure 5.36).

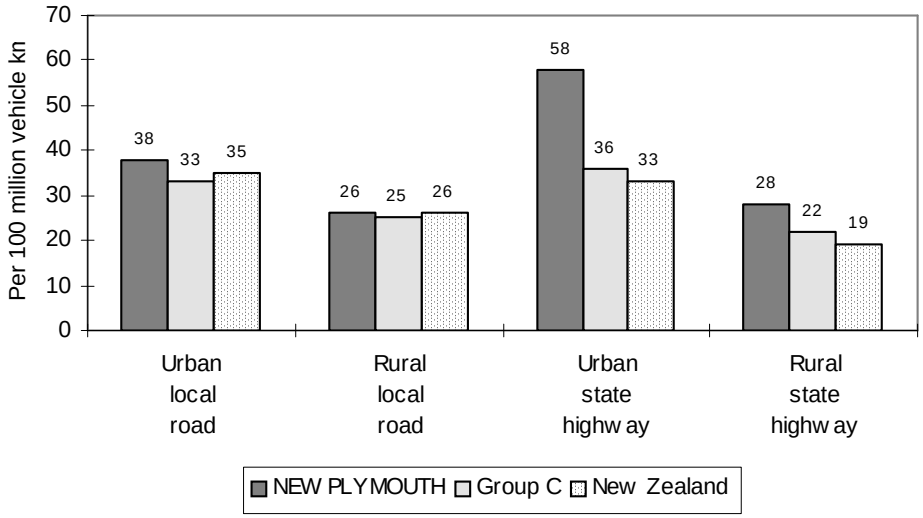
FIGURE 5.36: CRASH AND CASUALTY RATES (PER 10,000 POPULATION) IN NEW PLYMOUTH DISTRICT, GROUP C AND NEW ZEALAND IN 2000



Source: Data from LTSA 2001a (Table 2).

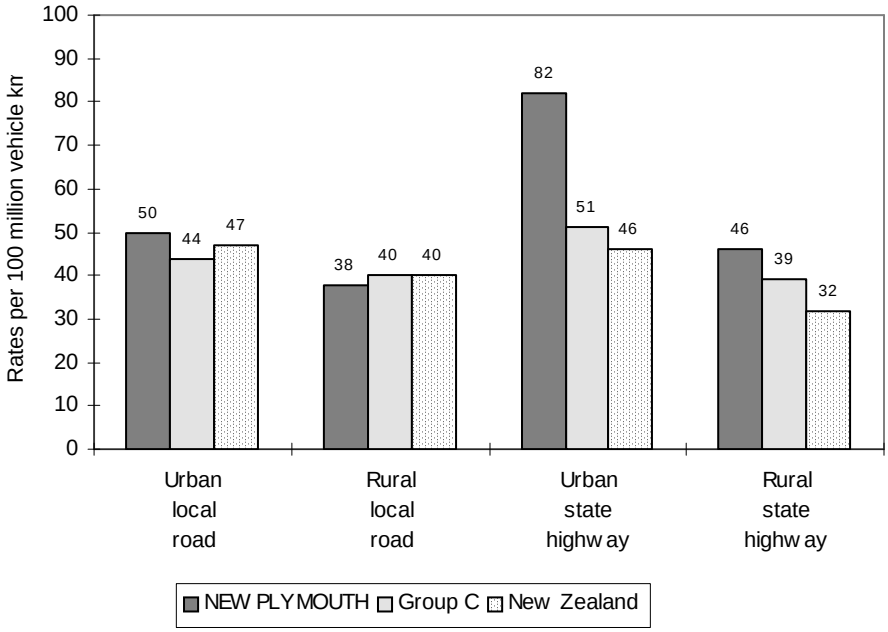
Looking at crash and casualty rates on different types of roads, taking into account distances travelled, it can be seen that the highest crash and casualty rates in New Plymouth District occur on urban state highways (State Highways 3 and 45). These reported crash rates on urban state highways were considerably higher than average rates for urban state highways for both New Zealand and Group C areas. Reported crash and casualty rates for urban local roads and rural state highways were slightly higher in New Plymouth District than for New Zealand and Group C areas. On rural local roads, crash rates for New Plymouth District were similar to New Zealand and Group C rates, and casualty rates were very slightly lower (Figures 5.37 and 5.38 overleaf).

FIGURE 5.37: CRASH RATES (PER 100 MILLION VEHICLE KILOMETRES TRAVELLED) IN NEW PLYMOUTH DISTRICT, GROUP C AND NEW ZEALAND IN 2000, BY TYPE OF ROAD



Source: Data from LTSA 2001a (Table 2).
Note: Lengths of the four different types of road vary between geographic areas, thus affecting crash and casualty rates.

FIGURE 5.38: CASUALTY RATES (PER 100 MILLION VEHICLE KILOMETRES TRAVELLED) IN NEW PLYMOUTH DISTRICT, GROUP C AND NEW ZEALAND IN 2000, BY TYPE OF ROAD

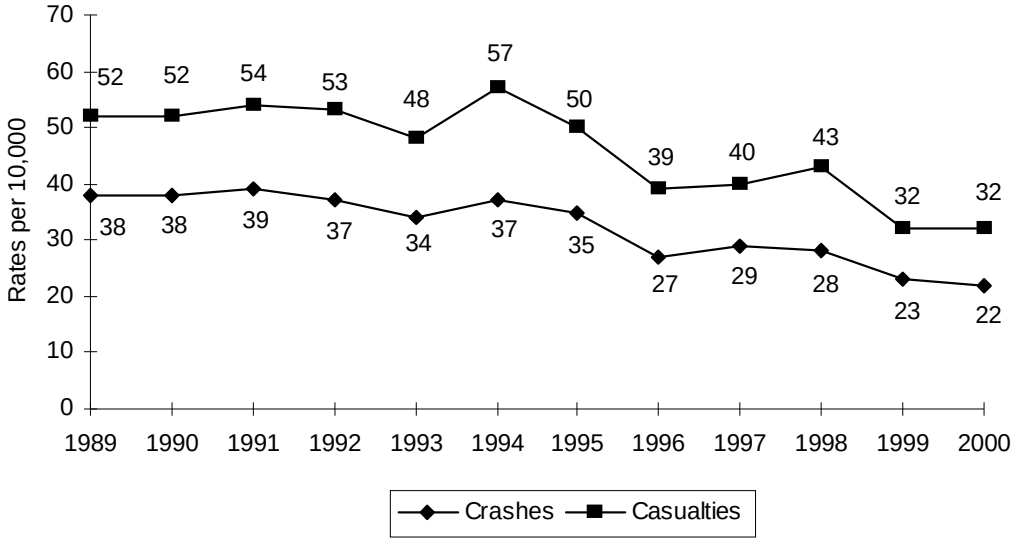


Source: Data from LTSA 2001a (Table 2).

Note: Lengths of the four different types of road vary between geographic areas, thus affecting crash and casualty rates.

Over the last 12 years, reported crash and casualty rates in the New Plymouth District have both gradually declined (Figure 5.39).[19] This downward trend is also evident for New Zealand as a whole and Group C areas (LTSA 1999; LTSA 2001a).

FIGURE 5.39: TRENDS IN CRASH AND CASUALTY RATES (PER 10,000 POPULATION) FOR NEW PLYMOUTH DISTRICT, 1989-2000



Source: Data from LTSA 1999 (Figures 4 and 4a), LTSA 2001a (Figures 5 and 5a).

[19] Ratios of reported serious injuries to hospital admissions in Taranki have increased slightly during this time.

Severity of injury crashes

During the period 1996-2000 in New Plymouth District, a total of 886 injury crashes were reported to the Police, involving 1,282 casualties. Most (71 percent) of these crashes involved minor injuries. Overall, most (22) of the 32 fatal crashes reported to the Police occurred on rural roads. Crashes involving serious injuries, too, were more likely to occur on rural roads than urban roads (Table 5.5).

The percentages of fatal, serious and minor casualties on rural and urban roads in the New Plymouth District were similar to the average for all Group C areas (LTSA 2001a).

TABLE 5.11: NUMBER AND PERCENTAGE OF FATAL, SERIOUS AND MINOR INJURY CRASHES FOR NEW PLYMOUTH DISTRICT FOR URBAN AND RURAL ROADS DURING FIVE-YEAR PERIOD 1996-2000

	URBAN		RURAL		TOTAL	
Injury severity	Number	Percent	Number	Percent	Number	Percent
CRASHES						
Fatal	10	2	22	6	32	4
Serious	100	19	127	35	227	26
Minor	410	79	217	59	627	71
Total	**520**	**100**	**366**	**100**	**886**	**100**
CASUALTIES						
Fatal	10	1	25	4	35	3
Serious	110	16	165	28	275	21
Minor	570	83	402	68	972	76
Total	**690**	**100**	**592**	**100**	**1282**	**100**

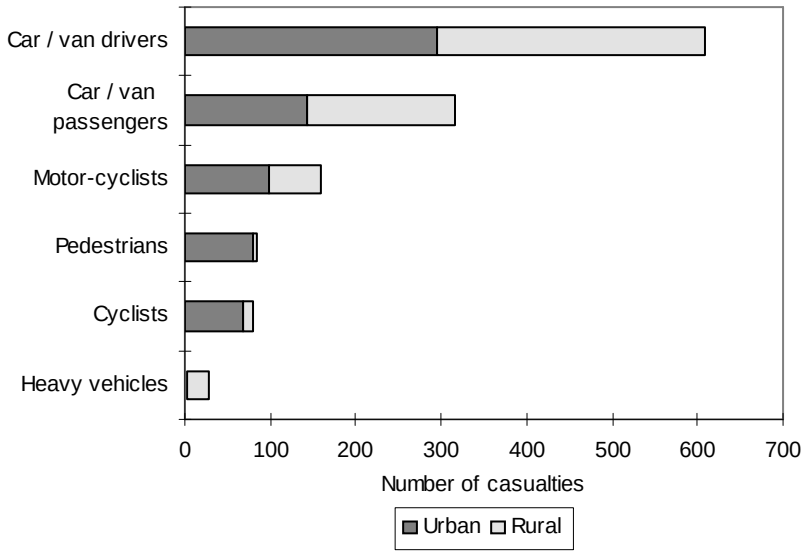
Source: Data from LTSA 2001a Tables 3, 4, 5, 3a, 4a, 5a.

Note: Injury severity recorded for the most severely injured casualty in the crash.
"Fatal" = injuries resulting in death within 30 days of crash.
"Serious" = injuries requiring medical treatment or hospital admission, including fractures, head injuries, internal injuries, crushing, severe lacerations etc.
"Minor" = injuries requiring first aid or causing discomfort including sprains, bruises etc.
"Urban" = road with speed limit of less than 80km/h.
"Rural" = road with speed limit of 80km/h or more.

Types of road users involved in injury crashes

In the period 1996-2000, nearly half (48 percent) of all casualties involved in reported crashes in New Plymouth District were drivers of cars or vans. Almost one in four of all the District's casualties were passengers in cars or vans, and 12 percent were motor-cyclists. A higher proportion of casualties from crashes on rural roads were car / van drivers and passengers or occupants of heavy vehicles, compared with casualties on urban roads where higher proportions of casualties were motor-cyclists, cyclists or pedestrians (Figure 5.40).

FIGURE 5.40: TYPES OF ROAD-USER CASUALTIES INVOLVED IN INJURY CRASHES ON URBAN AND RURAL ROADS IN NEW PLYMOUTH DISTRICT 1996-2000



Source: Data from LTSA 2001a Figures 6 and 7 (see Appendix Table A.44).

A (statistically) significantly lower proportion of New Plymouth District urban-road casualties were car / van drivers and occupants of heavy vehicles compared with the whole country. Moreover, compared with Group C, a significantly lower proportion of New Plymouth District urban-road casualties were car / van passengers. However, there was a significantly higher percentage of motor-cyclist casualties on the District's urban roads compared with both Group C areas and New Zealand as a whole (LTSA 2001a).

On rural roads, too, a higher proportion of New Plymouth District casualties were motor-cyclists compared with both Group C and New Zealand. New Plymouth District rural roads also had a comparatively high percentage of cyclist casualties (compared with New Zealand) and a low percentage of car / van passenger casualties (compared with both Group C and the New Zealand average) (ibid.).

Over the past decade (1991-2000) in New Plymouth District there has been a downward trend in the numbers of all types of road-user casualties except heavy vehicle occupants where the ten-year trend has remained quite flat (although quite wide fluctuations have occurred in individual years due to small numbers of cases) (ibid.).

Crash movement types

Looking at the types of vehicle movements preceding crashes is also useful when considering how to prevent injuries from this cause.

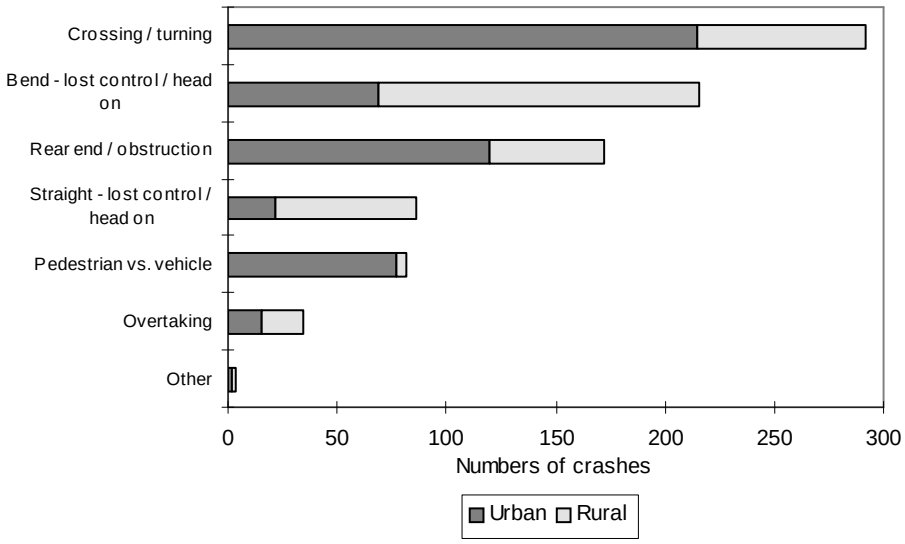
The most common types of reported injury crashes in New Plymouth District (in the period 1996-2000) resulted from:

- crossing or turning movements
- losing control or meeting another vehicle head-on on road bends
- rear-end / obstruction situations (such as crashing into the back of a parked or slow-moving vehicle) (Figure 5.41).

Crossing and turning movements, rear end / obstruction, and pedestrians resulted in larger numbers of *urban*-road crashes than *rural*-road crashes (Figure 5.41)

Losing control or head-on crashes on bends or straight sections were more common on *rural* roads (Figure 5.41).

FIGURE 5.41: MOVEMENT TYPE INVOLVED IN INJURY CRASHES ON URBAN AND RURAL ROADS IN NEW PLYMOUTH DISTRICT 1996-2000



Source: Data from LTSA 2001a Figures 6 and 7 (see Appendix Table A.45).

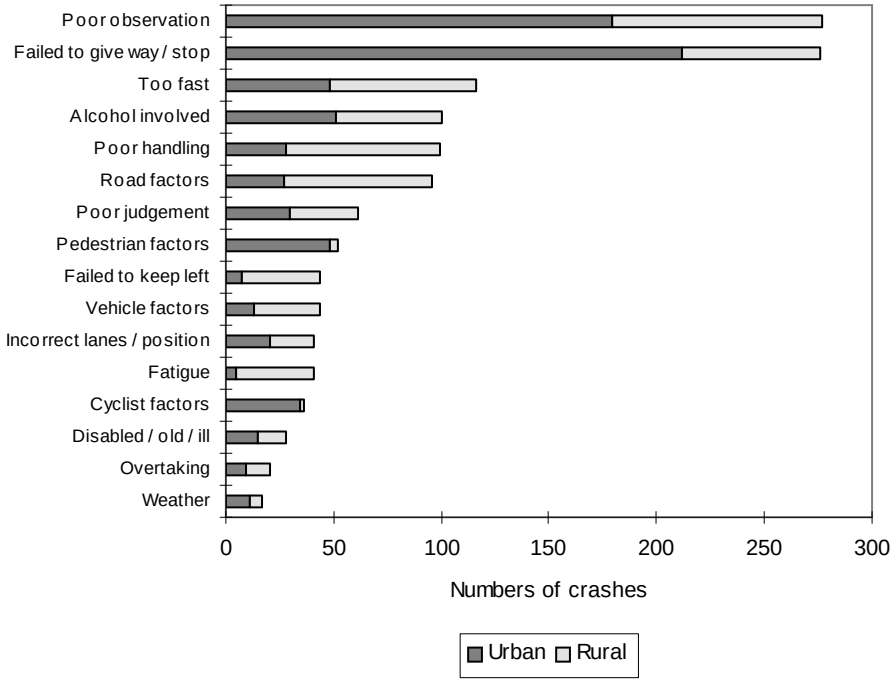
Comparing New Plymouth District with other areas, the following patterns in the types of crash movements were evident (LTSA 2001a):

- higher percentages of crossing / turning movements on both urban and rural roads (compared with Group C and all NZ)
- higher percentages of rear end / obstruction movements on rural roads (compared with Group C)
- lower percentages of losing control / head-on situations on bends of urban roads (compared with Group C)
- lower percentages of losing control / head-on situations on bends of rural roads (compared with Group C and all NZ)
- lower percentages of losing control / head-on situations on straight sections of urban roads (compared with Group C and all NZ).

Contributing factors to crashes

Poor observation and failing to give way or to stop were by far the most common contributing factors to injury crashes in New Plymouth District from 1996-2000. These two factors were much more frequent in *urban*- than *rural*-road crashes, as were pedestrian and cyclist factors. Driving too fast, poor handling, road factors, failing to keep left, vehicle factors, and fatigue were more common in rural-road crashes (Figure 5.42).

FIGURE 5.42: CONTRIBUTING FACTORS TO INJURY CRASHES ON URBAN AND RURAL ROADS IN NEW PLYMOUTH DISTRICT 1996-2000



Source: Data from LTSA 2001a Figures 24 and 25 (see Appendix Table A.46).

For *urban* roads, New Plymouth District had statistically significantly *lower* percentages of crashes (compared with both Group C and all New Zealand) due to the following contributing factors:

- road factors
- pedestrian factors
- fatigue
- incorrect lanes / position
- failed to keep left
- too fast
- alcohol involved.

However, *urban*-road crashes in New Plymouth District were *more* likely than either Group C or all New Zealand to have poor observation or failing to give way / stop as contributing factors (LTSA 2001a).

The following contributing factors on *rural* roads were significantly *less common* in New Plymouth District than other areas:

- weather (lower than all NZ)
- poor observation (lower than Group C)
- incorrect lanes / position (lower than all NZ)
- failed to give way / stop (lower than Group C)
- too fast (lower than all NZ)
- alcohol involved (lower than Group C and all NZ).

Poor observation, poor handling, and failing to give way or stop were *more* common in New Plymouth District *rural*-road crashes than New Zealand overall, as was going too fast compared with Group C areas (ibid.).

Timing of crashes

Crash data for New Plymouth District during the five-year period 1996-2000 show that, during weekdays, crashes peak in the mid to late afternoon, with a smaller peak around 9-10am. The afternoon peaks occur at a slightly earlier time of day than the New Zealand average, but at similar times to Group C areas. At the weekends, peaks in crashes in New Plymouth District occur on Saturdays and Sundays around midday, and on Sundays in the late afternoon. These weekend patterns are similar to the Group C average, but are different from New Zealand as a whole, where the highest peak occurs around midnight on Saturday with lower peaks during afternoons on Saturdays and Sundays (LTSA 2001a).

From 1996-2000, the lowest number of crashes in New Plymouth District occurred on Mondays (99 in total). The frequency of crashes gradually increased throughout the week to a peak on Fridays (158). Weekend numbers were 142 and 147 for Saturdays and Sundays respectively. These patterns are very similar to Group C areas, but different from all New Zealand which has a significantly higher proportion of crashes on Saturdays (ibid.).

July was the most common month for crashes in New Plymouth District (89 crashes in total), with October being the least common (59). Monthly crash patterns in New Plymouth District were similar to Group C and New Zealand, except for the District's high proportion of crashes in July which was significantly higher than both other comparative areas (ibid.).

Seatbelt, child restraint and cycle helmet use

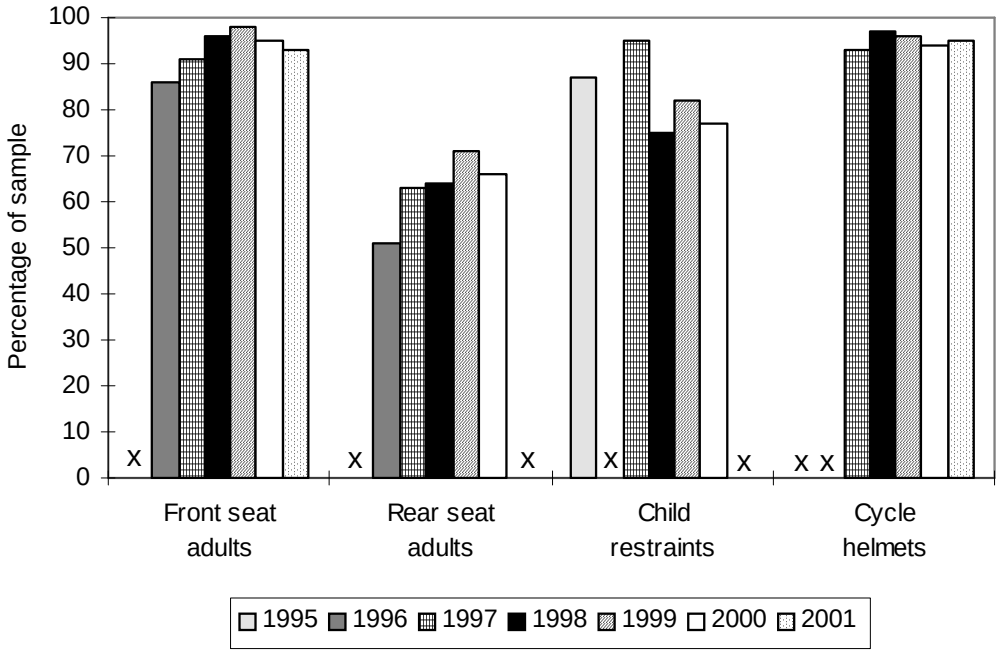
Surveys of seat belt, child restraint and cycle helmet use have been conducted throughout the country since the mid-1990s. These are reported by regions (rather than TLAs). In the latest survey, undertaken earlier this year, 93 percent of adults sitting in front seats of vehicles in Taranaki were wearing seatbelts. This is one percent higher than the national average, but is a statistically-significant decrease (of 2 percent) for the region since the last survey in 2000. Adult seatbelt-wearing rates throughout the country range from 82 percent (Hawkes Bay) to 99 percent (Auckland City) (LTSA 2001b). Since 1996, the rates of wearing front seatbelts in Taranaki increased to a peak in 1999, but have decreased slightly since then (Figure 5.43).

Wearing seatbelts in the backs of vehicles is still much less common than in front seats. In the latest survey in 2000, 66 percent of adult back-seat passengers in Taranaki were wearing seatbelts - 10 percent less than the national average of 76 percent. Rates throughout the country range from 47 percent in Hawkes Bay up to 96 percent in North Shore (LTSA 2001b). Since 1996, rear-seatbelt wearing rates in Taranaki increased to a high of 71 percent in 1999, but decreased by five percent in 2000 (Figure 5.43 overleaf).

The latest survey in 2000 of child-restraint use among children aged under five years, showed that 77 percent of Taranaki children were using a restraint (child seats, booster seats, infant seats or seatbelts). This is six percent down on the previous year, and two percent less than the national average (in 2000, the national range was from 64 percent [Manukau]) to 91 percent [North Shore] (LTSA 2001b). Taranaki child restraint use rates have varied since 1995, with 1997 having the highest use rate of 95 percent (Figure 5.43).

Cycle-helmet use in Taranaki is high (95 percent in 2001), as is the case for New Zealand overall (94 percent) (rates throughout the country range from 85 percent in Northland to 99 percent in Wellington City) (LTSA 2001b). Since 1997, rates of cycle-helmet use in Taranaki increased to 97 percent in 1998 and have decreased only very slightly since then (Figure 5.43).

FIGURE 5.43: PERCENTAGE OF SEAT BELT, CHILD RESTRAINT AND CYCLE HELMET USE IN TARANAKI, 1995-2001



Source: Data from LTSA 2001b (see Appendix Table A.47).

Note: x = data not available for this year.

"Social cost"

As well as reducing suffering, preventing injury crashes in New Plymouth District would save money through cutting down the number of deaths, hospitalisations and other medical care. The LTSA estimates that the "social cost"[20] of injury crashes in New Plymouth District in the year 2000 was $44.45 million. Nearly $28 million of this was for rural state highway crashes. The LTSA suggests that injury crashes on urban and rural local roads contribute to the total social cost by just over $5 million each, and the cost of injury crashes on urban state highways was just over $6 million.

[20] These estimates are based on "willingness-to-pay" studies.

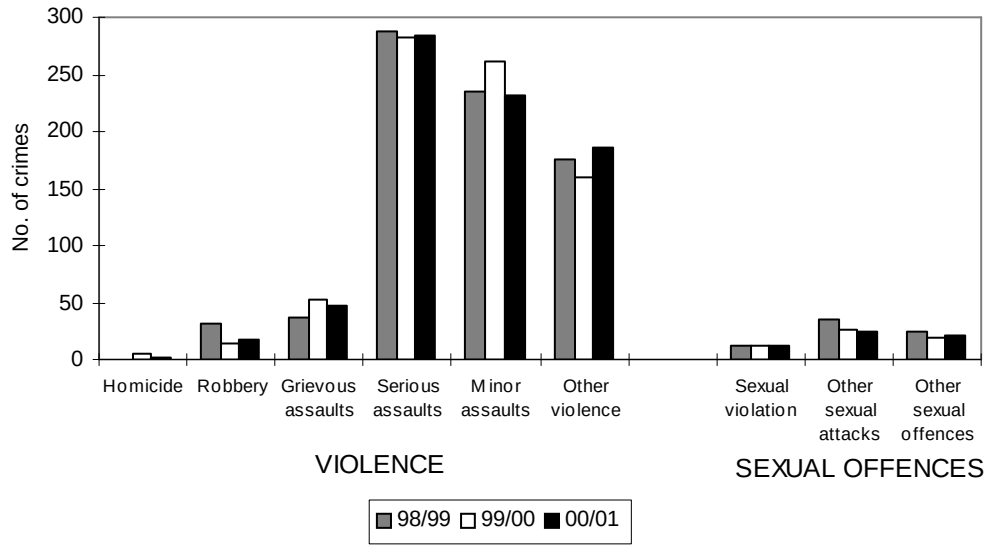
Police statistics

Information on reported assaults in New Plymouth District is available from local Police crime statistics. As discussed earlier in this report, assaults cause around three percent of injury deaths, 27 percent of hospitalisations for intentional injury and four percent of Emergency Department attendances in the District.

In the New Plymouth area[21], the numbers of different types of violent and sexual crimes have remained reasonably steady over the past three financial years, with "serious assaults", "minor assaults" and "other violence" being the most common types (Figure 5.44). Over the three-year period in the New Plymouth area, there were annual averages of 770 violent crimes and 63 sexual crimes.

Overall, the rates of violent and sexual crimes in the New Plymouth area are very slightly above the average for New Zealand. For the three years 1998/99-200/01, violent and sexual crimes made up 12 percent of recorded crimes in the District (this compares with 10 percent for the whole of New Zealand) (Appendix Table A.48).

FIGURE 5.44: NUMBERS OF VIOLENT AND SEXUAL CRIMES RECORDED BY POLICE IN NEW PLYMOUTH AREA, FROM 1998/99 TO 2000/01



Source: Data supplied by New Plymouth Police (see Appendix Table A.48).

[21] New Plymouth District plus Mokau.

6

THE COMMUNITY CONSULTATION

This section presents the findings of the community consultation undertaken with people from groups and organisations in the New Plymouth District. Chapter Two has already described the research approach used for the consultation, including how consultation participants were selected and interviewed.

Population groups most prone to injury

Participants in the community consultation identified nine different groups of people that they considered should have priority in any future injury prevention programme in the New Plymouth District. The groups were:

- Children
- Adolescents and youth
- Older people
- Mäori
- People participating in sport or recreation
- People in the workplace
- People on farms
- People at home
- People on the roads

Summarised below is the information gathered from consultation participants about the injury profiles and prevention needs of these nine priority groups. Each priority group is discussed in a separate section. Each section covers:

(1) the number of interviewees who identified the group as a "priority group"[22]

[22]People interviewed in the second phase of the consultation were not asked to identify priority population groups. The focus of the second phase interviews was discussing people's specialist knowledge of injuries in particular locations, e.g. manufacturing, farming.

(2) the common types of injuries experienced by the group and the main perceived causes of these injuries

(3) key risk factors for these injuries e.g. biological, social and other environmental factors

(4) existing injury prevention interventions relevant to the group

(5) suggested future interventions and approaches to reduce the incidence of injuries in the group.

Children

Children were identified by consultation participants to be particularly prone to accidental injury, largely because of their inexperience, innate curiosity and innocence of the potential domestic and environmental hazards around them.

Some interviewees saw boys, especially those aged 2 to 9 years, as more vulnerable to injury than girls. As one person put it, boys "have a nose for trouble".

Priority rating

Of the 24 people interviewed in the first phase of the consultation, 12 identified children's injuries as a high priority for future injury prevention initiatives.

Common types of injuries and their causes

Table 6.1 summarises the key types of injuries identified by interviewees as impacting on local children and the common causes of these injuries.

Table 6.1: COMMON TYPES OF CHILDHOOD INJURIES AND THEIR CAUSES

Common types of injuries	COMMON CAUSES
Poisonings	• Ingestion of unsecured household cleaners and other household products • Ingestion of parents / grandparents' pills
Fractures	• Falls from trips and heights e.g. trees, jungle gyms, cycles. • Child abuse
Bruises	• Trips and falls • Unsupervised use of baby walkers • Violence and physical abuse / neglect
Burns and scalds	• Matches, candles, unprotected heaters, open fires and fire boxes, pulling on electric jug / kettle cords and pot handles
Head injuries	• Vehicle crashes • Failure to use car restrainers, use of substandard car restrainers • Failure to use cycle helmets, use of substandard helmets • Violence and physical child abuse / neglect • Use of ATVs
Drowning	• Unsupervised access to swimming pools, beaches, water holes and troughs

Causes and influencing factors

Most interviewees identified fractures, bruises, cuts and lacerations as the most common childhood injuries. Factors seen as contributing to these included falling from heights (such as out of trees), falling off playground equipment, and falling from cycles and skateboards. Head injuries were considered to be less common than other types of injuries, although more likely to be serious. Head injuries were seen to be usually the result of car crashes, including failure to use safe child restraints.

A child health specialist noted that while children were indeed very vulnerable to injury, most of the injuries they sustained were minor. Only a very small percentage required hospitalisation.

Interviewees thought the most common place where children's injuries occurred was the home, closely followed by schools (one interviewee said 20 percent of injuries occurred at school), the beach, swimming pools and unfenced water holes, sportsgrounds, playgrounds, farms, and on roads.

Poisoning

Poisoning was considered a common, but preventable form of childhood injury. It was said to result largely from children ingesting adult medications, household cleaners and other toxic domestic products. Interviewees felt that new parents needed to be informed as early as possible about:

- the potential dangers that medications and toxic household products pose to children
- the importance of securing these substances out of the way of small children.

Some interviewees noted that grandparents also need reminding about child safety considerations. For many grandparents there can be a long break between having their own children and looking after grandchildren.

Child abuse and neglect

The Child Youth and Family Service indicated that the incidence of child abuse and neglect in the Taranaki region has been relatively stable in recent years. The number of notifications of deliberate abuse and acts of omission (neglect) were said to average around 80 per month. Of these, 60 required further investigation.

Drug and alcohol abuse, poor parenting skills, lack of social support and poverty were all considered to be contributing factors in child abuse and neglect.

Drowning

Interviewees identified a seasonal pattern to drowning in the New Plymouth District, with drowning much more likely to happen in the summer months.

There appeared to be some confusion among rural interviewees about the law governing the fencing of swimming pools. Some thought the legislation applied only to urban swimming pools and not those on farms. However, a Country Women's

Institute representative claimed that the Council was remiss because it was failing to adequately monitor fencing requirements for rural swimming pools.

Rural women also expressed concern about "hobby farmers" and "life-style" block owners' apparently allowing their children to wander at will, unsupervised, on to other peoples' farms. They worried who would be held responsible if one of these children ever drowned during one of these unsupervised excursions.

Burns and scalds

Burns and scalds were seen as prevalent injuries among children. Most interviewees in the first consultation phase identified matches, unprotected heaters, fires and fireboxes, overhanging electric jug cords and cooking pots as potentially hazardous to younger children. An important part of any injury prevention initiative was considered to be educating parents and others who live and work around children about these risks.

Other environmental factors

Many of the injuries discussed above were considered to be common to both urban and rural children. However, rural interviewees identified a number of environmental risks that they perceived to be largely specific to rural areas. Most urban children were never exposed to these risks unless they visited a farm.

Farm children were noted to be exposed on a daily basis to potentially hazardous materials and machines. Much of the machinery and equipment used on farms is heavy duty and potentially dangerous. Visibility of small children from tractors, trucks and harvesters was said to be often extremely limited. Under-age driving of all terrain vehicles (ATVs) and tractors was identified as another risk-factor.

The rural interviewees showed a high level of awareness and consciousness of all potential farming hazards.

According to the Child, Youth and Family Service (CYFS), in the eyes of the law it is an offence to leave children at home unsupervised. However, the CYFS staff member who participated in the consultation, as well as other people, such as the rural interviewees, acknowledged that children of farming parents may be left in the care of under-aged siblings when parents are out working on the farm. Others take their children with them; an option that involves its own inherent risks. In the face of the limited childcare options available to them, rural parents were said to largely place their faith in making sure their children were aware of the potential dangers around them and how to minimise the risk of injury. Other precautions included installing house-to-shed telephone lines so children could call parents, and securing toxic household and farming substances well out of sight. The rural women who participated in the consultation felt these measures had been largely "successful" in that, to their knowledge, very few rural children in the New Plymouth District had experienced serious injury.

Existing interventions

Groups noted to have provided child-targeted injury prevention initiatives in the past included the New Plymouth District Council, WestpacTrust Sport Taranaki, Kidsafe Taranaki Trust, Roadsafe Taranaki, the NZ Police, the Fire Service, Plunket, ACC, and Tui Ora. The initiatives included campaigns and programmes to promote people's awareness and use of "safety approved" child restraints, cycle helmets, playground safety, modified sport, fire safety in the home, and cycle lanes.

Participants in the consultation project provided examples of several child targeted safety information resources including posters, leaflets, booklets and pamphlets. These resources had been developed by various organisations and covered a diverse range of specialised topics from horse riding to modified sport.

Parent-targeted information booklets were considered an important first step in educating parents about general child safety issues. Examples included Plunket's *Thriving Under Five*, the Ministry of Health's *Well Child* / *Tamariki Ora* and ACC's *Making Your Home Child Safe*.

Some interviewees noted that information booklets required regular reinforcement from a range of other supporting safety promotion initiatives, such as those promoted by Kidsafe and Roadsafe Taranaki, Plunket and ACC. These same interviewees said that multi-faceted approaches were needed to reach parents, schools and others working with children, to keep the safety messages and behaviours "up there".

Staff from Taranaki Health's Health Promotion Unit and the local ACC office reported having worked with a number of local schools in recent years to help assess potential hazards within the school environment, establish systems and procedures to reduce the risk of injury, and monitor and manage injuries. Generally the success of these programmes was considered to vary from school to school.

One teacher from a local school where this kind of injury prevention initiative had been especially successful attributed this success to the whole school community, including the principal, teachers, the Board of Trustees, students and parents, "getting in behind" the programme. As a result, the school was seen to be a much safer and enjoyable place to be in.

Baseline reports from the ACC's school injury prevention and management programme show that the programme has tackled a diverse range of injury prevention initiatives. These include:

- the development of policies, systems and practices (e.g. promoting the use of the "Health and Safety Code of Practice for Schools"), development of school rules regarding student behaviour (e.g. fighting, bullying and rough play), establishing injury recording systems and review procedures, injury management (e.g. first aid), swimming pool management, playground equipment safety

- the assessment of injury problems and potential environmental hazards

- integration of injury awareness and prevention across the curriculum
- the promotion of the use of resources e.g. “Kia Tupato Tamariki” / “Junior Kidsafe Kit”
- the provision of specific safety / injury prevention modules, e.g. safe use of pedestrian crossings, sports safety.

Equestrian riders safety pamphlet

Staff from the local ACC office noted that horse-riding related accidents were a significant factor in the child injury toll. They indicated that their office was currently in the midst of developing an intervention to address this problem.

One rural interviewee suggested there had been a decline recently in equestrian-related injuries. She attributed this to one local woman’s efforts, although she still saw a need for an ongoing injury prevention programme.

Staff from the ACC indicated that the Kidsafe Taranaki had recently developed a safety pamphlet (funded by the Health Promotion Unit and the Pony Club) for young rural horse riders. The pamphlet is the ACC’s response to the high number of injuries experienced among young equestrians, particularly young female equestrians aged 10 to 14 years.

Suggested interventions

Interviewees, particularly in the first consultation phase, expressed a high level of satisfaction with past and present initiatives in the New Plymouth District aimed at reducing children’s injuries. They recommended that organisation like the Kidsafe Trust “keep up the good work”.

Regular re-runs of cycle helmet and car restraint promotion campaigns

Most suggestions for future interventions revolved around the idea of re-running previous safety campaigns and programmes that had been regarded as successful. Several interviewees, for instance, wanted both the Road Safety Taranaki free cycle helmet promotion and the Waitara child restraint promotion repeated at regular intervals. The would have the benefit of:

(1) sustaining earlier compliance gains

(2) reminding relapsers

(3) reaching “new” and “up-and-coming” cyclists and their parents.

Interviewees called for helmets to remain free of charge in any future cycle helmet promotion. They also felt it was important that the free helmets be suitably “up-to-date”, “trendy” and “styley” so that young people want to wear them, and even more importantly want to *keep* wearing them.

The Regional Road Safety Coordinator and the Police agreed with the need to re-run these types of campaigns on an annual basis. LTSA and Police road traffic data suggested there had been a "fall off" in the use of car restraints and cycle helmets recently.

Warning signs for Waitara bridge divers

Two Waitara-based interviewees expressed concern about the children (aged nine years and up) who apparently jump and dive off the Waitara Road Bridge. This activity was described as a regular summer time event for Waitara youngsters and "an accident waiting to happen". The interviewees felt the local council should put up a warning sign on the bridge alerting Waitara children and parents to the potential dangers. Both said they planned to lobby the council to have something done about this potential hazard.

Other interventions

Interviewees identified a range of safety-related options that they believed everyone - parents, grandparents, schools, the district and local councils, and health promotion agencies - could do to promote child safety and build on existing safety measures. These included:

- Council continuing to develop the city's cycle lanes
- schools and councils regularly monitoring school and public playgrounds to ensure that the required safety standards are in place and maintained. (One interviewee believed that "poorer", low decile schools were not sufficiently resourced to do this. She wanted the Ministry of Education to provide resources to upgrade playgrounds in these schools.)
- road safety agencies advocating for improved road signage outside schools and around school bus stops. Current signs were considered to be neither prominent enough nor legible from a moving motor vehicle
- health and road safety agencies continuing to raise parents awareness of the need for child restraints and cycle helmets, and the Police to continue policing compliance
- parents, sports clubs and schools promoting the use of equipment and protectors to reduce the risk of injury from sport and recreational activities, such as skateboarding, rugby and cricket
- schools and sports clubs continuing to provide and promote modified sports, such as KiwiSport, and promoting greater awareness among parents of the benefits of modified sports for children
- the Police and other road safety advocates improving parents' awareness of the dangers of encouraging and letting children ride bicycles on pavements. Interviewees noted that, contrary to what some parents think, the footpath is not

a safe place for children to ride on as motor vehicles can (1) back out unexpectedly and (2) are known to have “blind spots”.

Adolescents and youth

Adolescents and youth (young people), like children, were seen to be very prone to injury. Inexperience was considered an important contributing factor in the injuries sustained by 15 to 24 year-olds, irrespective of whether these injuries were sustained at home, work or play. However, young people's innate and developmental tendency to experiment, take risks and rise to challenges were also seen to be major factors influencing their risk of injury.

Priority rating

Twelve of the 24 interviewees in the first consultation phase identified adolescent and youth-related injuries as a priority for future injury prevention programme.

Common types of injuries and their causes

Table 6.2 summarises what interviewees said were the main types of injuries experienced by young people in the 15 to 24 year-old age group, and their main causes.

Table 6.2: COMMON TYPES OF INJURIES EXPERIENCED BY YOUNG PEOPLE AND THEIR CAUSES

Common types of injuries	Common causes
• Lacerations and bruising	• Inexperience, risk taking, violence, car and cycle car crashes
• Fractures	• Sports (mainly rugby and rugby league) recreational activities e.g. skateboarding, cycling and skiing • Falls from heights e.g. trees, the mountain
• Head injuries	• As above
• Poisonings	• Attempted suicides, excessive intake of alcohol, drug overdoses

Causes and influencing factors

The most common environments and locations where young people's injuries were thought to occur included vehicles and roads, sports grounds, and the home.

Road crash injuries

Males aged 15 to 24 years were considered most at risk of vehicle related injuries. Cars and motor cycles were the most common forms of vehicles involved. Interviewees working at the accident and emergency "coal face" and in road safety policy indicated that the road toll in Taranaki had generally been trending downwards over recent years. The incidence of road crash injuries among young males showed a similar declining pattern. However, the risk of road crash injury still remained high for young males in the New Plymouth District.

A high percentage of the road crash injuries involving males in this age group were identified to be the result of alcohol, speed and a failure to wear seat belts. Several interviewees regarded downtown New Plymouth to have its fair share of "young

hoons" that "roar up and down the town" on Friday and Saturday nights. Young rural males coming to the city for "a night out on the town" were among this group. Young Mäori males were similarly identified as being at risk of road-related injuries, particularly those without a driver's license, many of whom came from Waitara.

Sports injuries

Interviewees generally saw sports to be a leading cause of injury among young people aged 15-24 years. Bruises, fractures, sprains and strains were the most common forms of sports injuries. Sports administrators and ACC staff indicated that the use of protective gear such as mouthguards had helped reduce the incidence of injuries. However, some young males were recognised to be unwilling to use protective gear; a tendency which was put down to male bravado and an inherent desire to indulge in risky behaviours.

Assaults

While the overall incidence of road-related injuries among males has apparently reduced in the New Plymouth District, injuries from violent assaults have risen. Like road-related injuries, assault-related injuries were largely attributed to drunkenness. As one interviewee put it, "Young males don't drink and drive these days, they drink and fight instead." Interviewees from both the ambulance service and the hospital emergency department indicated that, whereas in the past young road accident casualties had been a major feature of their work in weekends, nowadays they were dealing much more with "out of control" young drunken males and to lesser extent drunken young women. While many of these young people were victims of assault, others were just "severely drunk". One interviewee expressed concern that there was currently no safe place in town to put these severely drunk young people so that they could "sleep it off". This was a concern especially in relation to young severely intoxicated women, who were seen to be particularly at risk of falling prey to sexual assault.

Suicide

Several interviewees did not regard youth suicide to be a serious problem in the New Plymouth District. Staff from the Base Hospital's emergency department had observed a considerable drop "of around 50 percent" over the past decade in attempted and completed suicides coming through the hospital's emergency service. However, another staff member reported an increase in attempted drug overdoses in under-15 year-old females. Paracetamol and antidepressants were said to be the two most common poisoning agents used in these suicide attempts.

One interviewee saw attempted and completed suicides by young people as representing "a small percentage" of a much larger youth problem, mainly depression. He pointed to research results from the Canterbury Suicide Project which showed that undiagnosed clinical depression featured in a high percentage of cases of completed and attempted suicides. He believed alcohol abuse was a key trigger for young people with depression in that alcohol acted to exacerbate depression. He was convinced that "if you could eliminate depression, then you could reduce the youth suicide numbers by 80 percent."

Existing interventions

According to several interviewees, road safety promotions had featured prominently in the New Plymouth District over recent years. The decline in the road toll generally was attributed largely to the success of these and other nationally promoted drink-drive safety campaigns. Other contributing factors included campaigns in the District promoting compliance with legal requirements to wear seat belts and cycle helmets. The increased safety of late model cars and more stringent vehicle testing requirements were also seen to have helped reduce the road toll and road-related injuries across all age groups.

The youth-targeted Waitara Project's driver licensing initiative was established in response to a high proportion of young men, predominantly Mäori, being caught driving vehicles while unlicensed. The LTSA funds the initiative, with the Police and agencies in the local community, including Road Safe Taranaki, providing additional resources. While its primary target group is young Mäori, the initiative is open to all young at-risk drivers.

The initiative's main objective is to get the unlicensed driver licensed. The initiative is marae-based, provides tutoring to learner licence level, involves six driving lessons with a driving instructor, and "touches on" defensive driving techniques. A subsidy is provided towards the actual cost of the driver's licence.

The driver licensing initiative was described by several interviewees as "excellent" and "innovative". It was praised for its "holistic approach" and for achieving benefits "way beyond just getting the kids licensed." While considered expensive, the results of the initiative were judged to be "worth it". Results were "excellent" with a 100 percent pass rate. Boosts in the morale and confidence of the successful drivers were seen to be an additional "spin off".

Suggested interventions

Several interviewees indicated that unemployment, and a general lack of opportunities in the New Plymouth District, leave many young people feeling angry, frustrated and prone to "kicking out at the system". Alcohol and drugs were seen as underlying many of the incidents that come to the attention of the media, such as drunkenness, violent assaults, rape and other forms of criminal offences. One interviewee saw adults as failing to acknowledge their part in the provision of alcohol, leading, for instance, to young people selling to under-aged adolescents. Her view was shared by another interviewee, who regarded Parliament's decision to lower the drinking age as "grossly irresponsible".

Establishing a mentoring service

Plans are afoot at the Taranaki Base Hospital's Child and Adolescent Unit to establish a mentoring service. The service is being developed on the premise that "significant relationships" help to build resilience in young people suffering from low self-esteem or depression. The interviewee who mentioned the proposed service believed that the mentoring concept needed to be extended out into the wider New Plymouth community.

This same person also noted that it was difficult to know what to do for youth these days in terms of community programmes, because the "Net Generation" (today's youth culture) does not think it is "cool to belong to anything". He saw this attitude as part of the country's shift to individualism, wherein communities are no longer strong on relationships, neighbours don't know each other, families are less connected and club memberships are decreasing (including at sports clubs).

Holding youth promoting road shows

At a recent networking meeting held in New Plymouth, which was attended by one of the authors, youth workers discussed similar issues to those raised above and talked about what they as a group might do to help promote young people's sense of well being in the region. Young people were generally regarded to have received "a poor press" in the past. There was a need now to do something positive. The group agreed to develop and run a road show that had an information sharing focus. They planned to run the first road show during next year's Youth Awareness Week.

Providing more skateboard rinks

Several interviewees felt the district council should provide more skateboard rinks for young adolescents as "the kids like these". More rinks were thought to be likely to reduce the problems associated with skateboarding on footpaths. While recreational areas such as parks abound in the New Plymouth District, these were seen to cater primarily for younger children and their parents, whereas "there's not much going on here" for the young adolescent age group.

Conducting a Wellness Summit

Another suggested approach was for the New Plymouth District Council to hold an intersectoral "Wellness Summit" along the lines of that run by the Waitakere City Council as part of that city's injury prevention programme. The approach involves looking at what's going well for the region's youth, what's not going so well, and what could be done to improve things. Youth involvement was considered essential.

Expanding the Waitara drivers' licensing programme

All the interviewees working in the road safety area wanted the Waitara-based driver licensing programme expanded. A third programme phase was envisaged that involved putting drivers through the Lion's funded defensive driving programme.

Other youth-targeted driving initiatives

Road Safe Taranaki's annual business plan for 2001-2201 includes several youth targeted road safety initiatives. These initiatives were based on annual reviews of LTSA and Police road traffic data and also take into account local community concerns. This year's annual plan included supporting the local SADD programme, running the Holden Team's Advanced Driving Instruction Programme, supporting school-based driving courses, and establishing a scholarship for young drivers who have completed their six month restricted driving licence. The scholarship covers completing a defensive driving course and attending a one-day Holden Team Advanced Driving Instruction Programme.

Older people

Older adults (aged 65 and over) were identified as another group "highly prone" to injury. However, interviewees who worked with older people emphasised that there is considerable diversity within this population group, ranging from those who are fit, healthy and independent through to the frail and totally dependent.

Priority rating

A total of 17 of the 24 interviewees in the first consultation phase saw a need to have a focus on injury prevention in older people aged 65 and over.

Common types of injuries and their causes

Table 6.3 summarises what interviewees saw to be the leading types of injuries in the older age group and the common causes of these injuries.

Table 6.3: COMMON TYPES OF INJURIES OCCURRING IN LATE ADULTHOOD AND THEIR CAUSES

Common types of injuries	Common causes
• Fractures of all kinds, particularly hip fractures in women	• Falls from ladders, falls and trips on slippery floors, mats, duvets, dressing gown cords • Car crashes • Poor nutrition e.g. lack of calcium, iron and vitamin B12 • Lack of physical fitness
• Bruises	• Falls, trips, "knocks" (see above)
• Strains	• Inappropriate lifting
• Burns and scalds	• Heaters, hot water bottles

People working with older people considered fractures to be the most common form of injury affecting this group.

The consequences of fractures were recognised to be potentially devastating for the older age group. Older women were seen as particularly vulnerable to hip fractures. One interviewee observed that a simple trip or fall could cause a normally active and independent older person (both male and female) "to be fully mobile and independent one day and totally dependent the next." Information provided by the Arthritis Foundation indicated that up to 50 percent of hip fracture patients lose their independence as a result of this type of injury, while about 20 percent die within one year of the injury event.

The cost of fractures as a result of falls in the aged was seen to be high and even greater than that attributed to heart disease, according to the Arthritis Foundation. Reducing the incidence of fractures caused by falls in the older age group was therefore seen to make "good economic sense" by those interviewees who identified injury prevention in the elderly as a priority.

Causes and influencing factors

The home was seen to be the most common site where older people's injuries occurred. Roads were considered the next most common location, either when older people were driving or when they were pedestrians.

As noted earlier, fractures from falls and trips were considered by far the largest group of injuries sustained by older people, both male and female. "There's a hundred different reasons why they fall," said one health specialist. "Their eyesight, hearing, heart, fitness levels, bone density, muscle tone, balance, gait and memory are largely not what they used to be." The natural aging process, poor diet and hormonal changes were all seen as contributing to making older bones both "brittle" and "frail".

Older men were perceived to be particularly loath to acknowledge and address some of the more potentially modifiable physical changes caused by the aging process. Older men were said to often fail to have their eyesight and hearing checked, even when there was an obvious need for them to do so. Alternatively, some failed to have the checks done regularly enough, or obtained corrective aids but then failed or refused to wear them. This trait was considered suggestive of a "strong denial that they are growing old."

Nutritional and physical exercise deficiencies

Two service providers who worked regularly with older people saw nutritional deficiencies and lack of regular exercise, particularly weight-bearing exercise, as underlying many of the fractures sustained by the "frail elderly". "The older you get the more gentle exercise you need", said one interviewee. She felt that many retire to do their tapestry and watch TV. A medical specialist perceived the "older olds" (those aged 70 years and over) to have a "mental block" about exercise. She considered it likely that "baby boomers" would make for a fitter and healthier older generation than the "older olds", because they brought with them an advanced knowledge of physical and nutritional needs.

Mobility scooters were considered "a mixed blessing". On the one hand they help older people maintain their independence. But on the other they act to reduce or eliminate regular walking from everyday exercise routines. Walking was considered one of the most valuable and health promoting exercises older people could do, because it is both "gentle" and "weight bearing", which promotes stronger bones.

Medications

Medications and the mix of medications were considered an important, though often unrecognised, contributing factor to older people's falls and trips. One interviewee from the Arthritis Foundation believed medications were involved "in about a quarter of the people we deal with who have had falls." She also noted that some GPs fail to monitor their older patients' medications adequately, particularly the combination of drugs prescribed. On the other hand, older people reputedly fail to tell their GPs about their "dizziness", while others just don't want to trouble the doctor when the problem persists. Forgetting to take medicines, doubling up and taking incorrect dosages were also implicated in some injuries caused by falls and trips.

Potential household hazards

Most interviewees identified the home as the most common place where older people sustain injuries. This pattern was recognised to be true for all age groups, but more so for the over 65 generation. Everyday household items including mats, dressing gown cords, bedding items and hot water bottles - things that were part and parcel of a person's everyday life - had the potential to become suddenly injurious for those with frail bones and thin skin. Slippery supermarket floors were similarly identified as potential hazards for the "frail elderly". Interviewees working with older people considered it hard to get older people to change their home environment and age-old behaviours to reduce the risk of injuries. "Old habits tend to die hard," they noted.

Older men were seen to be particularly prone to acting as if they were still young men by continuing to do high-risk household maintenance tasks that involved climbing ladders and painting roofs. Interviewees saw both these activities as the cause of head injuries and other types of fractures among men aged 60 and over.

Road crashes

Interviewees working in road safety indicated that while most older drivers are good drivers, it was not well known that in terms of crashes per kilometres driven, older drivers were second only to younger drivers in vehicle-related crash statistics. Several interviewees spoke of older drivers having stirred up "a good deal of angst" about the driving tests required of them under new licensing requirements for older people. It was noted that many older people, particularly older male drivers, questioned why they should be subjected to retesting just because they had "been driving for years". Several were described as having "vented their spleen" to the point where one driver licence tester reputedly resigned as result of the abuse he suffered from unsuccessful older drivers.

Although most vehicle-related incidents involving older people were relatively minor, one interviewee observed that even minor "nose to tail" incidents had the potential to severely impede an older person's movement and have a major impact on their quality of life.

Existing interventions

Interviewees from several agencies indicated that they worked regularly with older people and kaumatua, both in small groups and at an individual level. Written literature was considered largely unsuitable for reaching the older age group as many had eyesight problems or no longer found it easy to concentrate on reading matter. Interviewees saw face-to-face approaches as the best way to convey safety messages to this group.

Two community nursing interviewees routinely worked with kaumatua in their home settings to help them identify potential domestic hazards. They found this to be a most effective way of assisting kaumatua to make the necessary changes. Several interviewees said it made sense to train educators aged 55 and over to work specifically with older people and their support services to promote safety issues. It was thought that rapport would be easier to establish if the trainers were "not too young" and closer to the age of the recipients of the advice or programme participants.

The "Safe with Age" driving programme

Roadsafe Taranaki, Taranaki Regional Council, the LTSA and Tower Insurance sponsor the *Safe with Age* programme, a road safety initiative designed for the mature driver. The three-hour programme is a two-part module, the timing of which is flexible and adaptable to the client's needs. The programme covers:

- the effects of aging on driving ability
- recent road signage and road marking changes
- the effects of physical conditions on driving
- strategies to cope with driving.

A 30-minute session on driving and road safety tips is given to all participants, along with useful course notes and other road safety resources. All course participants are presented with an attendance after completing the course. The course is free.

AA Driving Courses

An interviewee from Aged Concern said he was aware that a lot of older people are fearful of the "older driver tests". Cars have been an important part of the older person's life, as they are for the majority of the driving population. Not surprisingly, the idea of not having a car is "a very traumatic business" and bound to make those "on trial" feel anxious. The interviewee saw little point in acting resentfully and arguing against the new licensing law. Instead he thought it better for all concerned if the older driver did something positive to help themself get their licence.

The interviewee from Aged Concern outlined his personal pro-active approach. First he attended the *Safe with Age* driver safety programme (see above for further information). This led him to approach the AA driving instruction service to help him assess his driving skills prior to going for a renewal of his licence at age 80. Before the one session instruction he swotted up the road code. He said he had found the AA driving instruction session "immensely valuable". The instructor identified a couple of weak points in his driving and gave him some additional useful pointers. He subsequently passed the 80-years driving test. The interviewee felt there was a likely need to promote the *Safe with Age* programme more intensively so older people were more aware of the AA service. The interviewee from Aged Concern highly recommended both the *Safe with Age* and AA driver instruction programmes.

Suggested interventions

Several interviewees suggested that generally older people were "a neglected group" in terms of health promotion programmes, especially injury prevention initiatives. Most funding was seen to be spent on preventing children's injuries. While these interviewees recognised the importance of promoting child safety, nevertheless they felt that the relative size and growth projections for the over 65s, coupled with the considerable economic and personal costs involved, suggested the need for safety promotion interventions to be developed for the older population.

Planning for retirement seminars

Interviewees noted that many older people suffer from low self-esteem, leading them to withdraw from the outside world and cease to actively participate "in life". Too often "they are the authors of their own misfortune" said one older interviewee. Several interviewees suggested that as people approached retirement age it was important for them to put some thought into how they planned to spend their retirement. Interviewees suggested a range of options for promoting retirement planning including seminars and workshops, small group sessions, personal counselling approaches, educational videos, articles in the local papers, and other forms of literature.

Exercise and nutritional promotions

Older people aged 60 years and over are an important client group of the Arthritis Foundation. In 1998-1999, with the help of a medical practitioner, a senior physiotherapist and ACC funding, the Foundation established a programme entitled *Upright and Moving.* The course was specifically targeted to older people aged 60 and over. The six-week course involved an exercise programme, hydrotherapy, exercise in the gym and some education on diet and nutrition. The course also "touched on" the subject of osteoporosis. The participants' physical fitness was assessed, both at the beginning and end of the six-week period. Results indicated significant improvements had occurred in participants' physical fitness levels, posture and gait, awareness of "home safety" measures, and nutritional needs and behaviour. The evaluation also showed participants had enjoyed the programme.

ACC did not continue funding the programme after the 12-month pilot, so its long-term impact was never determined. However, many of the *Upright and Moving* programme participants were known to have continued with the course's exercise and nutritional regime, despite the demise of the host programme. The Arthritis Foundation continues to use the principles guiding the *Upright and Moving* programme in its work today.

All four interviewees who worked exclusively with older people saw a real need to develop "holistic" programmes like *Upright and Moving* and others run by Mäori service providers for kaumatua. Programmes like these were considered to have the added benefit of increasing the opportunities for social interaction, thus reducing the risk of social isolation and helping to promote well-being.

Screening and management of osteoporosis risk

One of the four interviewees who worked mainly with older people wanted a national bone density screening programme established to screen menopausal women for osteoporosis risk factors. Another saw a need for a promotional programme to encourage older women to request bone density tests, while another wanted more primary health care providers to be alerted to (1) the need to assess older female patients' potential risk factors and (2) the range of very effective treatments now available for treating osteoporosis. All four interviewees disputed the commonly held view that it is too late to intervene by way of nutritional changes to reverse low bone density. They wanted this "fallacy" put to rest. In their opinion diet, in combination

with gentle weight bearing exercise and appropriate drug therapy, had proven effective for both managing and preventing further bone density deterioration. Putting everything down to old age and doing nothing to intervene was considered “lazy” and “unethical”.

Home safety assessment programmes

As noted earlier, in their daily clinical work Mäori community health service providers assess the homes of kaumatua for potential hazards. They also advise and suggest ways that the homes could be made safer. The district nursing service and Access Ability Service was also thought to look out for potential home hazards in the homes of their elderly clients. However, interviewees saw a possible need for this type of service and assessment to be more widely promoted and made available to older people.

Identification and modification of problematic pavement and curbings

Several interviewees saw uneven pavements and overly steep pavement curbings as potential hazards for older people, causing some to trip and fall. Some street / pavement curbings were also considered difficult to negotiate by older people on mobility scooters. The New Plymouth District Council’s road and pavement repair work is scheduled on an annual basis. However, the Council staff member interviewed for the consultation suggested that anybody who finds pavements or curbings they think are potentially hazardous should submit a formal complaint to the Council. A roading consultant would then be sent out to assess the situation and the problem would be remedied should this be judged necessary.

Mäori

In general, Mäori injury rates were perceived to be similar to non-Mäori. However, some differences were noted in the prevalence of certain types of injuries and injury risk factors.

Priority rating

Four of the 24 interviewees in the first consultation phase identified Mäori injuries as a priority for future injury prevention initiatives. None of the four interviewees were themselves Mäori.

Common types of injuries and their causes

The majority of interviewees considered there were no obvious differences in the types of injuries sustained by Mäori and non-Mäori in the New Plymouth District, or in the common causes of injury. However, staff from ACC observed that Mäori children were at greater risk of burns and scalds, although they were not able to provide information showing exactly how much higher this risk was.

Causes and influencing factors

According to interviewees, the main locations where Mäori incur injuries are in the home, on the sportsgrounds, on the roads, and at work, particularly at industrial workplaces. The home was considered the most common location. However, Mäori interviewees, as well as several non-Mäori interviewees, indicated that injuries on the road, sportsground and in certain workplaces could be higher for Mäori due to personal preferences in terms of the type of sports they play and the type of work they do.

Under-reporting of injuries

Staff from ACC and primary health care services regarded overall Mäori injury rates to be under-reported. Interviewees who worked regularly with kaumatua suspected that injuries were likely to be under-reported by this group because (1) in general they don't like going to doctors (2) some can't afford to pay for medical treatment.

Sports and recreational influences

Interviewees perceived Mäori to be over-represented in sports-related injuries because they were more likely to:

- participate in sport
- play more high-level contact sports e.g. rugby league, rugby and netball - sports which have a high incidence of torn ligaments and other musculoskeletal injuries
- play in recreational "Sunday sports" for which many were ill prepared and unfit.

One interviewee observed that Mäori children are more likely than non-Mäori children to get sports-related injuries because they play adult level sports which their young bodies are not ready for. She saw a need to promote greater awareness among

parents, teachers and coaches about the need for, and benefits of, modified sports for all children.

Staff from road safety agencies indicated that young, unlicensed, Mäori drivers under the age of 25 years are over-represented in road toll statistics. Inexperience, drugs and alcohol, risk-taking, failure to wear seat belts and the driving of substandard, non-road-worthy cars were all factors thought to be implicated in the statistics.

Occupational influences

Interviewees saw Mäori as over-represented in some types of occupational injuries, particularly injuries in the occupations involving heavy manual labour, such as those in the construction, mining, forestry and transport industries. Mäori, particularly Mäori males, were considered to be more likely to be engaged in unskilled, manual jobs in industries where exposure to risks were higher.

Existing interventions

Interviewees for the most part did not identify any particular Mäori-specific interventions other than those mentioned already in this chapter. Examples included the Mäori-specific, Kidsafe Taranaki child restraint and cycle helmet promotions and the Waitara young, unlicensed drivers, marae-based, programme. This primarily youth focused programme was led by a Waitara-based injury prevention service provider. Her position has been expanded recently to incorporate injury prevention for the New Plymouth District's tamariki.

The *He Oranga Poutama Kaiwhakahaera* Mäori sports coordinator, based at WestpacTrust Sport Taranaki, works specifically with Mäori to promote more active living and recreational activities generally. Her role involves networking and advocacy, including encouraging local iwi and hapu to set up fitness and recreational groups and advising those who decide to start their own group.

Suggested interventions

The focus group of rangatahi students, along with other Mäori interviewees, suggested a number of different approaches to help reduce Mäori injuries. These included:

- promote greater fitness levels to protect sports participants from injury, for example by using high profile role models such as Bernice Mene and Jonah Lomu

- encourage greater use of protective sporting equipment such as cycle helmets, and protective padding and helmets for skateboarders. It was considered important that these look "cool" by using good colours and labels, such as Nike

- promote greater awareness of the connection between alcohol and injuries – the recent TV road safety advertisements were recognised to be particularly effective in acknowledging Mäori culture and life experiences

- reverse recent legislation that reduced the age at which young people could buy alcohol

- use greater “visualisation” approaches to promote home safety, along the lines of the road safety television advertisements.

People participating in sport or recreation

Five interviewees had specialist knowledge of sports and recreation activities and sports injuries. Two worked for WestpacTrust Taranaki Sport, one was an ACC assessor, one was a St John's Ambulance officer, and another was a senior nurse at the Base Hospital's Emergency Department. Several other interviewees also identified sports and recreational pursuits to be a common source of injury.

Common types of injuries and their causes

Table 6.4 shows the sports and recreational activities that interviewees most frequently associated with injuries. It also shows the common types of injuries sustained from participating in these activities, as well as key contributing factors.

Table 6.4: HIGH INJURY RISK SPORTS PLAYERS, ASSOCIATED TYPES OF INJURIES, AND KEY CAUSES

High injury risk sports	Associated types of injuries	Key causes
• Rugby, rugby league, netball, touch football	• **Musculoskeletal injuries e.g. torn ligaments** • Strains and sprains • Cuts and lacerations • Concussion • Head injuries • Spinal injuries • Fractures	• High physical contact sports • Physical demanding sports • Violent and dangerous play • Below-par fitness • Failure to do pre-and post-warm up exercise
• Mountain climbing and skiing	• Exposure • Fractures • Death	• Failure to wear suitable clothing, protective gear • Faulty equipment • Sudden change in weather conditions • Poor judgement regarding weather • Failure to wear suitable protective gear
• Mountain biking and cycling	• Fractures • Cuts, lacerations, grazes • Head injuries • Death	• Mountain biking an " extreme sport" • Poor and faulty equipment e.g. cleats • Failure to wear suitable protective gear e.g. helmets
• Skateboarding	• Fractures • Cuts, lacerations, grazes	• Failure to wear suitable protective gear e.g. knee protectors

Interviewees identified a number of sporting codes and recreational activities they considered exposed participants to relatively high risk of injury. These ranged from the higher level contact sports such as rugby, rugby league, netball, basketball, and touch rugby, to the individual level sports and recreational activities such as cycling, skiing, road cycling and skateboarding.

Rugby league, rugby and netball were generally seen as carrying the greatest risk of injury, largely because the codes involved the greatest number of participants and the

highest level of physical contact. Mountain biking was described by one interviewee as an "extreme sport" and of considerable injury risk to its participants.

Several interviewees suggested that most sports involved risk and that this was part of the fun of participating in sports. Totally eliminating risk was considered impractical and unrealistic.

The most common forms of sports-related injuries identified by interviewees were musculoskeletal bruising, sprains, strains, twists, tears, torn ligaments, cuts and grazes. Less frequently mentioned injuries included concussion and more serious types of injuries, mainly head and spinal injuries.

One interviewee, a St John's officer, said he regularly attended around 20 sports injuries per week in sports involving approximately 200 or more participants in total. At a recent mountain bike event, he estimated at least one in 50 of the riders suffered a broken bone or more serious injury. From his experience, violence was involved in about two out of every 100 injuries in contact sports.

Causes and influencing factors

Interviewees identified a range of causal factors influencing sports injuries including:

- failure to wear suitable protective gear such as mouth guards, helmets, other head gear, protective padding
- faulty equipment such as cycle cleats and brakes
- poor judgement and limited experience, e.g. mountain climbers, trampers
- children playing sport beyond their developmental level
- coaches failing to train with safety in mind
- individuals failing to take responsibility for their own safety.

Existing interventions

Interviewees identified a number of initiatives already being used to reduce sports injuries. These included:

The Sport Smart Mouthguard Promotion

One of the two staff from WestspacTrust Sport Taranaki spoke of the "highly successful" ACC sponsored *Sport Smart 10 point plan* promotion that supported the mandatory requirement for all participants in contact sports to wear mouthguards. The initiative was described as having "significantly reduced" the previously high incidence of injuries to the mouth. The economic spin-off from reducing these types of injuries was considered to be double the $3,000,000 invested in the initiative nationwide.

Coaching efforts to reduce and promote greater awareness of injury

The major sports codes were seen to have become more responsible in recent years about reducing the risk of injury to players. Greater awareness of the need to reduce injury risk and improved coaching approaches were also seen to be helping to reduce the number and severity of sports injuries. ACC was considered a major influence in turning sports codes and coaches around to recognising the size and cost of the sports injury problem. ACC was seen to have literally "forced" sports to take more responsibility for getting players to use protective gear, avoid potentially dangerous manoeuvres and generally advocate for greater safety in sport. One interviewee noted that sports rules could and had been changed in the interests of safety.

Modified sports / KiwiSport

Several interviewees commended the provision of modified sports such as KiwiSport. Some saw an ongoing need to promote modified sports to coaches, parents and teachers.

Suggested interventions

Interviewees suggested using the following approaches to help reduce sports injuries in future:

- improve sports ground safety standards (one interviewee observed that many sports clubs cannot afford maintenance of their playing surfaces)
- give greater focus to sports stars who get injuries and the effects these injuries have on their lives, both in the short- and the long-term
- continue to promote modified sports for children
- promote awareness of the need for warm-ups and stretching, both before and after playing sport.

People in the workplace

Five of the interviewees had specialist knowledge of occupational injuries and injury prevention in the workplace. They included two officials from Occupational Health and Safety (OSH, a division of the Department of Labour) and three health and safety / human resource management staff, one each from the port transport, oil and timber industries. This section also includes some information on farming-related injuries arising from the interviews with the OSH officials and eight rural people.

Common types of injuries and their causes

Table 6.5 shows the industries where interviewees thought occupational injuries most commonly occurred, the main types of injuries associated with these industries, and the key causes of these injuries.

Table 6.5: HIGH INJURY RISK INDUSTRY GROUPS, ASSOCIATED TYPES OF INJURIES, AND KEY CAUSES

High risk industrial groups	Associated injuries	Key causes
• Dairy farmers	• Lacerations • Amputations • Crush injuries and bruising • Sprains, particularly back strain	• Chain saws, axes, other machinery • Entrapment under heavy machinery and vehicles, ditch collapses • Unpredictable stock • Incorrect lifting of heavy materials/objects • Difficult weather conditions • Difficult terrain • Long work hours in busy seasons / tiredness • Working with machinery at night • Rural road conditions
• Oil riggers	• Crushing/ contusions and bruises • Superficial scratches and grazes • Sprains and strains • Cuts and laceration, mainly to hands and fingers • Burns	• Lack of care and attention • Inadequate personal, protective equipment • Inadequate equipment and tools • Weather and third party involvement
• Forestry workers	• No information provided / collected	• No information provided
• Timber merchants	• Amputations, cuts e.g. fingers • Sprains and strains e.g. backs	• Dangerous equipment • Lifting
• Health and home care (rest home workers)	• Back strains	• Poor lifting techniques
• Construction workers	• No information provided / collected	• No information provided / collected
• Transport industry	• Sprains and strains, mainly backs	• Poor lifting technique • Handling of ropes for mooring at Port

The two OSH staff indicated that 25 percent of all injuries occur in the workplace. Males were considered more likely to suffer injury including the more serious types of injuries and death. Age was not regarded as a predisposing factor, although OSH data are considered "unreliable" regarding age and ethnicity reporting. Lack of experience was considered a far more important risk factor for work injuries than age. Workers coming in fresh to an industry, using equipment with which they had no experience, were considered far more prone to injury than "old hands".

In general, OSH staff believed that there was significant under-reporting in the numbers of serious work related injuries reported to OSH. Evidence for this included major discrepancies between the ACC's claims data for work-related injuries and OSH's own serious injury incident data.

Causes and influencing factors

Interviewees from the oil, port transport, timber and farming industries described an array of factors influencing injuries in those industries. For the oil, port transport and timber industries, the factors identified were in the main specific to these particular industry environments, rather than to broader biological, social or cultural determinants.

On dairy farms

The OSH staff noted that Taranaki dairy farmers had a considerably higher rate of injuries than dairy farmers in other parts of the country, although they were unsure why this should be the case. Effectively addressing the causes of farm related injuries was considered to be somewhat complex, given that a farm is typically a workplace and a home. (Farm-related injuries are discussed in more detail in the next section: People on Farms.)

On oil rigs and related services

Shell Todd Oil Services industry-wide health and safety programme has operated since the early 1980s, but has recently been overhauled and upgraded. The Shell Todd interviewee described the service as fully committed to providing the best health and safety programme possible. He noted that the cost of injuries on oil rigs "can run into millions" if drilling has to be shut down for even a few hours. The costs in every sense were considered high, both for the industry as a whole and for the injured persons and their families. Consequently, it made good economic sense for the company to have high-quality safety systems in place.

The company's health and safety programme covers injury risk identification and risk management, high quality and ongoing safety training and health programmes, and continuous injury incident monitoring and reporting. The latest health and safety programme is based on "the successful overseas Du Pont Stop Programme", but has been adapted to suit New Zealand conditions. The general approach is based on positive reinforcement of workers who are seen "to be doing things right" and "giving pointers" to those who are performing less well.

Prior to introducing the new health and safety programme, injury rates were particularly high amongst the company's drivers. These rates have since decreased dramatically. The drop was attributed to four main factors:

- the provision of driver assessments and testing
- the provision of Holden's Advanced Driving School tutelage
- use of high safety performance cars
- driving with lights on.

Shell Todd Oil have a policy whereby all the company's contractors must work to the same high safety management standards as Shell Todd Oil's own staff do.

Data for 2000 shows the most common forms of injuries suffered by workers in Shell Todd were:

- Crushing, contusions and bruises (26 percent)
- Superficial injuries, e.g. scratches and grazes (24 percent)
- Sprains and strains (21 percent)
- Open wounds, e.g. lacerations and cuts (15 percent)
- Burns (heat/cold) (6 percent)
- Other (8 percent).

The most common site of injury were:

- Fingers (15 percent)
- Hands (13 percent)
- Noses (13 percent)
- Eyes (11 percent)
- Ankles (7 percent)
- Chests (5 percent)
- Backs (5 percent)
- Other (31 percent).

The most common primary cause of injury incidents were:

- Lack of care and attention (46 percent)
- Inadequate personal protective equipment (11 percent)
- Inadequate equipment and tools (7 percent)
- External factors e.g. third party involvement, weather etc (6 percent)
- Other (30 percent).

Port transport workers

Westgate's Port Taranaki human resource manager indicated that Westgate also has a sophisticated health and safety management programme in place and that this is an integral part of all its processes and operations. The company's health and safety programme focuses on "safety as opposed to accidents" and includes a three-step first aid training programme and an alcohol and drug awareness programme. Like Shell Todd, Westgate's contractors must all have quality safety systems in place and accept responsibility for ensuring that all its managers and supervisors are trained in managing health and safety in the workplace. Since the introduction of the programme, the company reports that it has "significantly lowered its injury rate, with estimated cost benefits of around $30,000."

Last year, Westgate's accident data management system showed a total of 26 injury incidents, of which five involved time lost of more than 19 working days. In the 26 incidents, the most common injuries were back strain (8); leg cuts and bruises (5); and hand bruises, cuts and strains (4). Most of the 26 injuries occurred in the "rope shed". These injuries were considered difficult to prevent. Working with mooring ropes, to a large degree, was unpredictable due to uncontrollable factors such as changing weather conditions. Westgate nevertheless brought in experts to advise it on how these rope injuries could be reduced. As a result, a fitness programmes was put in place to strengthen those parts of workers' bodies most susceptible to injury.

Timber industry workers

Clelands Timber Limited's Sales and Health and Safety programme manager indicated that the company set up its current safety management system some 18 months ago. The company's owners were described as very "hands on" and proactive. They had led the development of the programme in consultation with the wider workforce. The new programme was initially piloted in one section of the business, while the rest of the business carried on as usual. OSH had assisted the company and was credited with having "done a brilliant job" of supporting the company "without a big price tag."

The company had experienced two "serious accidents" in the past, both involving the loss of tips of fingers. "Down time" from these incidents had been between four and six weeks. In both cases inadequate training standards were said to have been a contributing factor. The company saw amputation as its most serious form of injury. The risk of amputation was seen as high in an industry where so much equipment is potentially dangerous.

The most commonly reported type of injury was said to be back injuries. The risk of back injuries was found to increase with age. Clelands reported having recently put in place goals and performance measures and a monitoring system to enable the company to keep track of the number and causes of injury incidents, and the impact of these in terms of "down time". The manager indicated that many injuries had been prevented in the health and safety programme's 18-month lifetime - "there are few accidents nowadays."

Common features of "successful" safety interventions

A number of common "success and effectiveness" features were identified for the three industry health and safety programmes discussed above. These included:

- the programmes are led by top management
- workers have ownership
- high potential risks are reported to management
- health and safety programme components and targets are built into annual business plans
- "no blame" policies are in place
- regular and ongoing good quality training programmes are provided for all
- safety manuals and safety procedures are in place, and reporting systems are established to monitor injury incidents by type and contributing factors
- trained, experienced workers have confidence in themselves and serve as good role models to others
- the trickle down effects of the "safety culture", both in terms of workers taking their acquired safety knowledge home with them and the flow-on effects to subcontractors.

Two of the three companies commended OSH on its valuable advice and assistance in helping them to establish their programmes within realistic timeframes. One of the two companies suggested that OSH should promote its successes better, as "many are frightened of OSH", especially smaller companies. Smaller businesses were considered "not that proactive because they are too busy keeping their heads above water". This same person observed that "it's a safety culture mentality that is needed." This was seen as not necessarily involving great costs.

Underpinning these three successful health and safety programmes was the ACC's *Partnership Programme*, which is a three-phased incentive scheme. The companies described above were apparently audited at each of the three phases for continued injury reduction. The rewards were a 10 percent discount on injury insurance costs at primary audit, five percent at secondary and 20 percent overall at the tertiary phase.

Forthcoming OSH / ACC intervention

OSH is planning a national launch of a new Manual Handling Code at the end of 2001. The code is a joint venture between OSH and ACC. The initiative will involve the delivery of a series of local seminars, along with follow-up visits to local industries to assess their level of compliance.

People on farms

Many interviewees believed farming families, particularly adult male farmers and children aged two to nine years, faced a relatively higher risk of injury compared to their urban counterparts. They attributed this risk to the nature of the work undertaken by farmers, which exposed them literally on a daily basis to working with unpredictable stock, with heavy machinery and potentially dangerous equipment, and to an environment where bad weather can see them "up to the eyes in mud".

Common types of injuries and their causes

Table 6.6 lists the injuries that interviewees most frequently associated with farmers, their families and others living in rural areas. The table also indicates what people regarded as the main causes of these injuries.

Table 6.6: COMMON TYPES OF INJURIES ON FARMS AND THEIR COMMON CAUSES

Common types of injuries	Common causes
• Fractures, head injuries and crush injuries falls (mainly adult male farmers and equestrian riders, mainly girls aged 10-14 years) • Hip fractures (mainly among older women)	• Entrapment under machinery and vehicles, collapsed ditches, falls from horses, trees, and vehicles • Trips and falls
• Bruises and grazes	• Animal kicks / charges,
• Back injuries, sprains and strains	• Lifting heavy materials and handling stock
• Amputations, cuts and lacerations	• Chain saws, axes
• Scalping	• Long hair caught in milking or other machines
• Poisonings, burns and scalds	• Exposure of skin to chemicals and other irritants • Access to unsecured poisons (children)
• Drowning (mainly children aged 2-9 years)	• Unfenced swimming pools, dipping facilities, ponds and troughs

Interviewees largely saw fractures, bruising, cuts, lacerations, and sprains and strains, as particularly common farming-related injuries. The more serious and life-threatening injuries mentioned included amputations, head injuries, crush injuries, poisoning, drowning and one incident of "scalping" by a milking machine.

Causes and influencing factors

In the second round of interviews, eight rural women helped shed further light on patterns influencing rural injuries and what could be done to reduce the risk of injuries among farming families.[23] They largely agreed with first round interviewees who perceived male farmers and children as a major risk group on farms. (See the section earlier in this chapter on children for more information about rural children's injuries.)

[23] One male farmer also offered a few 'thoughts' on rural-based injury prevention.

Some rural interviewees saw sharemilkers (and their children) as more prone to domestic-related injury, owing to the substandard condition of many of the homes provided by farmers for them to live in.

Two rural interviewees saw older rural women as prone to hip fractures.[24]

The eight rural women interviewees saw the risk of injuries in male farmers to be influenced by a range of factors including:

- the farmer's frequent exposure to "heavy-duty" and "potentially dangerous" machinery, which they often have no previous experience of handling
- faulty equipment
- failure to use protective safety gear such as helmets, gloves, ear and eye protection
- male "macho" attitudes, particularly among the over 50 age group, which causes them to be unwilling to use safety equipment, such as helmets and hearing protection aids
- middle-aged farmers failing to admit there is a need for them to wear hearing aids or glasses, or neglecting to wear these remedial aids to enable them to read farm product labels and vehicle manuals, and to hear impending dangerous sounds
- use of tractors and all-terrain vehicles (ATVs) in difficult weather and environments
- tiredness from working long hours and doing heavy demanding work
- working in poor light such as around harvesting time
- poorly-lit and narrow country roads leading to vehicle crashes.

Existing interventions

Clear labelling

Rural interviewees commended the introduction by manufacturers of clear labelling on potentially dangerous sprays and poisons. This clear labelling was judged to be essential as the eyesight of many older farmers (ie. over 50) is impaired; a situation not helped by their refusal to acknowledge their need for reading glasses. The interviewees indicated that they would like to see the clearer labelling principle extended to other farming products.

[24] The hips of older male farmers were also seen as prone to wearing out because of farmers having to get up and down repeatedly from tractors and other farm vehicles.

Facilities for disposing of toxic waste

Several rural interviewees commended the Council for providing facilities for farmers and others to dispose of potentially toxic waste materials.

Suggested interventions

The staff from OSH identified farm industry injuries, particularly those occurring in the Taranaki dairy farming industry, as "significantly above the national average." But promoting injury prevention in the dairy farming industry was seen to be fraught with difficulties. Farmers were said to be a hard group to work with because they were considered "highly individualistic" and very resentful of "being told what to do in their own home." The fact that the farm is both workplace and home was seen to complicate efforts to reduce injury risk in rural areas. When interviewed, rural people made it clear that there has been some antagonism between farmers and OSH. Two interviewees saw OSH's past injury prevention initiatives relating to ATVs as "totally impractical".[25]

The rural women we interviewed saw themselves as much more aware of potential injury risks and more receptive and open to injury prevention messages than their "men folk". "Men are not out there in the community like we are … They don't get exposed to ideas." The women also warned future programme developers not to treat rural areas as a homogenous group, because they are not. "Hobby farmers" largely kept to themselves and were seen not to want to mix with mainstream farmers.

The rural women suggested a range of possible approaches for reaching rural communities. These included:

- through rural women's groups such as the Country Women's Institute and Rural Women
- through young farmers' clubs and Federated Farmers
- through appropriately-focused "spearhead organisations" such as goods and services suppliers like Wrightsons or Taranaki Farmers
- by encouraging manufacturers and retailers that sell agricultural products to develop and promote safety messages and protective measures. Examples include providing free helmets and clearly written safety instructions / easy to read manuals for products such as tractors and ATVs (some of these were described as "too dense" to read, while others were written in foreign languages)
- through rural-targeted radio and television programmes, e.g. "*Country Calender*" and "*Farming with Pictures*" on Taranaki's Channel 7

[25] OSH's proposed intervention apparently involved making it mandatory for ATV drivers to wear seat belts. Farmers considered this approach would expose them to an even greater danger. They believed they had a better chance of escaping injury from an overturning ATV if they weren't belted in.

- through rural-targeted advertisements, similar to the "high impact" road safety and ACC advertisements.

- by continuing to promote helmet wearing and other safety measures to children through regular school and community-based programmes (rural interviewees felt rural children were much more safety conscious than their fathers as a result of these programmes)

- developing videos in the same vein as the "*Number 8 Wire*" videos, which are distributed free of charge to farmers four times a year.

- preparing features for local newspapers based on personal accounts of injury e.g. the *Daily News*' regular Thursday feature for farmers. (One interviewee spoke of having been upset by the local newspaper's failure to alert dairying parents to the potential hazards of unprotected long hair around milking machines, as in the case of a child "scalped" by a milking machine. She was critical of the paper's journalism standards, which chose to focus on the medical intervention involved in repairing the damage, while totally ignoring the safety issues that would help to prevent similar accidents occurring in the future.)

The rural interviewees suggested that if a suitable rural safety initiative was developed, it would be important to appoint a credible "front person" with the necessary background experience and coordinating skills to capture and enthuse the target audience. Jim Hickey, TV One's weather presenter, was identified by one interviewee as a possible front man, as he "lived in Taranaki under the mountain." Rural interviewees expressed interest in participating in the development of future rural safety initiatives.

In the past ACC has worked through Federated Farmers to promote injury prevention on farms. ACC staff suggested other approaches for reaching rural farming families included:

- working with clusters of farmers and rural school teachers

- targeting young and up-and-coming farmers at high schools and tertiary agricultural education centres.

People at home

Interviewees identified the home as the most common location where injuries occur. ACC claim statistics appeared to confirm this widely held impression, with ACC staff describing the incidence of injuries in the home as very high and increasing. Injuries in the home were described as prevalent across all age groups.

Common types of injuries and their causes

Table 6.7: COMMON TYPES OF INJURIES OCCURRING IN THE HOME AND COMMON CAUSES

Common types of injuries	Vulnerable groups	Common causes
• Fractures	• Adult males (all ages) • Children • Older woman and to a lesser extent older men • Women between 30-50 years	• Falls off ladders, roofs • Falls from heights • Falls from ladders and unsteady chairs, • Trips on mats, duvets, dressing gown cords, uneven home paths • Slips on slippery floors and home paths • Domestic violence
• Bruises and grazes	• All age groups	• Many and varied reasons
• Back injuries, sprains and strains	• All adult age groups but particularly men	• Heavy lifting • Use of incorrect lifting techniques
• Amputations, cuts and lacerations	• Young and adult males • Children	• Use of dangerous equipment such as chain and skill saws, lawn mowers etc • Unprotected home renovation sites
• Burns and scalds	• Children • All age groups	• Failure to keep matches, candles, cigarette lighters out of the way of children • Failure to protect children from heaters, open fires and fireboxes • Overhanging electric equipment e.g. jugs and pot handles of boiling water • Hot bath water • House fires
• Poisoning (unintentional) • Poisoning (intentional)	• Children • Adolescents and youth, particularly younger women 15-19 years	• Adults failing to lock away medicines and other toxic substances away from children • Suicide attempts / cry for help

A good deal of information about injuries in the home has already been presented earlier, for example in the sections on injuries in children, young people and older people.

Table 6.7 (on the previous page) brings this information together and summarises it, including showing what were thought to be the main causes of these injuries and the groups most vulnerable to them.

Causes and influencing factors

Table 6.7 highlights a number of factors operating in the home that interviewees identified as predisposing particular groups to home-based injuries. These included:

- adults failing to protect children from potentially harmful household items
- the "kiwi do-it-yourself" attitude, which led some people, particularly men, to undertake risky tasks that they are not really qualified or equipped to do
- alcohol use / abuse (two interviewees suggested that alcohol was implicated in many home injuries, but that its involvement in injuries was not well known)
- carelessness and unnecessary risk taking
- ignorance of the risks involved in undertaking certain jobs at home. Examples of these types of risky tasks included: (1) fires generated by young men doing up their cars in the home basement (mentioned by a staff member from the fire service) and (2) older people failing to recognise the potential dangers of carrying out high injury risk tasks, such as changing light bulbs, installing fire alarms, or mending and painting roofs.

Existing interventions

Interviewees identified many injury prevention interventions targeting home-based injuries that had been designed and implemented in recent years in the New Plymouth District. This included efforts by the Kidsafe Trust, ACC and Plunket. ACC's *Thinksafe* initiative was identified as one of the more recent approaches to target home injuries.

Mitre 10 was reported as having developed and distributed an information sheet promoting the safe use of ladders in the home.

Suggested interventions

In general, interviewees indicated that it was very hard to get injury prevention messages into the home. Several people recommended that television advertisements be developed along the lines of the recent road safety campaigns. They saw this type of approach as "very effective" and having the greatest potential to spread the home injury prevention message.

Others saw potential for developing more promotions aimed at reaching the home handymen and women, such as the Mitre 10 ladder safety promotion. Participants in the rural focus group called for the ACC to develop rural specific interventions in partnership with retail outlets that specialise in providing services and equipment to farmers.

People on the roads

Road related injuries and deaths were identified as a key cause of injuries and death by most of the 24 people interviewed in the first consultation phase. In the second phase of interviews, four road safety experts and an engineer from the New Plymouth District Council's Roading and Planning Division were interviewed to gain further insight into the district's road toll and the measures being taken to reduce it. The information gathered from these interviews has already been presented in earlier sections of this chapter, particularly those covering the three priority groups of children, adolescents and youth, and older people.

Causes and influencing factors

Table 6.8 brings together and summarises the information provided by interviewees on the principal causes and influencing factors shaping the incidence of road related injuries and death in the New Plymouth District.

Table 6.8: HIGH-RISK GROUPS, KEY CAUSES AND INFLUENCING FACTORS IN ROAD INJURIES AND DEATH

High risk groups	Key causes and influencing factors
• Children	• Non-use of child car restraints / approved standard of car restraints • Non-use of cycle helmets / approved standard of cycle helmets • Vehicle drivers' blind spots particularly during backing / also problematic for farm vehicles • Drivers going to fast when passing school buses • Road signage around schools and school bus stops insufficiently visible • Riding cycles, scooters, skateboards on footpaths
• Adolescents and youth	• Inexperience / unlicensed driving • Innate developmental risk taking behaviour • Speeding / "hooning" • Drug and alcohol use and abuse • Driving substandard cars • Skateboarding and cycling on footpaths the road
• Older people	• Physiological changes – slower reaction times and deteriorating eyesight • Failure to use indicators to signal intentions • Failure to check rear vision • Driving too slowly

Road accidents in the New Plymouth District were described as typically involving a car with a single occupant who is a male aged between of 15 and 24 years. Accidents most often occur on a straight, dry road on a "good sunny day".[26]

[26] The profile of South Taranaki accident victims and conditions was said to be similar, except that the occupant was more likely to be a male aged 25-39 years.

As shown in Table 6.8, the interviewees regarded biological and human development factors to be important underlying influences in most vehicle and road-related injuries involving children, youth and older people.

Children

Children were seen as highly vulnerable to vehicle and road related injuries because of their young age, innocence, lack of experience of the inherent dangers in the world and their dependence on adults to ensure their safety.

Adolescence and youth

Adolescence and youth were seen as life stages in which people experiment, take risks and exhibit and adhere closely to peer group norms. Alcohol and drugs, speed, and unlicensed driving were all considered manifestations of these inherent biological and developmental influences.

Young males aged 15-24 years were identified as most prone to road and vehicle related injuries. Young Mäori males were said to figure strongly in local road statistics. Many young Taranaki males were said to go straight from school to work on farms, rather than go on to higher education. One of the two road traffic officers interviewed for the consultation suggested that a lot of the "hooning" and risky driving that goes on in downtown New Plymouth stemmed from young country males driving to town "to be where it's at". They looked for distractions and entertainment, which included speeding up and down the city streets on Friday and Saturday nights.

Older people

Interviewees saw the driving ability of older drivers to be linked closely to their physical and social well being. Most people over the age of 65 years were considered healthy and, in the main, very good drivers. The frail elderly and the "older-olds" (those over 75 years) were seen to be the group most at risk of road crash incidents involving injury. As a group, the number of older people involved in road crash incidents was said to be second only to youth. "Younger-old" males were perceived to be often unwilling to accept their need for remedial aids such as spectacles and hearing aids. Poor vision was thought to be implicated in many nose-to-tail accidents and failure to observe road signs, such as running amber and red traffic lights. Some older people were thought to have the attitude that they were good drivers simply by virtue of their having driven for years.

Cyclists

While injuries and death due to car crashes had reportedly declined in the New Plymouth District and the region as a whole in recent years, casualties among cyclists were described as "quite high".

Existing interventions

Interviewees thought road safety had been widely promoted at both national, regional and community levels over the past decade. Apparently "a huge amount of tax payers" money had been spent improving the safety of roads and promoting safer driving. These efforts had apparently paid off as the numbers of road-related injuries

and deaths in the New Plymouth District and in Taranaki generally had "drastically reduced". Staff from the Base Hospital's emergency department, the Ambulance Service, the Fire Service and the Police confirmed this viewpoint. All reported having attended "far fewer" road related deaths and injuries in recent years.

Road Safe Taranaki's Coordinating Group was supported by several statutory bodies including the Taranaki Regional Council, the New Plymouth District Council, other district councils, the LTSA and the Police. The bulk of funding for *Road Safe Taranaki* was provided by LTSA and channelled through local authorities. Other agencies also contributed time and human resources. The co-ordinator for *Road Safe Taranaki* was housed in the AA Centre.

Road Safe Taranaki was described as "a vehicle for ideas". Its business plan for 2000-2001 had involved about 30 road safety projects. Input from the community on ideas for programme development and delivery was described as "actively encouraged". Several *Road Safe Taranaki* initiatives and programmes have been described in earlier parts of this chapter, including the sections on children, adolescents and youth, older people and Mäori. These programmes included:

- the Waitara youth-targeted learner driver licensing programme
- the Holden Team's Advanced Driving Instruction open-weekend programme (reportedly involving about 150 young people at each session)
- community cycle helmet campaigns
- the *Safe with Age* road safety awareness programme, designed for the mature driver.

The *Sam I Am* Road Safety Billboard Campaign

The *Sam I Am* road safety billboard campaign is one of *Road Safe Taranaki*'s more visible programmes. The campaign is reputedly the "brain child" of the Wanganui and Manawatu inter-regional road safety agency. The cartoon character Sam represents all drivers, while the Friesan cow is a hitchhiker that any driver might pick up. The cow advocates road safety messages to motorists. For example the "Mooving too fast Sam" message. The messages encourage drivers to be both "safe" and "alert" when driving. The campaign has had its critics. They claim that because Sam and the cow's identity and roles are unclear, it undermines the campaign's potential effectiveness.

Other Road Safe Taranaki initiatives and resources

Other *Road Safe Taranaki* projects and resources identified in the community consultation included:

- the ongoing *Down with Speed* campaign which was started in July 2000 and for which ACC provided additional funding

- the pamphlet *Road Safety Reminders - Speed Limits Save Lives* (which explains the laws regarding New Zealand's speed limits, speed fines and demerit points)

- the pamphlet *Seatbelts and Child Restraints* (which explains the laws relating to the use of seatbelts and outlines the different kinds of restraints required for different age groups)

- the pamphlet *Road Works* (which explains signage relating to road works, the legal requirements of drivers in such zones, and the fines for exceeding the speed limit in road work zones)

- the booklet *It's Not Worth the Gamble*, which is a guide to the dozen most dangerous causes of road crashes in Taranaki

- the booklet *Road Safety Reminders – Rules and Driving Tips*

- the booklet *Road Safety Reminders – Road Signs and Road Markings*

- support for the school-based SADD (Students Against Drunk Driving) campaign and school driving instruction programmes.

Interviewees involved in promoting road safety and road development in the district also reported:

- continuing to work on reducing the region's road "black spots"

- continuing to develop cycle lanes in New Plymouth City

- introducing further safety measures to protect inner city and suburban pedestrians

- giving greater focus to promoting awareness of the role of alcohol in driving accidents

- reducing speed limits.

Suggested initiatives

Several interviewees suggested there was possibly a need to develop guidelines around the use of mobility scooters designed for disabled and older people. The production and use of mobility scooters was thought to have "really taken off". While commending the value of these vehicles to their users, interviewees nevertheless envisaged future problems as the "baby boom" generation advanced into older age. Footpaths were seen to be in danger of becoming highly congested with mobility scooters. Interviewees were concerned that pedestrian safety could be compromised. It was noted that some older people were already acting as if they had the right of way on the footpath, with some driving too fast. One interviewee said that newer scooter models could go considerably faster than earlier models. This suggested the possibility that special scooter lanes might have to be developed in future.

Community intersectoral approaches to injury prevention

The people consulted as part of this needs assessment were generally enthusiastic supporters of the community-based, intersectoral approach to injury prevention. Most saw the approach as the "only way to go", recognising that no one organisation or strategy was likely to succeed on its own. There were no "easy answers" to addressing the factors influencing road, home and rural injuries.

Many people pointed to examples of highly effective interagency initiatives already operating in the district, such as Road Safety Taranaki, and the Taranaki Kidsafe Trust.

LTSA staff indicated that the cross sector approach to road safety had allowed them to "work smarter". They considered that 98 percent of road safety initiatives in the Taranaki region were based on intersectoral collaboration and cooperation. Police staff had a similar view, indicating that "there's not a lot that we (the Police) can do on our own." The LTSA apparently dovetails its quarterly work programme with that of the Police.

Other good reasons identified for using an intersectoral community-based approach included:

- it capitalises on the fact that community people and groups have the best understanding of what makes their community/s tick
- groups can share common interests but come to the issue from different angles
- it enables the best use of resources (both financial and human) that are typically in short supply
- it helps to reduce "overlap" and "duplication" of programme development.

While in the past tensions apparently have arisen on occasions between certain groups, these tensions were seen on the whole to be positive in terms of contributing to "healthy debate".

Groups wanting to be involved in community injury prevention

Groups that have already played a major role in developing injury prevention initiatives, such as Health Promotion Unit (Taranaki Health), New Plymouth District Council, Tui Ora, Kidsafe Taranaki, Plunket, the Police, Road Safe Taranaki and the ACC, indicated their continuing interest and desire for involvement in injury prevention in the district.

Moreover, several interviewees whose organisation had either been less involved or not involved at all in previous community-based injury prevention initiatives signalled their organisation's interest and willingness to be involved in future initiatives. These organisations included:

- The Fire Service
- St Johns Officers and the Ambulance Service
- Te Puni Kokiri
- WestpacTrust Taranaki Sports Trust
- Rural women's groups
- The Pinnacle Independent Practitioners' Association.

Other identified potential partners in the development of intersectoral, community-based injury prevention strategies included the Strengthening Families initiative and the Safer Community Council's focus groups.

7

SETTING UP AND RUNNING A COMMUNITY INJURY PREVENTION PROGRAMME: LESSONS FROM THE LITERATURE

Evaluations of the five New Zealand community-injury prevention programmes, plus research on overseas programmes (such as those in Australia), have identified a range of factors thought to be important in shaping the success of community injury prevention programmes. These are highlighted and discussed below.

As well, towards the end of this section, a more general discussion is provided about factors thought to be important in helping to promote effective intersectoral working in community-based initiatives for health.

Setting up an intersectoral Advisory Group

In the early stages of the five evaluated New Zealand pilot community injury prevention programmes, one of the first moves was to establish an intersectoral Advisory Group (usually called a Steering Committee or Management Committee) made up of local people from various backgrounds and areas of expertise.

Evaluations suggest that programme developers should be reasonably prescriptive and selective about the people invited to sit on a Steering Group or Advisory Group, to ensure a good representation and mix of local professional and non-professional people. Ideally, Steering Committee or Advisory Group members should have an understanding of, and commitment to, injury prevention using community development approaches (Simpson 1999).

Evaluations also highlight the importance of aiming to ensure that the functions, boundaries and responsibilities of a Steering Committee or Advisory Group are carefully and clearly defined (Coggan and Simpson 1999).

In both Waimakariri and Kawerau, Steering Committee members were initially drawn from people who attended public meetings announcing the setting up of the programmes.

The Kawerau Steering Committee included representatives from the education sector (e.g. local primary schools and kohanga reo), the District Council (a councillor) and the Mäori Women's Welfare League. Evaluation reports indicate that, at least in the

early years, the function of the Kawerau Steering Committee was not particularly well defined, nor did its individual members have clearly identified roles (e.g. Chairperson, Secretary, etc.). The committee was also comparatively small (the usual number of committee members at any one time was around six) and had minimal representation from the key agencies with a stake in injury prevention (e.g. LTSA; GPs and other local health services, etc.). As well, no training in injury prevention was given to committee members. The committee mainly seemed to just 'rubber-stamp' the proposals of the programme co-ordinator.

The Waimakariri programme's Steering Committee included representatives from Plunket, parenting groups, the Police, ACC, St Johns Ambulance and local primary schools, as well as a Waimakariri District Councillor, a Waimakariri District Council Community Development Officer, a general practitioner and health promotion workers. Most of these people sat on the committee as part of their paid positions, not as volunteers. Their contributions included providing essential services and resources to support strategies for planning, committee development, training options, and an understanding of health promotion and injury prevention (Simpson 1999). They also provided skilled facilitators, which helped to cultivate a positive sense of ownership and participation among members of the Steering Committee.

In Waitakere, a permanent Management Committee was established. Identified responsibilities for the group included:

- setting broad policy
- identifying key priorities for the overall programme
- acting in an advisory capacity in relation to development and implementation issues.

The first chairperson of the Management Committee was a city councillor; chosen for her facilitation and public relations abilities; skills regarded as critical to the success of the project.

Identifying the community and its needs

Various reports suggest that, in the early stages of developing a community injury prevention programme, it is important to undertake some kind of planning or consultation process to produce a community profile or needs assessment. This work could be done by a researcher hired specifically for the task. The aim should be to document the size and nature of safety problems evident in the community, to help identify priorities for action and guide the initial development of the programme (WHO 1998; Simpson 1999; Coggan and Simpson 1999). The work can include:

- collecting and reviewing relevant data on the local area and population (injury statistics; demographic data, geography, housing, crime and injury characteristics),

- assessing "community capacity" (the scope for the people in a community to band together to support and work on an injury programme)

- identifying people and organisations that could be potential allies (and obstacles) to the development of the programme

- identifying injury-related health and safety initiatives already going on (Simpson 1999).

Evaluations also suggest that during this process it is important to ensure that clear agreement is reached on what will be the boundaries and/or membership of the "community" to be covered by the programme (Simpson 1999). This should include assessing the extent to which there may in fact be several different "communities" within the population (e.g. Mäori, Pacific, Asian), and what implications this might have for the design and implementation of the programme (Coggan and Simpson 1999).

Neither the Waimakariri nor Kawerau programmes undertook a formal community profile or needs assessment at the start of their planning, something that management and staff in both programmes regretted in hindsight (Simpson 1999).

By contrast, the Waitakere project started out by:

- compiling data on injury rates (e.g. from NZHIS mortality and hospitalisation statistics and ACC summary claim data)

- reviewing existing injury prevention programmes;

- surveying people for ideas about additional injury prevention issues and strategies.

As part of this work, a consultant was commissioned to identify existing injury prevention activities in the city and possible priorities for future activities. This involved completing 100 telephone interviews with members of local community organisations.

The data from these different sources provided the foundation for the development of an injury profile and associated injury prevention strategy. This was followed by an official launch of the overall project and sanctioning by the community (Williams 1996).

The role and influence of local authorities

Evaluations suggest that community injury prevention programmes that are well supported by local authorities (i.e. city or district councils) are most likely to flourish and do well.

A 1999 review of evaluation findings from the five New Zealand community injury prevention pilots concluded that basing programmes in local authority offices appeared to be highly successful and beneficial (Coggan and Simpson 1999). Positive outcomes included:

- opportunities to develop services and share expertise with other council programmes, such as Safer Community Councils or road safety
- councils valuing the community links developed by community injury prevention programmes
- community members and organisations developing greater trust and understanding of local government.

On top of this, links to councils were also considered important for helping to create an environment conducive to institutionalising a concern with injury prevention issues amongst the staff of the local authority.

In Waitakere, from the start, the Waitakere City Council was keen to assume responsibility for management of the programme, as well as to host programme staff within its offices.

Evaluations of the Waimakariri programme found that the programme gained added momentum and increased community interest and support after responsibility for management of the programme was shifted from Plunket to the Waimakariri District Council. The district council was described as a "socially responsive" local authority, evidenced in part by the fact that it already hosted a Safer Community Council and a road safety co-ordinator (Simpson 1999).

By contrast, in the early years of the Kawerau programme, staff and elected officials at the local district council generally appeared uncomfortable with the philosophy and goals of community injury prevention or community development. On top of this, the organisation that did eventually assume 'local' management responsibility for the programme, the Eastern Bay of Plenty Rural Education Activities Programme (REAP), was located quite a distance away in Whakatane. As a result, the programme's sole co-ordinator was not especially well supported in her position and had to undertake the bulk of management activities herself, which in turn limited her ability to develop new initiatives and work in the community (Simpson 1999).

Appointing co-ordinators

All the five community injury prevention programmes developed in NZ over the last decade have included at least one full or part-time paid co-ordinator. This is in keeping with research indicating that having a paid position in the community is essential for successful intersectoral community action. Relying on voluntary labour alone is thought to make it too difficult for a programme to sustain continuity and a strategic focus (Casswell 2000).

In both Waimakariri and Kawerau, the first project co-ordinators were appointed by the Plunket Society's National Office, in consultation with local community representatives. These were initially half-time positions, although the hours were subsequently extended. Job descriptions included day-to-day management of the programme, networking, and supporting the intersectoral committee. The Kawerau co-ordinator shared an office in a downtown shop while the Waimakariri co-ordinator was housed in the offices of the Waimakariri District Council.

In Waitakere, three co-ordinators were appointed – one for each of the three sub-projects (i.e. the general population project, Puriri the Mäori project, and the Pacific project). The co-ordinator (or Kai Mahi) for Puriri was employed by the management of Te Pikiora Mäori Health Trust, although all three coordinators were based in offices in the Waitakere City Council (Williams 1996).

Reviews of the "keys to success" for community-based intersectoral health initiatives, such as community injury prevention programmes, list some of the important skills which people in these front-line co-ordinator positions should ideally possess (Harris et al. 1995). They include:

- good verbal and written communication skills
- the capacity to work as a team player
- the ability to build consensus between people, along with good negotiation and conflict resolution skills
- the ability to listen and value the contributions of others
- good management skills (including the ability to access and package information, brief appropriate people, handle publicity and the media, etc).

Coggan and Simpson (1999) conclude that the co-ordinator role is pivotal to the success of community injury prevention in New Zealand. People appointed to these positions must be "out front" people, skilled at making connections between people and establishing networks. They must already have close links with their community (especially if they are employed specifically as Mäori or Pacific co-ordinators) and ideally they should have at least some experience in injury prevention, health promotion or community development.

Evaluations of the Turanganui a Kiwa and Ngati Porou community injury prevention programmes found that appointing co-ordinators who were well regarded members of the local community was a key factor contributing to the success of these programmes (Coggan and Simpson 1999).

Infrastructure and administrative support

Evaluation reports also highlight the importance of ensuring that programme co-ordinators have access, as a matter of course, to secretarial services and other support

services and amenities (e.g. suitable office accommodation, meeting rooms, etc.) to sustain their work.

Ideally, too, co-ordinators should be located within a supportive professional working environment alongside other people who understand, and are sympathetic to, the processes associated with community development type work (Coggan and Simpson 1999).

Evaluations of the Turanganui a Kiwa and Ngati Porou community injury prevention programmes found that, as well as organising and running programme activities, the co-ordinators were required to do all their own administration. This had a detrimental impact on their performance, increasing the amount of time they had to spend in the office rather than out in the community (Coggan and Simpson 1999).

Similarly, in the Kawerau programme, the co-ordinator had to undertake clerical and administrative duties on top of her work of leading meetings, setting up interventions and collecting local injury data. This seriously restricted the time she could devote to face-to-face networking; an especially important process for building relationships with Mäori (ibid).

Defining priorities and strategies for action

New Zealand evaluations highlight the need for Advisory Group members, co-ordinators and other key people participating in a community injury prevention programme to reach clear agreement about which types of injury and population groups will be the priority for the work of the programme (Simpson 1999).

Our review of the literature suggests that there is no set formula or method for deciding which kinds of injuries and population groups should have priority. Nor is there really a set formula or method for deciding what kinds of specific strategies or activities should be adopted to try to reduce the prevalence or severity of these injuries. Rather, decisions about which groups, injuries and activities should take priority appear to take into account a variety of factors including:

- findings from initial needs assessments and analyses of injury statistics
- findings from consultation with local stakeholder groups and other people about which injury issues they consider important and worth doing something about
- information on what other community-based programmes have done, or are doing, both in New Zealand and overseas
- assessment of the feasibility and likely effectiveness of different intervention options
- assumptions about the appropriateness and acceptability of different intervention options to members of the community

- estimates of the likely cost-effectiveness of different intervention options
- the resources available (financial and human).

From a scientific perspective, injuries generally can be prioritised in terms of:

- their prevalence
- their severity
- their costs to individuals and to society
- their preventability (Central Health 1997).

However, typically the final selection of priorities and intervention strategies is not determined by these criteria alone. Selection decisions also take into account what community members themselves regard as priorities, since considerable local energy and enthusiasm for change may exist in these areas. Community-injury prevention initiatives are thought to be less likely to succeed when agencies from outside of the community define the kinds of injury problems to be addressed and their solutions, rather than people and organisations from the community itself (Simpson 1999; WHO 1998).

In New Zealand, evaluations suggest that people from disadvantaged communities may be more likely to get in behind injury prevention strategies with a relatively immediate, visible impact. Less visible, longer-term strategies may be more appropriate in better-off communities, where people are perhaps more comfortable with the notion of deferred gain (Simpson 1999).

Establishing working groups

To help reach decisions about the specific kinds of injury prevention strategies or activities to be implemented, New Zealand community injury prevention programmes have usually set up intersectoral Working Groups that report directly to the programme's Advisory Group.

For example in Waimakariri and Waitakere, once broad priorities areas were identified (e.g. injuries among the elderly), small Working Groups were formed to take responsibility for devising and undertaking specific interventions addressing aspects of these broad priority areas. Working Group members included people directly affected by the injuries as well as professionals with expertise in the area

At Waitakere, seven different Working Groups were initially established covering Mäori, Pacific, children, young people, older people, alcohol, and road-related injuries (Williams 1996). Some of the many organisations and businesses represented on these different Working Groups included Safekids, Plunket, Barnardos, West Auckland Parents Centre, Early Childhood Development Unit, the Kindergarten

Association, NZ Fire Service, Alcohol Healthwatch, Waitakere City Council, ACC, and private businesses (such as First Alert and Wormalds).

Identifying and implementing specific injury prevention interventions

World Health Organization guidelines for community injury prevention indicate that potentially a wide range of different intervention strategies could be used as part of the effort to reduce the incidence or severity of the specific kinds of injuries singled out for attention (WHO 1998). These include:

- mass media interventions
- presentation of local data
- dissemination of other types of information and advice
- education of professional groups and members of community organisations
- supervision through safety rounds and checklists
- environmental control and product development.

Closer to home, NZ experts conclude that intervention strategies should be based on recognised models, should be realistic and achievable, and should aim to:

- change policies
- create safer environments
- achieve organisational change

and not just raise public awareness or change individual behaviour (Coggan and Simpson 1999).

Below are described some examples of the kinds of intervention strategies implemented in various NZ and overseas community injury prevention programmes. These are presented here mainly to help highlight the wide range of strategies and activities that potentially could be considered for adoption in the New Plymouth District.

Most of these interventions address specific *unintentional* injury issues, especially unintentional injury among certain identified "high priority" groups within the community such as children or older people.

Kawerau

In Kawerau, annual plans were developed identifying key programme objectives, strategies and outputs. Some of the first interventions adopted included preventing

burns and scalds through promoting hot tap water safety; playground safety; road safety (including cycle safety - child car seat restraints) and encouraging proper disposal of broken glass.

Waimakariri

Specific interventions undertaken in recent years by Injury Prevention Waimakariri have included:

- developing a kit to assist sports clubs to institute safe sporting polices and practices
- running a drug dump campaign to encourage people to return unused or unwanted pharmaceuticals to pharmacies
- completing an initiative to get smoke alarms into every home in Rangiora
- running workshops for high school students on the risks and impact of drink-driving
- developing a booklet promoting child safety equipment
- promoting host responsibility practices around alcohol
- checking cycle helmet usage and safety
- promoting safe driving practices for older drivers (Waimakariri District Council 1999).

Other activities have included making submissions to Council on safer roading environments, publicity campaigns on child car safety restraints and the 'chaos at the school gate project' (focusing on safety during the pick up and drop off of school children).

Turanganui a Kiwa

Activities undertaken in the early years of the Turanganui a Kiwa project focused on:

- increasing public awareness and knowledge of injury prevention
- improving the use of seatbelts
- improving feelings of personal safety
- reducing drink driving (and reducing the number of people travelling in cars with drivers who had been drinking)
- safe drinking in sports clubs
- increasing the use of safety equipment by sports participants

- improving road safety behaviour among children
- installing smoke alarms in the homes of kaumatua.

Ngati Porou

Activities undertaken in the Ngati Porou project had a major focus on road safety, including decreasing speed, using child restraints and making sure vehicles were safe.

Waitakere

Activities undertaken in Waitakere in the early years included:

For Children

developing a Safer Homes Education Kit on burns and scald for use by educators to facilitate discussion among caregivers of preschool children, with the aim of getting caregivers to make a checklist of safety changes in and around the home

Supermarket safety: promoting better availability and use of appropriate supermarket trolley restraints for children, to prevent injuries from falls from trolleys

For Young People

Youth suicide: a seminar was organised on the topic for school teachers, guidance counsellors and Boards of Trustees, with content provided by the Mental Health Foundation. A second follow-up seminar included keynote speakers and workshops to identify possible actions.

Risk-taking Behaviour: advocating for the then pilot Healthy Schools initiative to be trialled in a local high school.

For Older People

Safer Homes initiative: identifying and providing information to older adults about small, achievable changes they can make to reduce their injuries at home

Safety While Shopping initiative: advocacy with managers of major shopping complexes to provide safe, non-slip flooring in shopping areas

For Mäori

The Mäori project (Puriri) identified three priority areas: injuries to children and seat restraints; injuries to kaumatua; sports injuries (Williams 1996). Decisions were then made about what particular strategies to use to address these priorities. These were written up and approved in a Strategic Plan. Activities subsequently undertaken included:

Child Restraint Project – this involved research to see which types of car restraint hire schemes Mäori caregivers preferred and securing funds to publicise and run a car restraint hire scheme suitable for Mäori.

Sports Injury Project – development of a training package focusing on changing attitudes about injury for netball coaches, with the target group being Kura Kaupapa Mäori.

Safe Routes to Schools – entered into a working partnership with the Waitakere City Council to find workable solutions to an identified community need for better pedestrian access to the Kura Kaupapa Mäori at Hoani Waititi Marae.

For Pacific Island people:

Sports Injuries Project organising a rap competition for young people at the Pacifica Games, with the rap music including sports injury themes and live movements showing sports 'warm ups and warm downs'.

Fire safety

Smoke alarms: sourcing good quality smoke alarms; and providing free alarm installation and free house fire safety checks, with the aim of having a smoke detector installed in every home in Waitakere City.

Alcohol

advocacy for funding for Alcohol Healthwatch to conduct the Last Drink Survey.

Other activities of the Waitakere programme focused on getting the consideration of injury and safety issues "mainstreamed" into Council activities, plans and staff development processes.

Priorities and interventions adopted in Safe Communities in Australia

Given the similarities between New Zealand and Australia, it is useful to also highlight some of the main injury priority areas and interventions adopted in a selection of Australian Safe Community programmes.

Illawarra

Safe Community Illawarra has given priority to childhood injury prevention, injury in the elderly, road safety initiatives, work with migrant communities and suicide prevention.

Hume City

Safe Community Hume City has developed programmes on injuries among children and youth; injuries among older people; family safety, traffic safety; occupational safety (including safety on farms); home safety; school and playground safety; safety in public places (e.g. in downtown after dark) and sports and leisure safety.

Reports suggest that more than 100 separate intervention activities relating to these priorities have been developed and implemented (Ozanne-Smith et al 1998). Some were chosen because research indicated they had a good potential for success, while others were chosen by community members (though not necessarily supported by available research evidence). By way of illustration, the following list shows the interventions chosen just for child injuries alone:

Child safety presentations in many community languages by trained peer educators
Promotion of two 'safe' show homes in Hume
Courses in paediatric first aid/CPR
Safety theme badge making at community events
Dog bite prevention strategy
Poisoning prevention promotion
Child-resistant poisons cabinet available at discounted price
Promotion of child restraint fitting stations
School playground safety audits
First aid classes in local schools
Support and promotion of bike education and safe routes to schools
Bicycle helmet promotion
Safety and traffic education project
'Play it Safe Sport' project - support for clubs in developing safety policies, advocating for use of protective equipment and safety training for parents and coaches
Child safety video
Family Safety Guide
Safe house design guidelines

Noarlunga

Safe Community Noarlunga has covered areas like home safety, industry, personal safety, recreation, and community identified safety hazards. Programmes for taking care of domestic violence have also been developed.

La Trobe

Safe Community La Trobe has developed activities in the following areas: childhood injuries, falls among older people, sport and recreation related injuries, injuries in the

home, consumer product related injuries, fire related injuries, injuries in rural settings, workplace injuries, transport injuries, and injuries associated with interpersonal violence and self-harm.

Parkes

Safe Community Parkes has concentrated on vehicle restraints for children, sports and road injury prevention for youth, workplace and farm safety for adults, and falls prevention in the elderly.

SHOROC

Safe Community SHOROC (comprising a Regional Organisation of Councils, incorporating Manly, Mosman, Pittwater and Warringah Councils) identified the following priority population groups and issues:

Children - falls prevention, burns and scalds prevention, playground safety, sports safety

Youth - sports safety, personal safety in public places, road safety, water safety

Adults - safety in public places, road safety, fire safety, sports safety, water safety

Older people - falls prevention, pedestrian safety, safety in public places, fire safety, pedestrian safety.

Ryde

In Safe Community Ryde, the key priority groups and issues were:

Children - playground safety, bicycle safety, sport safety, safety travelling to and from school, pedestrian safety

Youth - youth recreation, graffiti prevention, safety in public places

Adults - safety in public places, pedestrian safety, workplace safety

Older people - falls prevention, pedestrian safety, safety in public places, peer support programs.

Denmark

The Shire of Denmark Safe Community has implemented the following interventions:

Workplace
Farm safety programme (develop awareness of back care, identification of risks, educate agricultural school students on injury prevention within the curriculum).
Work safe programme (promote safe work environment within business and service areas in town).

Roads
Hazard audits to identify problems.
Review of school roads and children's crossings, speed limits.
Introduction of speed humps, one way traffic areas.

Improved road signs.

Sports/sportsgrounds
Level 1 coaching accreditation for all coaches.
Developed injury prevention program for persons involved in sport.
Increased shade at outdoor sports venues.
Encourage warm up and cool down as appropriate within all school sports programmes.

Leisure and recreation places
Tourist safety program (hazard audits of all major tourist destinations, beaches, reserves, parks, walk trails, etc).

The home
One-to-one safety audits of homes of people over 65.

Schools and playgrounds
'Safety Rules OK' programme.
Hazard audits of the school environment (where appropriate, remove or replace equipment etc).
First aid courses for year 7 students.
Bike safety program.
Eye safety program.

Women
Violence prevention (intentional injuries).
Data collection through health and police.
Domestic violence information kits.

Suicide prevention (self-inflicted injuries):
Suicide prevention programme.
Post natal depression screening.
Post natal depression support group.
Bouncing back programme.
MOM'S support group.
Youth house and youth support officer.

Elderly
Stay on your Feet Program (for >65 yr olds).

Melbourne

The Melbourne Safe Community, based in and hosted by Melbourne City Council, is one of the larger Australian community injury projects, with seven full-time permanent staff. Activities implemented by the programme in recent years include:

Skate Safe Program: where youth participate in planning for new skate parks, including their location, design, equipment and safety requirements.

Safe City Taxi Ranks: which aim to create a safer environment for passengers to wait for a taxi and taxi drivers to access safe fares.

Nightrider Bus Service: where buses depart the central city hourly from 12.30 am to 4.30 am on Saturday and Sunday mornings, providing safe transport to outer suburban areas.

Melbourne City Licensees Accord: a commitment by management and staff of late-night licensed venues to high standards of safety and service for patrons.

Walk with Care Program: emphasising the importance of pedestrian safety.

Community and Social Support: a programme that provides a number of social, recreational and educational opportunities to older persons, as well as a home maintenance service.

Fostering joint working between local organisations and people

As already indicated, intersectoral action is a key element of the Safe Community injury prevention model. Ideally, Advisory Group and Working Group members, as well as other people associated in some way with a Safe Community programme, will come from a range of backgrounds and will work together to support projects in several ways. This may include networking to share information; providing technical support, providing information and training; developing joint policies; or participating in the delivery of services and programmes.

A recent report for the Ministry of Health (Maskill and Hodges 2001) has examined some of the key requirements for successful intersectoral action in community-based initiatives such as Safe Communities. The report summarises findings from three major overseas reviews of the subject (Harris et al. 1995; FPTAC 1999; Kuhn et al. 1999) as well as looking in depth at evaluations of various New Zealand intersectoral community-based health initiatives including:

- Healthy Cities projects
- Health Promoting Schools
- community alcohol action programmes
- community nutrition programmes,
- Safer Community Councils
- community injury prevention programmes.

The report ends by identifying a number of factors thought to be important in influencing the degree to which effective intersectoral relationships are achieved in community-based programmes. These are briefly summarised below.

Compatibility with wider community values

When seeking to develop effective intersectoral relationships, it is important that the philosophy, goals and strategies of the intersectoral project are compatible with the prevailing values or beliefs of the target community.

If a project's fundamental objectives do not square with, or make sense to, at least a good proportion of the community, then it is unlikely to get off the ground.

On the other hand, if the core objectives of the project can be linked in some way to widely expressed or felt concerns or issues in a community, then this can be a positive step forward.

Evaluations also suggest that community injury prevention initiatives may be more likely to succeed in communities with a strong tradition of self-help and voluntarism (Simpson 1999).

Community size and density

Developing effective intersectoral working may be more difficult in relatively small rural townships (e.g. Kawerau), where there are perhaps not enough people or local agencies available to cooperate in order to sustain viable projects (Simpson 1999; Visser 2000; Richardson 1999). Travelling distances may also be an issue in very dispersed rural settings, making it hard to sustain effective working relationships.

In larger provincial towns, such as Rangiora, intersectoral working may be more feasible, especially if there are several health or social service agencies based there and enough people who already interact closely with each other and share an interest and enthusiasm for injury prevention (Coggan and Simpson 1999).

Be realistic about the involvement of members of the general public

It is important to think carefully about, and reach agreement on, the level of participation by members of the general public that an intersectoral injury prevention project is aiming to achieve (Simpson 1999). Should the project be run mainly by professionals from local agencies and have minimal input from the general public? Or should the project have a stronger community development focus and involve people, including unpaid volunteers, from a broader spectrum of community groups, organisations and the wider public?

Generally the New Zealand research literature indicates that the capacity of community and volunteer groups, as well as "grassroots" members of the community, to participate in the planning and implementation of intersectoral projects can be highly variable. While aiming to secure the participation of these kinds of groups in intersectoral action is a worthy goal in theory, achieving it in practice may well be difficult, especially if voluntary labour is expected (Simpson 1999; Coggan and Simpson 1999).

In some cases, community members and organisations may lack the resources necessary to enable them to fully participate in intersectoral processes (Ministry of Social Policy 2000). This can be especially true in disadvantaged communities, where a high proportion of people may be experiencing adversity in their lives; which is also likely to mean that injury prevention ranks low in their day-to-day priorities.

In the early years in the Kawerau community injury prevention programme, it was difficult achieving any significant community interest and participation in the programme, both from local organisations and members of the public. This was thought to be because there were more pressing issues in the community, such as poverty, youth unemployment, crime, sexual health and education (Simpson 1999).

In the Waitakere programme, the Older Peoples Working Group eventually decided to focus on advocacy work rather than implementing specific interventions. This was because the group was small and mainly made up of older people, whose time and resources were limited. None of the older people were being paid in a professional capacity. The group also found it difficult to secure the participation and support of other older people in projects because of physical mobility issues (Williams 1996).

More fundamentally, community members may be reluctant to participate in a community-based injury prevention project because of fatalism about problems such as injury ("these things happen") or because they prefer to blame the victims of injury for their "carelessness" or "irresponsibility", rather than accept that concerted community action by themselves and others could make a difference (WHO 1998).

As well, some members of the public may be resistant to contributing to a community-based initiative because they perceive it to be designed to serve mainly bureaucratic or political ends, rather than a genuine effort to improve a community's health or social problems in any significant way.

Recognising these limitations, in general NZ community action projects have tended to focus on making good use of *existing* community organisations, rather than relying on "grassroots" development with the wider general public (Casswell 2000).

Partnerships with Mäori

Reports examining the effectiveness of injury prevention programmes designed for Mäori indicate that such programmes should (Central Health 1997):

- adopt a holistic perspective
- consider Mäori perspectives and values
- be delivered by Mäori for Mäori
- facilitate Mäori workforce development
- facilitate positive development of whanau wellbeing.

In the Waitakere community injury prevention programme, as we have seen, a separate Mäori sub-project was established. This project was responsible for designing and delivering an approach to injury prevention for Mäori that was uniquely Mäori (Williams 1996).

In Kawerau, there were difficulties establishing a strong relationship with tangata whenua. There were suggestions that the Kawerau programme should have had a kaumatua.

In Waimakariri in the early years, representation was sought from local Mäori, but none was forthcoming. This appeared to be at least partly a result of Mäori being overloaded with existing responsibilities of this type (Coggan and Simpson 1999). This is consistent with other reports in which lay people or community organisations speak of "consultation fatigue", where they are consulted by all and sundry to the point of exhaustion (Sullivan et al.1999).

A key factor in the success of Mäori community alcohol action projects is reported to be the emphasis on working with existing organisations with high standing among Mäori, rather than attempting to create new groups made up of "flaxroots" community members (Moewaka Barnes et al. 1996a; Moewaka Barnes et al. 1996b; Moewaka Barnes et al. 1998a, Moewaka Barnes et al. 1998b, Pipi et al. 1994, Tunks et al. 1998).

Participants must have sufficient resources and capacity

People and organisations participating in an intersectoral project must have sufficient resources and capacity to enable them to sustain the relationships and work involved. If these people or organisations are under extreme pressure from other directions (for example constantly reactive rather than proactive, or going through restructurings) then they are less likely to be able to contribute effectively to the regular rounds of meetings and other processes involved in an intersectoral project (Harris et al 1995; Simpson 1999; Stewart and Conway 2000).

Compatible partners

Intersectoral projects are likely to work best if the participating people and organisations are compatible with one another in terms of their overall philosophy, goals and social outlook. It will also be beneficial if at least some of the participants already have worked together successfully on other projects (FPTAC 1999; Harris et al. 1995).

Develop a shared vision

During the early development of an intersectoral project, it can be helpful to undertake some kind of group exercise, to encourage participants to develop a shared vision of what the project is aiming to do, to align purposes and reach agreement on common underlying values (Angus 1999; FPTAC 1999).

Ideally, this process should result in participants recognising that there are significant and tangible benefits to be gained for themselves and / or their organisation by working together (Harris et al. 1995; Murphy and Thomas 1999).

Developing and consolidating this kind of shared vision is also important for avoiding situations where project participants end up becoming "passengers" in the work of a project, rather than active contributors.

Some people and organisations may be wary of getting involved in intersectoral programmes, worrying that it will involve the investment of "scarce resources and energy in developing and maintaining relationships with other organisations when the potential returns are often unclear and intangible" (Harris et al. 1995: 56). In communities where resources are scarce, "organisations often retreat to conducting their core business – they are less willing and able to address issues that fall outside their direct mandate" (ibid: 60).

Keep management structures and systems simple

The co-ordinating structures and decision-making processes used for intersectoral working should be kept as simple as possible (FPTAC 1999). Reports suggest that community-based projects can be compromised if they are dependent on a "myriad of planning cycles and bureaucratic processes" (Health Promotion Forum 1994).

Build trust and respect

Successful intersectoral working is reliant on trust and respect being developed and maintained between all participants. This trust and respect should grow rather than diminish as a project goes along (Angus 1999; Blaiklock 1997; FPTAC 1999; Kuhn et al. 1999; WHO 1997). The use of consensus-orientated decision-making processes is important for this, with the experiences and perspectives of each participating organisation and individual being valued and acknowledged (Harris et al. 1995; FPTAC 1999; Murphy and Thomas 1999).

Roles and responsibilities clearly defined

The expected roles and responsibilities of the different people participating in a community-based intersectoral project should be clearly defined (e.g. information sharing, co-ordination, collaboration, formal partnerships) (Harris et al. 1995; Kuhn et al. 1999).

This is particularly important if the project involves people from several different organisations and groups, each of which may have their own organisational culture and way of doing things (Bauld and Judge 1999; FPTAC 1999). For example, people from highly decentralised organisations (where individuals have a high degree of discretion and freedom to make decisions) can find it difficult working with people from very hierarchical organisations, where decisions often have to be approved along a lengthy "chain-of-command"(Harris et al. 1995: 80).

Flexibility and freedom to act

Intersectoral working at the local level is likely to run more smoothly if the people representing organisations are as free as possible to act and make decisions as individuals, rather than being tied too closely to the agenda of their own organisation (FPTAC 1999). Unfortunately, in practice, although local staff from an organisation may be keen to contribute to an intersectoral project (and even have this formally recognised in their job descriptions), staff further up the organisation (whether locally, regionally or nationally) may not necessarily support this (Harris et al. 1995).

High-level political support

The development of intersectoral relationships seems more likely to be successful if the issues the intersectoral project is focusing on are high on the political agenda or mandated at different levels of national or local government (Harris et al. 1995). For example, if elected politicians at the local government level (e.g. mayors and councillors) publicly express their commitment to a project and help lead its development, this can be an important positive factor because it encourages other groups and individuals to come on side as well (FPTAC 1999). One illustration of this is the long-running Manukau Healthy City project, where the support of the city's Mayor is recognised to be a key factor in its survival and success (Grey 1996).

In the Kawerau community injury prevention programme, the co-ordinator had personal support from the mayor, but the District Council signalled that health matters were not its "core business" and therefore not a priority (unlike in Scandinavian countries, New Zealand city councils do not routinely have responsibility for addressing health issues). By contrast, the generally more successful Rangiora initiative secured strong local council support at a relatively early stage (Simpson 1999). In Waitakere, strong support from local government politicians eventually resulted in safety issues being mainstreamed into the city council's activities, planning and staff development (Coggan et al. 1998c).

That said, securing high-level local government involvement and mandate for a project may also carry some attendant risks. For example, if co-ordinators on an injury prevention programme are employees of the local council, this may curb their ability to voice concerns or criticise various agencies when community safety goals conflict with, say, corporate interests (Casswell 2000; Hutt and Scott 2000).

Focus on a realistic number of tangible, achievable goals

Intersectoral projects should have a strong action orientation, focus on concrete action and specific, achievable goals (Jaffe 1991), rather than trying to meet "laudable but vague goals" (FPTAC 1999: 19).

In the two East Coast community injury prevention programmes, for example, focusing on a manageable number of intervention strategies was considered to be a key factor in their success (Coggan and Simpson 1999).

Be realistic about timeframes

Finally, it is widely recognised that intersectoral projects need to be given sufficient time to evolve, bed-in and mature. Effective working relationships and joint action involving people from diverse backgrounds usually takes considerable time to develop, plan and implement, especially if the people and organisations involved have not worked together before (Harris et al. 1995; Kuhn et al. 1999; Casswell 2000). In both Waimakariri and Kawerau, for example, it took about a year to fully establish the Steering Committees and co-ordinators and get specific injury prevention project activities underway.

Measuring success

An important question is how a new community injury prevention programme should aim to assess its impact on the frequency and severity of injuries experienced by the local population.

New Zealand's first community-injury programmes, because they were pilots, tended to give significant emphasis to evaluating and monitoring programme outcomes. However, out of this experience has emerged a recognition that it is probably not wise to expend significant programme time and resources attempting to determine with

certainty whether or not a programme is leading to a reduction in the incidence of injury.

This is especially the case if the intended monitoring approach involves the setting up of an extensive injury surveillance system that seeks to collect and analyse local data on injury from a variety of different sources (e.g. NZ Health Information Service, hospital emergency departments; primary care services; Police, etc).

On the whole, to date, NZ community injury programmes have struggled to develop any kind of reliable injury surveillance system to determine whether or not their activities are contributing to reductions in injury. Two key reasons for this are the lack of good quality, up-to-date injury surveillance data, and the lack of the time, money and expertise to collect and process such data (should it be available).

In the cases of the Rangiora and Kawerau projects, efforts to set up an injury surveillance system were unsuccessful (Simpson 1999). One major problem was small numbers, making analysis of changes in hospitalisation data only useful when figures were grouped together.

Other limitations were the lengthy delays before NZHIS data came available and the incompleteness of text fields in the hospitalisation data (text fields provide extra details about injury events).

Problems were also experienced extracting emergency department data and attempts to compile injury data from local GPs failed because ACC forms changed midway through the programme, or because GPs did not supply the necessary information.

Only the evaluation for the Waitakere project really managed to make any significant headway in compiling injury surveillance data.[27] To do this, the evaluators tracked changes over time in New Zealand Health Information Service injury morbidity (hospitalisation) and mortality statistics for Waitakere and Hamilton (a comparative, "control" location of similar population size) were analysed. Originally it had been planned to use other injury data sources as well, such as emergency department attendances, but in the end this proved impractical.

The results of the analysis suggested that hospitalisation rates for injuries *increased* slightly in both Waitakere and Hamilton from 1995-1996 (the injury prevention programme was introduced in 1994), and this increase was predominantly among non-Mäori in Waitakere.[28]

In the end, though, the evaluators concluded that a lack of up-to-date injury data made it difficult to accurately assess the programme's impact on these kinds of health

[27]Reports from the Waitakere evaluation indicate that during the contract negotiation phase there was significant debate about the feasibility and value of developing an injury surveillance system and monitoring outputs and outcomes (Williams 1996).

[28] Overseas evaluations of the impact of community injury programmes on injury rates have also shown mixed results. Of the seven international "coalition" injury prevention programmes reviewed by Kuhn et al. (1999), three showed statistically significant changes in injury outcomes. Scandinavian studies have generally shown reductions in injury, whereas the results from Australian studies have been more variable (Simpson 1999).

outcomes. They also indicated that it was probably unrealistic to expect to identify measurable reductions in injury rates within the first three years of the project.

A 1999 review of the five NZ community injury prevention pilot programmes concluded that it was unrealistic to expect community injury programmes to set up and maintain injury surveillance systems as they were too time-consuming and costly (Coggan and Simpson 1999).

Apart from difficulties with the quality and scope of injury surveillance data, it is also often difficult to attribute changes in the incidence of injury to interventions themselves. For instance, changes in the social environment, unrelated media campaigns, or local or national events can also have a significant effect on injury rates and there is often no way of knowing whether these other factors are completely or partially responsible for these changes.

Assessing other programme impacts

There is more support in the literature for evaluation and monitoring approaches that focus on gathering evidence on what is sometimes called the *intermediate* impact of programme activities.

From a theoretical perspective, an intermediate impact is an outcome that reasonably can be expected to occur directly as a result of a particular activity or intervention and which, logically, is likely to contribute eventually to a reduction in injury (e.g. installation of smoke detectors; safe storage of medicines; removal or modification of unsafe playground equipment, etc).

Evaluation evidence related to these intermediate outcomes tends to be derived from face-to-face interviews or surveys, reviews of project documents, or direct observation in the field. For example, in the Ruatoria project (Ngati Porou), community surveys were used to assess if there had been an increase in awareness and knowledge of injury prevention among the target population.

In the Shire of Bulla Safe Living Programme, several of the specific interventions used in the programme were evaluated in separate research projects. Examples included observational studies of bicycle helmet wearing and a telephone survey to determine awareness of a 'train the trainer' programme for child safety (Ozanne-Smith et al. 1998).

In some evaluations, too, before-and-after type research methodologies have been used to track changes in community awareness or knowledge, or self-reported changes in behaviours related to injury prevention.

For example, in the Waitakere project, pre- and post-intervention surveys of the general public found no reduction in self-reported injury in either Waitakere or Hamilton. However, self-reported rates of medical treatment for injury decreased amongst Waitakere adults. There was also a statistically significant increase in the proportion of Waitakere people reporting they were using appropriate car restraints

and reporting that they had installed home safety equipment such as fireguards, pool fences and stair gates. Ownership of protective equipment for sport also increased (Coggan et al. 1998c).

Formative and process evaluations

The literature also supports the use of evaluation approaches that aim to provide detailed description and analysis of programme structures and activities as they develop over time - what are usually called "formative" or "process" evaluations.

All evaluations of the five pilot New Zealand community-based injury prevention programmes have included work of this kind. Mainly they involve compiling evidence from various sources including interviews, surveys, observation and documents, in an effort to shed light on various issues or questions, such as the extent to which the people and organisations involved in a programme have developed suitable working relationships with one another, and the factors contributing to this.

For example, the evaluations completed for the Kawerau and Waimakariri programmes used the following research methods (Simpson and Morrison 1998; Simpson 1999):

- key informant interviews with project management members, those implementing parts of the projects (e.g. collaborating organisations) and community representatives
- focus group discussions with pre-school parents
- reviewing written documentation and archival records
- regular discussions with co-ordinators
- observation during site visits
- two community surveys in each town (relating to 300 children in each location).

Research methods used in the evaluation of the Turanganui a Kiwa and Ngati Porou pilot community injury prevention projects included key informant interviews, document analysis, a review of the resources produced, participant observation, communication with co-ordinators, and pre- and post-intervention surveys (Brewin et al. 1997).

Coggan and Simpson (1999) conclude that future NZ community injury prevention programmes projects should be required to develop an *internal* process evaluation. This means a process evaluation that is designed and undertaken by programme participants (e.g. co-ordinators and Advisory Group members), rather than external or independent evaluators. They regard this as useful for assisting programme participants to enhance their skills in self-appraisal.

General principles

Reviews looking generally at how intersectoral community-based health initiatives, like community-based injury prevention, should be evaluated and monitored have made the following key points:

evaluation approaches that involve experimental or quasi-experimental designs (e.g. control or comparison groups) may not be feasible or scientifically appropriate for community action projects (Casswell 2000).

quantitative (i.e. statistical) research approaches may not be adequate for capturing evidence of a programme's broader achievements such as co-operation and networking (Randle and Hutt 1997). Qualitative social science methods such as interviews, focus groups, reviews of documents and field observations are more likely to be useful and appropriate for this.

it is important not to over-estimate what evaluations of intersectoral community-based programmes will yield in terms of information, especially information about programme impact. There are real methodological challenges when it comes to making causal links and attributing certain outcomes to an intervention (Angus 1999).

the monitoring or evaluation approaches selected should reflect the size, amount of funding and outcomes expected from the initiative, and be acceptable to all participants in the project. Evaluation and monitoring procedures should not overshadow the actual project or be the dominant driver of the process (Harris et al 1995).

8

SUGGESTIONS FOR THE NEW PLYMOUTH DISTRICT COMMUNITY INJURY PREVENTION PROGRAMME

A core principle of the community injury prevention model is that community members themselves should finally select the priority injury areas, groups and intervention strategies that will be the focus of their injury prevention programme.

So far, this report has provided the community with information about:

- the management and activities of other community injury prevention programmes overseas and in New Zealand
- injury patterns in New Plymouth District based on the analysis of available health and other statistics
- the opinions of a selection of local experts and other community members about the kinds of injuries that are important in New Plymouth District and how the incidence of these injuries could be reduced.

This final chapter draws together key material from these three sources and considers its implications for the work of Tui Ora and the Injury Safe Advisory Group. In particular, it makes a number of suggestions aimed at assisting Tui Ora and the Injury Safe Advisory Group with the process of:

- identifying and agreeing on the types of injuries, population groups and injury locations that should be given priority in the work of the programme
- selecting suitable intervention strategies and activities
- setting up the Injury Safe programme in the best way.

Injuries in New Plymouth District

It is clear from the information presented in this report that New Plymouth District does have a problem with injuries.

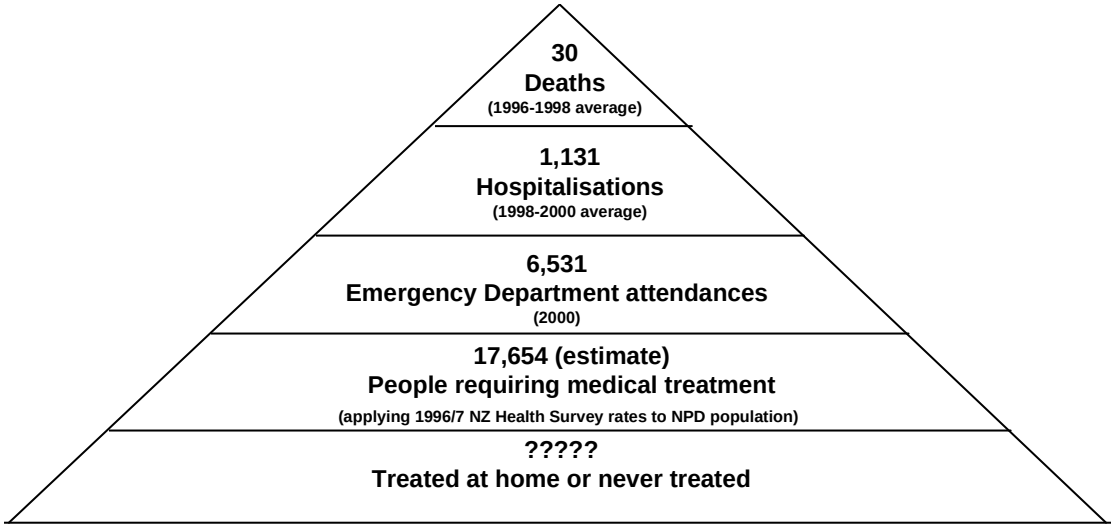
Each year about 30 people in New Plymouth District die as a result of injury-related events. A further 1,300 or so are admitted to hospital because of injury, while

probably well over 6,000 people have to get injuries treated at a hospital emergency department.

On top of this, many thousands of New Plymouth people go to their doctor or after-hours medical service because of injury. In fact, we estimate that every year probably well over 17,500 New Plymouth District residents over the age of 15 get some kind of medical treatment for injury (including poisoning).[29]

In addition, there will be even more, generally minor, injuries that are treated at home, work, school or other locations without people having any contact with health professionals (Figure 8.1).

FIGURE 8.1: INJURY PYRAMID FOR NEW PLYMOUTH DISTRICT - ANNUAL NUMBERS OF INJURIES



Source: Figure by authors

Like for the rest of New Zealand, in New Plymouth District it is *unintentional* injuries rather than *intentional* injuries (e.g. suicides, suicide attempts and violent assaults) that comprise the lion's share of the deaths and hospitalisations from injury. Two out of three injury-related deaths in New Plymouth District and nine out of 10 injury-related hospital admissions are for *unintentional* injuries.

Looking more closely at all the different kinds of *unintentional* and *intentional* injuries in New Plymouth District, the three most common kinds of injury events *resulting in death* are, in order of frequency:

- motor vehicle crashes
- self-inflicted injury (i.e. suicide)

[29] A survey by the Ministry of Health (1999) found that in a 12 month period more than a one in four NZ adults (aged 15+) and one in four children (aged under 15) got some kind of medical treatment for an injury or poisoning. There is no reason to think that the current situation in New Plymouth District is much different to this.

- falls.

The six most common kinds of injury events *resulting in inpatient admission to hospital* are, in order of frequency:

- fractures
- falls resulting from slipping, tripping and stumbling
- other falls from one level to another
- motor vehicle crash injuries involving drivers or passengers
- injuries from cutting and piercing instruments (e.g. knives or tools)
- suicide attempts and self-inflicted injury.

The three most common kinds of injury events *resulting in emergency department attendances* are, in order of frequency:

- falls
- blunt trauma
- penetrating trauma.

Looking more closely at the types of people in New Plymouth District who experience injuries, we find that:

- *For gender:* New Plymouth District males are more than twice as likely as New Plymouth District females to die as a result of injury. New Plymouth District males are also 60 percent more likely to be hospitalised for injury, 56 percent more likely to need their injuries treated at emergency departments and 69 percent more likely to apply for ACC compensation for injury.[30]

- *For ethnicity:* In New Plymouth District, Mäori are more than twice as likely as non-Mäori to die as a result of injury. However, Mäori are 24 percent *less* likely than non-Mäori to be hospitalised for injuries, and 35 percent *less* likely to go to emergency departments for treatment for injuries. It is unclear what the reasons for these local ethnic differences might be.

- *For age:* New Plymouth District people over the age of 80 and in the 20-29 year age group are most likely to die as a result of injury. Injury death rates are lowest in the 0-9 year age group.

[30] In NZ as a whole, men are more likely than women to require medical treatment for injury. Nearly 1 in 3 of all men require medical treatment for injury in a year. For women the figure is about 1 in 5. Young men in the 15-24 year age group are especially likely to require some kind of medical treatment for injury, with 43 percent being treated for injury at least once in a year (Ministry of Health 1999).

- *For age:* New Plymouth District people over the age of 80 are the most likely to be admitted to hospital for injury. Males and females in the 10-19 year age-group, 20-29 year old males, and females over the age of 80 are most likely to get treated for injury at emergency departments.

- Young men in the 15-24 year age group are especially likely to require some kind of medical treatment for injury, with 43 percent being treated every year.

Of course these statistics indicate little about the activities or circumstances leading to these injuries; or where these injuries typically occur. NZ mortality and hospitalisation data normally does not include this type of information, even though knowledge of these issues would be helpful when designing interventions to prevent injuries.

Fortunately, some useful information on the circumstances of injury was collected during the community consultation, as well as from the data obtained from Taranaki Health Emergency Departments, the ACC and Police.

Activities associated with injury

In New Plymouth District, activities that most commonly result in people making ACC claims for injury are those associated with:

- driving or riding
- recreation / sports
- walking and running
- lifting / lowering / loading / unloading.

The most common 'causes' of injuries for which ACC entitlement claims are made are:

- loss of balance or control
- lifting / carrying / strain
- slipping or skidding
- loss of control of a vehicle.

Injury locations

The three most common places where people who attend Taranaki Health Emergency Departments get injured are:

- domestic situations
- sports / recreation venues
- public areas.

ACC injury statistics suggest that there are three main places where injury events resulting in ACC claims occur:

- in the home or other community situations
- at work (especially in jobs in the agriculture, forestry, fishing, manufacturing and construction industries)
- at sports venues and other recreational settings (with claims for rugby injuries being the most common)

Deaths and injuries on the road are a significant part of the picture of injury in New Plymouth District, with 149 road crashes and 216 casualties (injuries and deaths) reported to the Police last year.

There are comparatively few ACC claims for road injuries. However, road injuries do, on average, cost more than other types of injuries, indicating they are generally more serious and more likely to cause long-term disability. Road injuries also make up a significant proportion of "serious" injuries for which claims are made.

Notably, road crash and casualty rates are highest on the state highways running through the urban areas of New Plymouth District. Poor observation and failing to give way or stop were by far the two most common factors contributing to local injury crashes.

Information from the community consultation

The community consultation provided further information about likely key causes of injury for certain groups, as well as common injury locations. Taken as a whole, these impressions suggest that:

for *young children* in New Plymouth District, the two most common locations for injury are the *home* (both inside and outside) and the *roads*. Common causes of injury include falling from trees, play equipment and other high places; violence and abuse; ingestion of poisonous substances; burns; cycle crashes and car crashes.

for *teenagers and youth*, common injuries include lacerations, fractures, head injuries and poisonings, with road crashes, sports, falls, assaults, attempted suicides and excessive use of alcohol and drugs being seen as key injury causes in this age group.

for *adults*, work injuries are important, such as in occupational groups like dairy farmers, oil riggers, forestry workers, timber merchants, health and home care workers and construction workers. The work injuries of most concern include amputations, lacerations, crush injuries and strains and sprains. Injuries at home were also seen as significant in this age group.

for *older people*, fractures, bruises, strains and burns and scalds from falls, car crashes, poor nutrition, lack of physical fitness, inappropriate lifting, heaters and hot waterbottles were identified as significant issues.

Establishing a community injury prevention programme in New Plymouth District

Given the injury patterns described above, there is clearly scope to reduce the number and severity of injuries experienced by people living in New Plymouth District.

A central tenet of the community injury prevention model is that many injuries can be prevented, and in particular, as Swedish programmes have shown, that they can be prevented by the people in a particular place getting together and making themselves and their environments safer.

Preventing injuries is important not just because it helps save the costs of medical treatment and other services related to treating and caring for people who are injured. It is also important because it helps reduce the many negative personal consequences of injury that people experience in their day to day lives; the pain, disability, disfigurement, misery and grief of injury that for many victims and their families can be long-lasting.

Given that preventing injuries is important and feasible, we would now like to offer some suggestions on how the Injury Safe Advisory Group could go about setting up an effective local community injury prevention programme that follows the WHO Safe Communities model. These suggestions are discussed under the following headings:

- perceived need and support for a local community injury prevention programme
- capacity for setting up a local community injury prevention programme
- identifying priorities and strategies for action
- developing a programme plan
- monitoring and evaluation.

1. Perceived need and support for a local community injury prevention programme

Our literature review has shown that there are a number of features of community injury prevention programmes that tend to make them "successful". The first of these is that the local community perceives there is a need for a comprehensive injury prevention programme and supports one being set up.

From our findings, especially the community consultation, there does appear to be considerable support from key people in local injury prevention and treatment services, and from representatives of certain population groups (e.g. rural women), for the establishment of New Plymouth District community injury prevention programme. Most of these people see the intersectoral approach as the only viable option for addressing many kinds of injuries occurring in the District.

Successful local interagency initiatives to reduce injury have already been run in the District, or are still running, such as Road Safe Taranaki and Kidsafe Taranaki.

Five key local organisations have shown their support for developing a more comprehensive injury prevention programme by applying to ACC for funding for the current needs assessment project, and by setting up the Injury Safe Advisory Group. Presently, the Injury Safe Advisory Group comprises representatives from:

- Tui Ora
- Health Promotion Unit, Taranaki Health
- Kidsafe Taranaki Trust
- New Plymouth District Council
- ACC.

The support and involvement of these agencies indicates that a good beginning has been made towards planning and setting up a community injury prevention programme in the District. Our literature review suggests that local authority support is one of the key ingredients for success in such programmes and this support is already evident in New Plymouth District.

The fact that Tui Ora is the lead agency also bodes well for Mäori participation in the programme and for applying a community development approach.

During our community consultation, representatives from other local agencies and organisations, such as St Johns Ambulance and Te Puni Kokiri, also expressed interest in being involved in future initiatives.

The research literature indicates that ideally the partners in a community injury prevention programme need to have a common understanding of the local issues regarding injury prevention and a shared vision of what they want to achieve. All partners should perceive they have something to gain from setting up a community injury prevention programme.

The current needs assessment and future planning processes that involve all the programmes' partners should help in achieving these things.

Support from the wider community is also necessary. It is essential that local people are willing to participate in interventions developed by the injury prevention programme, and ultimately change their behaviour and environments in order to reduce injuries. In some communities , particularly those that are socio-economically deprived, injury prevention is often well down the list of people's priorities. Issues such as food security and employment are often perceived as more important.

We have been told that injury prevention programmes in the District have been well supported and used by the public in the past. However, further consultation with members of the wider New Plymouth District population to determine their level of enthusiasm for the proposed "Injury Safe" programme will probably be essential in the near future.

2. Capacity for setting up a local community injury prevention programme

The research literature also indicates that a key determinant of the success of a local community injury prevention programme is that there is sufficient local capacity to introduce and maintain a viable initiative. Three aspects of capacity, discussed below, are:

- the capacity of the partner organisations
- the capacity for community participation
- the resources available for the programme.

The capacity of the partner organisations

Representatives from agencies or groups participating in an intersectoral injury prevention programme need to have widespread support for their involvement in the programme at all levels of their organisation. Time for programme planning and activities needs to be built into their job description. As well, these representatives need to be able to make decisions on behalf of their own local organisations, as much as possible without needing approval at the central or national level.

The Injury Safe Advisory Group should consider these factors when setting up the new community injury prevention programme in New Plymouth District.

The fact that local intersectoral partnerships have already worked effectively in certain areas of injury prevention is a positive sign for the future.

Capacity for community participation

The capacity of the wider community to participate in a community injury prevention programme is an important issue that needs to be considered early in the planning stages of a programme.

Generally, intersectoral initiatives for health tend to work best when *existing* community organisations and groups are involved in the "higher level" activities of programmes such as strategic planning. New groups that are set up for the purposes of the programme, or individuals recruited from the general public (especially from disadvantaged groups) often do not have the capacity to contribute to these "higher-level" types of activities because they lack the time, resources and infrastructure.

Of course, there are some exceptions to this trend (notably a number of successful initiatives for Mäori living in disadvantaged areas), and it is important to involve the wider community in "lower level" activities, such as volunteering to help with specific interventions, attending special events and using health promotion resources.

Resources

The "success" or effectiveness of a community injury prevention programme is also dependent on the level and type of resources available to support the programme, i.e. money, time and personnel.

Sufficient **funding** is needed to support priority prevention activities (which are nevertheless relatively "low-tech" and low-cost), as well as the overall administration of the programme and the partnership infrastructure.

Previous studies have noted that funding needs to be *long-term* (for several years), as this helps to ensure that prevention activities are given sufficient time to "work". It also helps to attract skilled staff.

As well as funding from the ACC, the Injury Safe Advisory Group may need financial and other assistance from other sources (such as programme partners, other organisations or local businesses) in order to run an effective community injury prevention programme. The level of extra support required will depend to some extent on the type and number of injury prevention interventions that the Injury Safe Advisory Group decides to implement.

Most community injury prevention programmes employ at least one full-time **co-ordinator**. Ideally, this co-ordinator should have secretarial and administrative help so they can concentrate on their core tasks like co-ordinating and participating in programme planning, giving information to the public, running interventions, and liasing with volunteers and the Advisory Group.

One of the partners, for example the District Council, Tui Ora, or Taranaki Health, may be able to "host" the programme by providing office space and secretarial and administrative support.

The co-ordinator should have a wide range of skills, knowledge and experience in community development, health promotion, injury prevention, communication, negotiation, and management. In addition, they should have good local knowledge and networks.

A Mäori injury prevention provider is already working to prevent injuries among tamariki (Mäori children) in New Plymouth District. Another co-ordinator responsible for injury prevention initiatives among the broader New Plymouth District population is also likely to be required.

Staff from partner organisations should be able to assist in planning and running the programme overall, as well as helping with individual activities and interventions. These staff need to be skilled and have sufficient time to devote to the injury prevention programme. General research on community-based intersectoral initiatives for health indicates that quite a bit of time is required of the representatives who sit on advisory groups and working groups, e.g. for meetings, following-up actions agreed at meetings, etc.

As mentioned, the Injury Safe Advisory Group has already been formed. In general, it is recommended (Safe Communities Foundation 2000) that "Safe Community" committees such as these include the following personnel:

- chair / co-chair
- co-ordinator (paid position)
- treasurer
- secretary
- enthusiastic and committed members – ideally from both the public and private sectors
- community leaders.

3. Identifying priorities and strategies for action

Before developing a comprehensive community injury programme plan for New Plymouth District, the Injury Safe Advisory Group, probably in conjunction with wider community consultation, needs to decide:

- what are the local injury prevention priorities
- how these priorities can be best addressed in the local context.

While potentially a very wide range of injury issues could be addressed by a community injury prevention programme, the kinds of injuries and population groups that have been selected as priorities by existing NZ and overseas community injury prevention programmes have in fact been quite similar (see Chapters Three and Seven).

The Injury Safe Advisory Group may wish to take into account the following criteria when finally deciding which injury prevention issues should have priority for the work of a New Plymouth District community injury prevention programme:

- the frequency of different injuries
- the severity of injuries
- the population groups affected
- the availability, feasibility and cost of interventions
- how long it is likely to take to get results, and the extent to which these results are measurable
- whether or not other local interventions already exist
- the enthusiasm of the local community to address certain issues.

Frequency and severity of injuries

Injuries can be regarded as important or a priority simply because they are very common. For example, as we have seen, injuries caused by falls are the most common kind of injury seen at the Taranaki hospital emergency department, making up a third of all injuries seen there.

Certain kinds of injury events – such as high-speed car crashes - can also be considered a priority because, although perhaps comparatively rare, they are relatively severe and often lead to death or very serious and lasting injury.

Population groups affected

As we have also seen, some population groups in New Plymouth District are at high risk of experiencing certain types of injuries.

Some injuries may be regarded as more important than others because they happen most often to particularly vulnerable population groups, such as very young children, or very old people, who may lack the resilience and resources to overcome the effects of injury as successfully as other people.

Evidence suggests outcomes of injuries are generally more severe for people in the older age groups, particularly hip fractures resulting from falls, and more likely to require hospitalisation (Ministry of Health 1999a).

Likewise, preventing injuries that lead to death or permanent disability among children and young people may be considered to be a priority because more “years of life” are lost or affected by a reduced quality of life.

Effective interventions

Even if certain types of injuries among different population groups are considered to be priorities in terms of frequency and / or severity, the Injury Safe Advisory Group needs to know these injuries can be effectively prevented before it chooses them as priorities for local action. Experiences of injury prevention activities by other programmes both in New Zealand and overseas can help here.

The Advisory Group also needs to consider whether these types of interventions and activities are likely to be feasible in the local context. This means looking at factors such as:

- cost of the intervention
- personnel and skills required
- technology / equipment required
- accessibility of target population groups
- accessibility of injury locations
- local "causes" of different types of injuries.

Results

Another thing to consider is how long it takes for certain interventions and activities to produce observable results. Other community injury prevention initiatives have found it beneficial to include in their programme at least some activities with short-term effects that can be easily measured. This can help to quickly demonstrate the benefits of the programme to funders and sponsors. It can also help boost staff morale and build greater enthusiasm in the community for other longer-term injury prevention activities that focus on more ingrained injury problems.

Existing interventions

An awareness of existing local interventions is also essential. It would be inefficient, not to mention undiplomatic, to duplicate what is already being done effectively in the local area.

Some injury prevention programmes invite existing initiatives to come under their "umbrella" or establish other kinds of formal links with them.

Support for specific interventions

Having considered all the above factors, the Injury Safe Advisory Group still needs to consider the level of local enthusiasm for interventions aimed at specific kinds of injuries or targeting particular population groups. There would be little point in attempting to introduce activities for which there is little support.

Our consultation with local experts and selected community representatives identified the following priority population groups that injury prevention interventions should target:

- older people
- children
- adolescents and young people
- Mäori
- people on farms (particularly children and dairy farmers)
- people participating in sports and recreation
- people in the workplace
- people at home
- people on the roads.

The wider population may have similar (or different) priorities.

Types of interventions and activities

There are many types of possible injury prevention interventions and activities. The options include mass media campaigns, other types of information and advice, education of professionals and community organisations, environmental change, and development of safety products and advocacy.

As discussed in Chapter Seven, intervention strategies should be based on recognised models, and they should be realistic and achievable. They should also aim to change policies, create safer environments and achieve organisational change.

It is also important for the Injury Safe Advisory Group to think about the acceptability and appropriateness of any interventions and activities for the local population.

As discussed previously, the ACC's requirements (ACC 2000) for the New Plymouth District community injury prevention activities are that they should be:

- creative and innovative
- low-tech (inexpensive and not requiring extensive professional expertise or monitoring)
- cost-effective (involve the effective allocation of resources and achieve results within reasonable funding levels)
- integrated closely with other relevant initiatives already underway in the local community.

Suggested model for considering injury prevention priorities

The following few pages present one possible model of how the Injury Safe Advisory Group, or newly-established working groups, could think about systematically prioritising and addressing injury issues in New Plymouth District.

The model considers injury prevention among different age groups, as these groups appear to experience quite different injury issues.

The example matrix (shown overleaf) is for injury prevention among children, and the information presented is based on our interpretation of the findings from our analysis of statistical data and the community consultation).

The Injury Safe Advisory Group and other local community representatives need to fill in the gaps and add more information to the matrix as they see appropriate.

The model matrix that we have presented is **not** intended to be the final word on injury prevention priorities for local children. For this reason we have not provided similar examples for other age groups (or other population groups). It is up to local people to do this, using the information from this report, and other sources, if they see this method as helpful.

In our suggested model, for each age group, unintentional and intentional injuries are considered separately. For each of these two groups, priorities for different types of injuries, sub-populations and injury locations are listed. For each of these issues the following information is provided:

- supporting evidence that the issue can be considered a priority
- the perceived local causes or risk factors
- existing local injury prevention programmes and services
- suggested interventions
- local organisations and groups with an interest in the issue (who may be able to help with, or give advice about, proposed interventions).

This exercise would generate a large number of priorities from which the most important can be chosen for action. The research literature suggests that, especially at the beginning of a programme, it is better to choose a few interventions and do them well, rather than trying to cover too many issues that end up not being dealt with adequately.

CHILDREN - UNINTENTIONAL INJURIES

Injury types **(ADD OTHERS)**	**Evidence (from needs assessment)** **(ADD OTHERS)**	**Perceived risk factors (suggestions from community consultation)** **(ADD OTHERS)**	**Existing local injury prevention programmes and services** **(ADD OTHERS)**	**What could / should be done now?** **(ADD OTHERS)**	**Local organisations / groups with possible interest in this issue** **(ADD OTHERS)**
Falls / fractures	• Most common causes of hospitalisations for injury (0-9 year olds) • Cause nearly half the injuries for which ED visits are made (0-9 year olds) • Perceived priority / issue in community consultation	• Playground equipment • Playground surfaces (costly to upgrade) • Baby walkers • Tripping • Falls from heights (trees, jungle gyms, cycles)	• Kidsafe Taranaki • ACC school injury prevention programme • Mäori injury prevention programme (Manaaki Oranga) • Plunket	• Maintenance of safety of public playgrounds • Monitoring safety standard compliance of playgrounds	• Kidsafe Taranaki • ACC • Tui Ora • Plunket • Schools • Boards of Trustees • PTA • Parents' Centres • District Council • Regional Council • Playground manufacturers and suppliers • Early childhood centres • Ministry of Education • Strengthening Families • Safer Community Council • Supermarkets (trolleys) • Westpac Trust Sport Taranaki • Taranaki Health • GPs • Private A&E clinics • Pre-parenting courses • Cycle manufacturers • Rural interest groups (e.g. CWI, Federated Farmers) • Children's equipment retailers • St. John's Ambulance • Health promotion / health education providers

Injury types **(ADD OTHERS)**	**Evidence (from needs assessment)** **(ADD OTHERS)**	**Perceived risk factors (suggestions from community consultation)** **(ADD OTHERS)**	**Existing local injury prevention programmes and services** **(ADD OTHERS)**	**What could / should be done now? (suggestions from community consultation)** **(ADD OTHERS)**	**Local organisations / groups with possible interest in this issue** **(ADD NAMES)**
Motor vehicle crashes Bicycle injuries Road injuries	• Most common cause of injury deaths (0-9 year olds) • Vehicle injuries are the third most common location of injuries that lead to ED visits (0-9 year olds) • Perceived priority / issue in community consultation (especially head injuries)	• Ill-fitted, substandard and non-use of car restraints • Substandard and non-use of cycle helmets	• Kidsafe Taranaki • Plunket (car restraint hire) • Mäori injury prevention programme (Manaaki Oranga) • Roadsafe Taranaki • ACC Roadsafe programme • Police	• Rerun cycle helmet programme • Rerun car restraint programme • Continue developing city cycle lanes • Improve signs outside schools (indicate parking times) • Discourage cycles being ridden on footpaths[31]	See above Also: • Road Safety Taranaki • LTSA • Bike helmet retailers and manufacturers • Car restraint retailers and manufacturers
Poisoning	• Second most common cause of hospitalisations for injury (0-9 year olds) • Perceived priority / issue in community consultation	• Parents' / grandparents' medication • Unsecured household cleaners and products	• Kidsafe Taranaki • Mäori injury prevention programme (Manaaki Oranga)	• Store medications and hazardous substances safely out of reach	See above Also: • Pharmacists • Drug manufacturers • Hazardous substances retailers and manufacturers
Bruises	• Perceived priority / issue in community consultation	• Unsupervised use of baby walkers			See above. Also: • Retailers and manufacturers of baby walkers
Burns and scalds	• Perceived priority / issue in community consultation	• Matches, candles • Electric jug cords, overhanging pot handles • Heaters, unguarded open fires and wood burners			See above Also: • Fire Service

[31] There may be debate about this suggestion (for instance see Scott 2001).

Injury types **(ADD OTHERS)**	**Evidence (from needs assessment)** **(ADD OTHERS)**	**Perceived risk factors (suggestions from community consultation)** **(ADD OTHERS)**	**Existing local injury prevention programmes and services** **(ADD OTHERS)**	**What could / should be done now? (suggestions from community consultation)** **(ADD OTHERS)**	**Local organisations / groups with possible interest in this issue** **(ADD NAMES)**
Drowning	• Perceived priority / issue in community consultation	• Swimming pool fencing requirements don't apply to rural areas • Access to swimming pools, beaches, water holes, troughs • Use of Waitara Bridge for diving and jumping	• Kidsafe Taranaki • Mäori injury prevention programme (Manaaki Oranga)	• Review rural swimming pool fencing requirements • Provide warning signs on Waitara Bridge	See above Also: • Water Safety Council
Injuries at home	• Two-thirds of ED visits are for injuries that occur at home (0-9 year olds) • Perceived priority / issue in community consultation	• Home renovations • Storage of medications and hazardous substances	• Kidsafe Taranaki • Mäori injury prevention programme (Manaaki Oranga)		See above
Injuries at school	• Second most common location for injuries leading to ED visits (0-9 year olds) • Perceived priority / issue in community consultation • Large range and no. of injuries from ACC school injury recording system	• Playgrounds • Sports • Bullying, playground violence	• Kidsafe Taranaki • Mäori injury prevention programme (Manaaki Oranga) • ACC school injury prevention programme		See above
Sports injuries	• Perceived priority / issue in community consultation • Large range and number of injuries from ACC school injury prevention recording system	• Need to be fit for sports	• Kidsafe Taranaki • Mäori injury prevention programme (Manaaki Oranga) • Westpac Trust Sport Taranaki	• Increase promotion of modified sports (e.g. Kiwisports) • Encourage skateboarders to wear kneepads • Continue to encourage rugby players to wear of mouthguards	See above

Injury types (ADD OTHERS)	Evidence (from needs assessment) (ADD OTHERS)	Perceived risk factors (suggestions from community consultation) (ADD OTHERS)	Existing local injury prevention programmes and services (ADD OTHERS)	What could / should be done now? (suggestions from community consultation) (ADD OTHERS)	Local organisations / groups with possible interest in this issue (ADD NAMES)
Injuries on farms and lifestyle blocks	• Perceived priority / issue in community consultation	• Visiting children not used to hazards • Home alone situations • Children driving ATVs	• Kidsafe Taranaki • Mäori injury prevention programme (Manaaki Oranga)	• Review rural swimming pool fencing requirements	See above
Injuries among boys	• Boys have 20 percent higher hospitalisation rates for injury than girls (0-9 year olds) • Boys have 26 percent higher ED attendance rates for injury than girls (0-9 year olds) • Perceived priority / issue in community consultation	• Boys' "nose for trouble"	• No particular programmes targeting boys		See above

CHILDREN - INTENTIONAL INJURIES

Injury types	Evidence from needs assessment	Perceived risk factors (suggestions from community consultation) (ADD OTHERS)	Existing local injury prevention programmes and services (ADD OTHERS)	What could / should be done now? (suggestions from community consultation) (ADD OTHERS)	Local organisations / groups with possible interest in this issue (ADD NAMES)
Child abuse and neglect	• Perceived priority / issue in community consultation	• Home alone • Drugs and alcohol	• Kidsafe Taranaki • Health promotion unit • Child and adolescent unit (Taranaki Health) • Child Youth and Family • Police Child and Sexual Abuse Team	• More focus on alcohol	See above Also: • Child Youth and Family

4. Developing a programme plan

Previous research suggests that it is essential to have a written plan that describes how the community prevention programme will be implemented and who will be responsible for carrying out the various activities.

The Canadian *Safe Communities Guidebook* (Canadian Safe Communities Foundation 2000) provides an example business plan. This identifies the following key elements of a business plan:

- background to community injury prevention programme
- mission statement
- goals and objectives
- terms of reference
- specific programme plans (interventions and activities) including measurables
- data collection methods
- time lines
- evaluation methods
- community profile
- committee (advisory group) structure
- executive designates (names, addresses, affiliations)
- committee members (names, addresses, affiliations)
- operating plan
- banking arrangements
- funding plan (short, mid and long term)
- budget (minimum two years)
- letters of support
- position descriptions for co-ordinator and executive.

Further discussion of some of these points is provided below.

Mission, goals, objectives, targets, activities, strategies, interventions

It is helpful for programme partners and funders to have written statements about a) what the injury prevention programme overall is trying to achieve, and b) what each individual activity or intervention is trying to achieve. Statements of this kind vary in their level of detail and in the precise way different authors use different terms to describe them, but they are often known as missions, goals, objectives, and targets. It is here that priority injury issues should be mentioned, such as:

“reduce injuries among local children”;

"increase the use of back-seat safety belts among adults".

"reduce by half the injury deaths from motor vehicle crashes among children aged 0-9 over the next decade".

Once it is clear *what* the injury prevention programme (or individual intervention) is trying to achieve, the next step is to write down *how* it is intended to achieve this (strategies, interventions, activities). Again, the Injury Safe Advisory Group will need to decide how much detail it will be able (and wants) to provide in the programme plan about each activity or intervention.

When the activities and interventions will take place is also important to include in the programme plan.

The organisational structure

The programme plan should also provide an overview of the proposed organisation of the new Injury Safe programme.

To date the Injury Safe Advisory Group has already been formed. The plan should also describe any other positions and subgroups that the Group wishes to establish, for instance:

- a paid programme co-ordinator
- working groups to address certain major priority areas (e.g. older people, Mäori).

It is generally believed that the organisational structure of any community injury prevention programme should be kept as simple as possible.

Clearly defining partner relationships

From reading the literature, another area that the Injury Safe programme plan, or possibly a separate document, needs to include is a clear definition of partner relationships. For instance, it is important to state *who* will be responsible for which programme activities, and what resources (time, money, personnel, administrative assistance, accommodation) each partner has agreed to provide. Sometimes, it can also be useful to have a predetermined time and process for reviewing partner relationships.

5. Monitoring and evaluation

The Injury Safe Advisory Group should also consider undertaking some kind of monitoring and evaluation of their community injury prevention programme. The main purpose of this would be to show that the programme is having some positive results and is being run in an effective way. It could also identify aspects of the programme that would benefit from improvements. It is important to plan monitoring and

evaluation early because it may be necessary to collect "baseline data" before the programme starts, to enable good "before" and "after" observations to be made.

The type of monitoring and evaluation could range from simply keeping a record of programme activities at a fairly rudimentary level for audit purposes, to a much more comprehensive evaluation of the whole programme, or at least some of its specific interventions and activities.

The decision about "how far to go" with monitoring and evaluation depends on a number of factors, including:

- the funding available
- the requirements of funders and sponsors
- how useful the Advisory Group thinks monitoring and evaluation would be to the running of the programme
- how interested the Advisory Group is in carrying out health promotion research (as well as concentrating on providing services).

Several authors have noted that it is important for evaluations not to dominate community health initiatives. Others have said it is really unnecessary for every health promotion programme to be extensively evaluated by outside evaluators. As the literature review has shown, at least five New Zealand community injury prevention programmes, and many overseas initiatives, have already been formally evaluated. The Advisory Group may wish to choose a relatively low-key approach to monitor and evaluate the New Plymouth District Injury Safe programme. On the other hand, they may decide to implement some innovative interventions, untried elsewhere, that would benefit from some kind of evaluation.

If it is decided that the programme will be evaluated, the Injury Safe Advisory may particularly like to think about the issue of measuring programme "outcomes".

Outcome evaluation

A number of authors have discussed the issue of measuring the "outcomes" of community injury prevention programmes (and other intersectoral community health initiatives).

On the face of it, it would seem logical to try to measure changes in health outcomes that result from community injury prevention programmes, ie. changes in the incidence of injuries. However, in New Plymouth District, as in most of New Zealand, a comprehensive injury surveillance data collection system does not exist (e.g. one that includes primary health care data, hospital data, mortality data, and detailed information about injury causes and locations).

As we have seen from the research literature, too, changes in the local incidence of injury, as measured by data, such as hospitalisation or mortality rates, are often very

small (or non-existent) over short periods of time (e.g. one or two years) and can be difficult to interpret because of the relatively small numbers of cases.

Any changes in injury incidence statistics are also often very hard to directly attribute to any particular programme. This is because it is usually difficult to untangle local programme effects from other influences such as national campaigns and other changes in the local social or physical environment.

It is generally seen as advisable for programme evaluations to focus on measuring "intermediate" outcomes that can be assessed relatively easily and that can be more readily causally-linked to specific interventions. In the case of the New Plymouth District Injury Safe programme, these "intermediate" outcomes could include:

- public awareness of the existence of the programme
- public awareness of, and participation in, Injury Safe programme activities
- public recall and understanding of Injury Safe messages
- self-reported changes in behaviour such as wearing protective gear for sports, driving within the speed limit, following safety guidelines at work
- observed changes in behaviour such as proportion of adults wearing seatbelts in the back seats of vehicles, use of cycle helmets, or driver behaviour at intersections.

These types of outcomes could be measured through public surveys and physical observations.

Taken together with an appropriate process evaluation, and possibly the long-term monitoring of trends in injury incidence (using the statistical databases covered in this report), "intermediate" outcome evaluation could provide a reasonable indication of how well the Injury Safe programme is "working".

Having said that, all health promotion programmes, particularly those involving intersectoral partnerships, must be given time to succeed (perhaps several years). It often takes longer than expected to get partnerships together, activities underway, and to develop effective interventions.

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APPENDIX A

ADDITIONAL STATISTICAL TABLES

TABLE A.1: ESTIMATED RESIDENT POPULATIONS OF NEW PLYMOUTH DISTRICT AND NEW ZEALAND BY AGE GROUPS AND SEX, AT 30 JUNE 2000

	NEW PLYMOUTH						NEW ZEALAND					
	Males		Females		Total		Males		Females		Total	
Age group	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	2370	7.1	2,250	6.5	4,620	6.8	146,830	7.8	138,690	7.1	285,520	7.5
5-9	2790	8.4	2,530	7.4	5,320	7.9	155,600	8.2	146,250	7.5	301,850	7.9
10-14	2810	8.4	2,730	7.9	5,540	8.2	148,240	7.9	140,900	7.2	289,140	7.5
15-19	2660	8.0	2,230	6.5	4,890	7.2	140,540	7.4	132,340	6.8	272,880	7.1
20-24	1770	5.3	1,570	4.6	3,340	4.9	130,230	6.9	126,000	6.5	256,230	6.7
25-29	1820	5.5	1,960	5.7	3,780	5.6	128,570	6.8	136,410	7.0	264,980	6.9
30-34	2210	6.6	2,340	6.8	4,550	6.7	136,930	7.3	148,580	7.6	285,510	7.5
35-39	2540	7.6	2,740	8.0	5,280	7.8	149,440	7.9	158,000	8.1	307,440	8.0
40-44	2590	7.8	2,790	8.1	5,380	7.9	141,770	7.5	146,670	7.5	288,440	7.5
45-49	2420	7.3	2,400	7.0	4,820	7.1	127,300	6.7	129,48	6.7	256,780	6.7
50-54	2110	6.3	2,170	6.3	4,280	6.3	118,750	6.3	118,430	6.1	237,180	6.2
55-59	1680	5.0	1,660	4.8	3,340	4.9	91,600	4.9	92,210	4.7	183,810	4.8
60-64	1380	4.1	1,440	4.2	2,820	4.2	73,920	3.9	76,060	3.9	149,980	3.9
65-69	1250	3.8	1,350	3.9	2,600	3.8	63,490	3.4	65,920	3.4	129,410	3.4
70-74	1190	3.6	1,350	3.9	2,540	3.8	56,600	3.0	62,670	3.2	119,270	3.1
75-79	810	2.4	1,260	3.7	2,070	3.1	40,490	2.1	54,380	2.8	94,870	2.5
80+	870	2.6	1,680	4.9	2,550	3.8	36,620	1.9	70,900	3.6	107,520	2.8
TOTAL	33300	100.0	34,400	100.0	67,700	100.0	1,886,920	100.0	1,943,890	100.0	3,830,810	100.0

Source: Data supplied by Statistics New Zealand.

TABLE A.2: NUMBER AND PERCENTAGE OF WORKERS EMPLOYED IN DIFFERENT INDUSTRIES IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

	NEW PLYMOUTH DISTRICT		NEW ZEALAND	
Industry group	**No.**	**%**	**No.**	**%**
Agriculture, forestry, fishing	2790	10.0	150105	9.8
Mining	369	1.3	4086	0.3
Manufacturing	4515	16.2	232527	15.2
Electricity, gas, water supply	354	1.3	8910	0.6
Construction	2016	7.2	94038	6.1
Wholesale trade	1287	4.6	94413	6.2
Retail trade	3948	14.2	199983	13.1
Accommodation, cafés, restaurants	1152	4.1	69408	4.5
Transport, storage	975	3.5	62184	4.1
Communication services	369	1.3	24426	1.6
Finance, insurance	663	2.4	52689	3.4
Property & business services	2598	9.3	161352	10.5
Government admin., defence	921	3.3	67170	4.4
Education	1920	6.9	104820	6.9
Health & community services	2331	8.4	108015	7.1
Cultural & recreational services	420	1.5	33876	2.2
Personal & other services	1233	4.4	61722	4.0
Unidentifiable / not specified	1794	-	185949	-
TOTAL	29655	-	1715673	-
TOTAL, SPECIFIED	27861	100.0	1529724	100.0

Source: Data from Statistics New Zealand 2001.

TABLE A.3: NUMBER AND PERCENTAGE OF WORKERS EMPLOYED IN DIFFERENT OCCUPATIONAL GROUPS IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

	NEW PLYMOUTH DISTRICT		NEW ZEALAND	
Occupational groups	**No.**	**%**	**No.**	**%**
Legislators, administrators, managers	3093	10.9	188979	12.2
Professionals	3498	12.3	191466	12.4
Technicians, associate professionals	3123	11.0	177597	11.5
Clerks	3369	11.9	216468	14.0
Service and sales workers	4335	15.3	226080	14.6
Agriculture and fisheries workers	3120	11.0	153603	9.9
Trades workers	3069	10.8	148974	9.6
Plant/machine operators/assemblers	2658	9.4	135627	8.7
Elementary occupations	2076	7.3	111285	7.2
Unidentifiable/not applicable etc.	1314	-	165594	-
TOTAL	29655	-	1715673	-
TOTAL, SPECIFIED	28341	100.0	1550079	100.0

Source: Data from Statistics New Zealand 2001.

TABLE A.4: NUMBER AND PERCENTAGE OF PEOPLE AGED 15+ WITH DIFFERENT INCOME SOURCES IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

	NEW PLYMOUTH DISTRICT						NEW ZEALAND	
	Males		Females		Total		Total (M+F)	
Sources of income	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Wages and salary	14154	37.7	12900	34.3	27054	36.0	1500438	38.2
Self-employed	5397	14.4	3366	9.0	8763	11.7	468771	11.9
Investment income	6975	18.6	6999	18.6	13974	18.6	711633	18.1
ACC	729	1.9	531	1.4	1260	1.7	66801	1.7
NZ Superannuation	4044	10.8	5781	15.4	77	13.1	441045	11.2
Other superannuation, pensions, annuities	1128	3.0	942	2.5	2070	2.8	107424	2.7
Unemployment Benefit	2637	7.0	2034	5.4	4671	6.2	223446	5.7
Domestic Purposes Benefit	222	0.6	1899	5.1	2121	2.8	103335	2.6
Sickness Benefit	495	1.3	582	1.5	1077	1.4	57669	1.5
Invalid's Benefit	408	1.1	405	1.1	813	1.1	47508	1.2
Student allowance	540	1.4	564	1.5	1104	1.5	69927	1.8
Other Government benefits	609	1.6	1095	2.9	1704	2.3	86367	2.2
Other income sources	204	0.5	495	1.3	699	0.9	46410	1.2
TOTAL	37542	100.0	37593	100.0	75135	100.0	3930774	100.0

Source: Data from Statistics New Zealand 2001.

TABLE A.5: NUMBER AND PERCENTAGE OF PEOPLE AGED 15+ WITH DIFFERENT LEVELS OF PERSONAL ANNUAL INCOME IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

	NEW PLYMOUTH DISTRICT						NEW ZEALAND	
	Males		Females		Total		Total (M+F)	
Annual income	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Nil or income loss	720	3.1	1677	6.8	2397	5.0	137562	5.4
$1-5,000	1620	7.0	3192	12.9	4812	10.1	271236	10.7
$5,001-$10,000	3306	14.3	5043	20.4	8349	17.5	414594	16.4
$10,001-$15,000	3018	13.1	5685	23.0	8703	18.2	410709	16.2
$15,001-$20,000	2019	8.7	2811	11.4	4830	10.1	245847	9.7
$20,001-$25,000	2148	9.3	1968	8.0	4116	8.6	222180	8.8
$25,001-$30,000	2289	9.9	1617	6.5	3906	8.2	224013	8.9
$30,001-$40,000	3222	13.9	1650	6.7	4872	10.2	275568	10.9
$40,001-$50,000	2034	8.8	585	2.4	2619	5.5	142062	5.6
$50,001-$70,000	1560	6.7	258	1.0	1818	3.8	100866	4.0
$70,001-$100,000	690	3.0	117	0.5	807	1.7	43755	1.7
$100,001 or more	486	2.1	117	0.5	603	1.3	39069	1.5
Not specified	1947	-	2337	-	4284	-	258768	-
TOTAL	25059	-	27057	-	52116	-	2786229	-
TOTAL, SPECIFIED	23112	100.0	24720	100.0	47832	100.0	2527461	100.0

Source: Data from Statistics New Zealand 2001.

TABLE A.6: NUMBER AND PERCENTAGE OF PRIVATE DWELLINGS UNDER DIFFERENT TYPES OF TENURE IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

	NEW PLYMOUTH DISTRICT		NEW ZEALAND	
Type of tenure	**No.**	**%**	**No.**	**%**
Owned with mortgage	8964	37.2	448374	36.8
Owned without mortgage	8349	34.7	394077	32.4
Owned, mortgage not specified	417	1.7	18312	1.5
Provided rent-free	858	3.6	45405	3.7
Rented	5049	21.0	290124	23.8
Not owned, rental status not specified	435	1.8	21534	1.8
Not specified	1005	-	50271	-
TOTAL	25077	-	1268097	-
TOTAL, SPECIFIED	24072	100.0	1217826	100.0

Source: Data from Statistics New Zealand 2001.

TABLE A.7: NUMBER AND PERCENTAGE OF HOUSEHOLDS IN PRIVATE DWELLINGS WITH ACCESS TO TELEPHONES IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

	NEW PLYMOUTH DISTRICT		NEW ZEALAND	
Type of telephone access	**No.**	**%**	**No.**	**%**
Telephone access	23211	96.0	1158831	95.0
No telephone access	978	4.0	60570	5.0
Not specified	891	-	48699	-
TOTAL	25080	-	1268100	-
TOTAL, SPECIFIED	24189	100.0	1219401	100.0

Source: Data from Statistics New Zealand 2001.

TABLE A.8: NUMBER AND PERCENTAGE OF HOUSEHOLDS IN PRIVATE DWELLINGS WITH ACCESS TO MOTOR VEHICLES IN NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1996 CENSUS

	NEW PLYMOUTH DISTRICT		NEW ZEALAND	
Number of vehicles households have access to	**No.**	**%**	**No.**	**%**
None	3009	12.5	144972	12.0
One	11256	46.9	518460	42.7
Two	7641	31.8	406881	33.5
Three or more	2094	8.7	142827	11.8
Not specified	1083	-	54954	-
TOTAL	25083	-	1268094	-
TOTAL, SPECIFIED	24000	100.0	1213140	100.0

Source: Data from Statistics New Zealand 2001.

TABLE A.9: NUMBER AND PERCENTAGE OF POPULATION LIVING IN NEW PLYMOUTH DISTRICT AREA UNITS BY NZDEP96 RANKINGS, 1996 CENSUS

Suburb	NZDep96	Number	%
Carrington	1	576	0.8
Highlands Park	1	2508	3.7
Fernleigh	1	567	0.8
Barrett	1	1206	1.8
TOTAL, NZDep1		**4857**	**7.1**
Oakura	2	1233	1.8
Omata	2	441	0.6
Lepperton	2	1665	2.4
Egmont Village	2	495	0.7
TOTAL, NZDep2		**3834**	**5.6**
Bowden	3	321	0.5
Kaitake	3	2013	3.0
Upper Westown	3	1455	2.1
Kaimata	3	2547	3.7
TOTAL, NZDep3		**6336**	**9.3**
Paraite	4	288	0.4
Mangaoraka	4	645	0.9
TOTAL, NZDep4		**933**	**1.4**
Okoki-Okau	5	1911	2.8
Glen Avon	5	864	1.3
Spotswood	5	1809	2.7
Merrilands	5	2793	4.1
TOTAL, NZDep5		**7377**	**10.8**
Bell Block	6	3918	5.8
Lynmouth	6	2175	3.2
Westown	6	3429	5.0
Mount Bryan	6	954	1.4
Fitzroy	6	3684	5.4
Welbourn	6	1761	2.6
Struan Park	6	4704	6.9
TOTAL, NZDep6		**20625**	**30.3**
Urenui	7	414	0.6
Marshland Hill	7	1461	2.1
Frankleigh	7	3567	5.2
Inglewood	7	3192	4.7
TOTAL, NZDep7		**8634**	**12.7**
Kawaroa	8	1947	2.9
TOTAL, NZDep8		**1947**	**2.9**
Okato	9	498	0.7
Waitara East	9	2796	4.1
Moturoa	9	3819	5.6
New Plymouth Central	9	666	1.0
TOTAL, NZDep9		**7779**	11.4
Waitara West	10	3714	5.5
Marfell	10	2085	3.1
TOTAL, NZDep10		**5799**	**8.5**
GRAND TOTAL		**68121**	**100.0**

Source: Area unit NZDep96 ranking categories from New Plymouth District Council 2000, population data from Statistics New Zealand 2001.

TABLE A.10: NUMBER AND PERCENTAGE OF DEATHS FROM INJURIES AND OTHER CAUSES, NEW PLYMOUTH DISTRICT 1996-1998

	Number of deaths 1996-1998	Average annual no. of deaths	Percentage
Deaths from injuries	89	29.7	5.5
Deaths from other causes	1530	510.0	94.5
ALL DEATHS	1619	539.7	100.0

Source: Raw data from New Zealand Health Information Service.

TABLE A.11: NUMBER AND PERCENTAGE OF DEATHS FROM INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 1996-1998

	Number of deaths 1996-1998	Average annual no. of deaths	Percentage
Unintentional injuries	57	19.0	64.0
Intentional injuries	30	10.0	33.7
Undetermined if intentional or not	2	0.7	2.2
ALL DEATHS	89	29.7	100.0

Source: Raw data from New Zealand Health Information Service.

TABLE A.12: NUMBER AND PERCENTAGE OF DEATHS FROM DIFFERENT TYPES OF INJURIES, NEW PLYMOUTH DISTRICT 1996-1998

	Number of deaths 1996-1998	Average annual no. of deaths	Percentage
Motor vehicle crashes	30	10.0	33.7
Falls	8	2.7	9.0
Unspecified fractures	7	2.3	7.9
Other unintentional injuries	12	4.0	13.5
Suicide and self-inflicted injury	27	9.0	30.3
Other intentional injuries	3	1.0	3.4
Not determined if injury intentional or not	2	0.7	2.2
All deaths	89	29.7	100.0

Source: Raw data from New Zealand Health Information Service.

TABLE A.13: NUMBER OF DEATHS AND ANNUAL MORTALITY RATES (PER 100,000) FOR INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 1994-1998, BY AGE GROUPS

A) Number of deaths (Total for 1994-1998)

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	TOTAL
Unintentional injuries	7	9	22	13	7	7	8	10	20	103
Intentional injuries	0	11	10	9	7	5	5	2	1	50
Undetermined if intentional or not	0	0	1	1	0	0	0	0	0	2
TOTAL	7	20	33	23	14	12	13	12	21	155

B) Average annual number of deaths

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	TOTAL
Unintentional injuries	1.4	1.8	4.4	2.6	1.4	1.4	1.6	2.0	4.0	20.6
Intentional injuries	0.0	2.2	2.0	1.8	1.4	1.0	1.0	0.4	0.2	10.0
Undetermined if intentional or not	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4
TOTAL	1.4	4.0	6.6	4.6	2.8	2.4	2.6	2.4	4.2	31.0

C) Average annual rates per 100,000 population

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	AGE-STANDARDISED RATES
Unintentional injuries	13.2	17.6	50.3	24.5	14.7	21.8	29.3	46.4	186.7	26.1
Intentional injuries	0.0	21.5	22.9	16.9	14.7	15.6	18.3	9.3	9.3	14.4
Undetermined if intentional or not	0.0	0.0	2.3	1.9	0.0	0.0	0.0	0.0	0.0	0.6
TOTAL	13.2	39.0	75.5	43.3	29.3	37.4	47.5	55.7	196.1	41.0

Source: Raw data from New Zealand Health Information Service.

TABLE A.14: AVERAGE ANNUAL NUMBER OF DEATHS AND AGE-STANDARDISED MORTALITY RATES (PER 100,000) FOR INJURIES, NEW PLYMOUTH DISTRICT 1994-1998, BY SEX

	Average annual number of deaths	Age-standardised rates
Males	21.6	60.2
Females	9.4	23.3

Source: Raw data from New Zealand Health Information Service. Age standardised using Segi's world population.

TABLE A.15: AVERAGE ANNUAL NUMBER OF DEATHS AND AGE-STANDARDISED MORTALITY RATES (PER 100,000) FOR INJURIES, NEW PLYMOUTH DISTRICT 1994-1998, BY ETHNICITY**

	Average annual number of deaths	Age-standardised rates
Non-Mäori	24.0	33.7
Mäori	5.7	74.9

Source: Raw data from New Zealand Health Information Service. Age standardised using Segi's world population.
** Note mortality data by ethnicity not available before 1996 (due to changes in coding for ethnicity in 1995). Also note Mäori rates based on small numbers.

TABLE A.16: TRENDS IN ANNUAL AGE-STANDARDISED MORTALITY RATES (ASR) (PER 100,000) FOR INJURY, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1989-1998

	New Plymouth District (NPD)		NPD 3-year running average*		New Zealand	
	No. of deaths	ASR	No. of deaths	ASR	No. of deaths	ASR
1989	24	34.0	-	-	1977	53.4
1990	22	29.4	24.3	34.5	1932	51.7
1991	27	40.1	30.3	42.4	1752	46.8
1992	42	57.6	32.7	45.8	1802	48.0
1993	29	39.8	32.0	43.8	1732	46.2
1994	25	34.2	31.7	43.8	1739	42.7
1995	41	57.2	30.7	42.5	1806	44.7
1996	26	35.9	33.3	44.5	1732	42.6
1997	33	40.4	29.7	37.9	1778	43.8
1998	30	37.5	-	-	1669	41.7

Source: Raw data from New Zealand Health Information Service. Age standardised using Segi's world population.
** Calculated by aggregating data from the specified year, the previous year and the subsequent year (and dividing by 3)

TABLE A.17: NUMBER AND PERCENTAGE OF HOSPITALISATIONS FOR INJURIES AND OTHER CAUSES, NEW PLYMOUTH DISTRICT 2000

	Number of hospitalisations	Percentage
Hospitalisations for injuries	1374	8.4
Hospitalisations for other causes	15065	91.6
ALL HOSPITALISATIONS	16439	100.0

Source: Raw data from New Zealand Health Information Service.

TABLE A.18: NUMBER AND PERCENTAGE OF HOSPITALISATIONS FOR INTENTIONAL AND UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 2000

	Number of hospitalisations	Percentage of injuries
Unintentional injuries	1265	92.1
Intentional injuries	103	7.5
Undetermined if injuries intentional or unintentional	6	0.4
TOTAL	1374	100.0

Source: Raw data from New Zealand Health Information Service.

TABLE A.19: NUMBER AND PERCENTAGE OF HOSPITALISATIONS FOR DIFFERENT TYPES OF UNINTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 2000

	Number of hospitalisations 2000	Percentage
Falls	367	29.0
Unspecified fractures	191	15.1
Motor vehicle	132	10.4
Other transport	83	6.6
Cutting / piercing instruments	79	6.2
Struck by object or person	76	6.0
Late effects of injury	61	4.8
Other	276	21.8
TOTAL	1265	100.0

Source: Raw data from New Zealand Health Information Service.

TABLE A.20: NUMBER AND PERCENTAGE OF HOSPITALISATIONS FOR DIFFERENT TYPES OF INTENTIONAL INJURIES, NEW PLYMOUTH DISTRICT 2000

	Number of hospitalisations	Percentage
Suicide and self-inflicted	76	73.8
Fight, brawl, rape	13	12.6
Other	14	13.6
TOTAL	103	100.0

Source: Raw data from New Zealand Health Information Service

TABLE A.21: NUMBER OF HOSPITALISATIONS AND ANNUAL HOSPITALISATION RATES (PER 100,000) FOR INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, BY AGE GROUPS AND SEX

A) Number of hospitalisations (total for 1998-2000)

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	TOTAL
MALES										
Unintentional injuries	349	360	263	178	194	115	77	101	109	1746
Intentional injuries	5	35	37	39	12	14	0	4	3	149
Undetermined if intentional or not	1	2	4	4	1	0	0	1	0	13
TOTAL	355	397	304	221	207	129	77	106	112	1908
FEMALES										
Unintentional injuries	273	157	78	85	76	73	79	136	388	1345
Intentional injuries	1	12	34	28	23	10	3	2	0	113
Undetermined if intentional or not	1	2	14	7	0	2	0	1	0	27
TOTAL	275	171	126	120	99	85	82	139	388	1485
TOTAL MALES AND FEMALES										
Unintentional injuries	622	517	341	263	270	188	156	237	497	3091
Intentional injuries	6	47	71	67	35	24	3	6	3	262
Undetermined if intentional or not	2	4	18	11	1	2	0	2	0	40
TOTAL	630	568	430	341	306	214	159	245	500	3393

Source: Raw data from New Zealand Health Information Service.

B) Average annual number of hospitalisations

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	TOTAL
MALES										
Unintentional injuries	116	120	88	59	65	38	26	34	36	582
Intentional injuries	2	12	12	13	4	5	0	1	1	50
Undetermined if intentional or not	0	1	1	1	0	0	0	0	0	4
TOTAL	118	132	101	74	69	43	26	35	37	636
FEMALES										
Unintentional injuries	91	52	26	28	25	24	26	45	129	448
Intentional injuries	0	4	11	9	8	3	1	1	0	38
Undetermined if intentional or not	0	1	5	2	0	1	0	0	0	9
TOTAL	92	57	42	40	33	28	27	46	129	495
TOTAL MALES AND FEMALES										
Unintentional injuries	207	172	114	88	90	63	52	79	166	1030
Intentional injuries	2	16	24	22	12	8	1	2	1	87
Undetermined if intentional or not	1	1	6	4	0	1	0	1	0	13
TOTAL	210	189	143	114	102	71	53	82	167	1131

Source: Raw data from New Zealand Health Information Service.

C) Average annual rates of hospitalisations per 100,000 population

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	AGE-STANDARDISED RATE
MALES										
Unintentional injuries	2134	2221	2054	1159	1364	1201	973	1852	5089	1783
Intentional injuries	31	216	289	254	84	146	0	73	140	149
Undetermined if intentional or not	6	12	31	26	7	0	0	18	0	13
TOTAL	2171	2449	2374	1439	1456	1347	973	1944	5229	1946
FEMALES										
Unintentional injuries	1764	1080	581	515	527	754	930	1818	9057	1078
Intentional injuries	6	83	253	170	160	103	35	27	0	109
Undetermined if intentional or not	6	14	104	42	0	21	0	13	0	28
TOTAL	1776	1176	938	727	687	878	965	1859	9057	1215
TOTAL MALES AND FEMALES										
Unintentional injuries	1954	1682	1300	825	943	976	951	1833	7734	1439
Intentional injuries	19	153	271	210	122	125	18	46	47	129
Undetermined if intentional or not	6	13	69	35	3	10	0	15	0	21
TOTAL	1979	1848	1639	1070	1069	1111	969	1894	7781	1589

Source: Raw data from New Zealand Health Information Service. Age-standardised using Segi's world population.

TABLE A.22: NUMBER OF HOSPITALISATIONS AND ANNUAL HOSPITALISATION RATES (PER 100,000) FOR INJURIES, NEW PLYMOUTH DISTRICT 1998-2000, BY AGE GROUPS AND ETHNICITY

A) Number of hospitalisations (total for 1998-2000)

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	TOTAL
MÄORI										
Unintentional injuries	111	59	53	36	26	14	6	4	3	312
Intentional injuries	4	8	8	7	5	1	2	0	0	35
Undetermined if intentional or not	0	1	4	3	0	0	0	0	0	8
TOTAL	115	68	65	46	31	15	8	4	3	355
NON-MÄORI										
Unintentional injuries	511	458	288	227	244	174	150	233	494	2779
Intentional injuries	2	39	63	60	30	23	1	6	3	227
Undetermined if intentional or not	2	3	14	8	1	2	0	2	0	32
TOTAL	515	500	365	295	275	199	151	241	497	3038

Source: Raw data from New Zealand Health Information Service.

B) Average annual number of hospitalisations

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	TOTAL
MÄORI										
Unintentional injuries	37	20	18	12	9	5	2	1	1	104
Intentional injuries	1	3	3	2	2	0	1	0	0	12
Undetermined if intentional or not	0	0	1	1	0	0	0	0	0	3
TOTAL	38	23	22	15	10	5	3	1	1	118
NON-MÄORI										
Unintentional injuries	170	153	96	76	81	58	50	78	165	926
Intentional injuries	1	13	21	20	10	8	0	2	1	76
Undetermined if intentional or not	1	1	5	3	0	1	0	1	0	11
TOTAL	172	167	122	98	92	66	50	80	166	1013

Source: Raw data from New Zealand Health Information Service.

C) Average annual rates of hospitalisations per 100,000 population

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	AGE-STANDARDISED RATE
MÄORI										
Unintentional injuries	1589	964	1283	887	1054	1037	725	1034	2564	1162
Intentional injuries	57	131	194	172	203	74	242	0	0	136
Undetermined if intentional or not	0	16	97	74	0	0	0	0	0	27
TOTAL	1647	1111	1573	1133	1257	1111	966	1034	2564	1325
NON-MÄORI										
Unintentional injuries	2055	1858	1302	817	932	971	962	1867	7808	1493
Intentional injuries	8	158	285	216	115	128	6	48	47	129
Undetermined if intentional or not	8	12	63	29	4	11	0	16	0	19
TOTAL	2071	2028	1650	1061	1050	1110	968	1931	7855	1642

Source: Raw data from New Zealand Health Information Service. Age-standardised using Segi's world population.

TABLE A.23: TRENDS IN ANNUAL AGE-STANDARDISED HOSPITALISATION RATES (PER 100,000) FOR INJURY, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, 1989-2000

	New Plymouth District (NPD)		New Zealand	
Year	No. of deaths	ASR	No. of deaths	ASR
1989	1228	1822.5	51206	1494.8
1990	1457	2178.6	55786	1633.7
1991	1286	1918.5	55209	1606.7
1992	1221	1809.0	55835	1619.8
1993	1353	1996.8	61428	1805.4
1994	1247	1862.9	65050	1810.5
1995	1378	1984.5	64679	1759.7
1996	1325	1837.6	66843	1776.6
1997	1354	1886.1	68161	1793.6
1998	1344	1863.2	70244	1837.4
1999	1190	1607.4	72641	1871.6
2000	1374	1863.6	72205	1823.9

Source: Raw data from New Zealand Health Information Service. Age standardised using Segi's world population.

TABLE A.24: NUMBERS AND RATES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES (PER 100,000), NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY AGE GROUPS AND SEX

	Males		Females		Total	
Age Group	Nos.	Rates	Nos.	Rates	Nos.	Rates
0-9	581	10658.6	438	8488.4	1019	9603.2
10-19	1043	19304.1	623	12858.6	1666	16256.8
20-29	805	18856.9	370	8266.3	1175	13436.2
30-39	561	10961.3	326	5925.1	887	8352.2
40-49	371	7827.0	277	5767.2	648	6790.3
50-59	235	7362.2	152	4708.8	387	6028.0
60-69	118	4474.8	108	3813.6	226	4132.4
70-79	106	5830.6	129	5174.5	235	5451.2
80+	82	11484.6	206	14425.8	288	13445.4
TOTAL	3902	11703.0	2629	7561.8	6531	9589.0
Age-standardised rate (ASR)	-	12356.9	-	7897.9	-	10135.6

Source: Raw data supplied by Taranaki Health.

TABLE A.25: NUMBERS AND AGE-STANDARDISED RATES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES (PER 100,000), NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY SEX AND ETHNICITY

	Mäori		Non-Mäori	
Sex	**Nos.**	**Age-standardised rates**	**Nos.**	**Age-standardised rates**
Males	429	8871.2	3242	12177.9
Females	279	5943.3	2252	7925.6
TOTAL	708	7431.8	5494	10046.0

Source: Raw data supplied by Taranaki Health.
Note: Excludes data for people of unknown ethnicity.

TABLE A.26: NUMBERS AND RATES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES (PER 100,000), NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY AGE GROUPS AND ETHNICITY

	Mäori		Non-Mäori	
Age groups	**Nos.**	**Rates**	**Nos.**	**Rates**
0-9	160	1512.0	812	2155.1
10-19	192	1694.1	1349	2955.1
20-29	172	1998.5	962	2087.3
30-39	111	984.5	736	953.4
40-49	50	729.9	577	793.4
50-59	12	240.0	354	533.1
60-69	8	202.9	206	277.4
70-79	3	69.8	223	160.8
80+	0	0.0	275	130.4

Source: Raw data supplied by Taranaki Health.
Note: Excludes data for people of unknown ethnicity.

TABLE A.27: NUMBERS AND PERCENTAGES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES, NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY SEX AND CAUSE OF INJURY

	Males		Females		Total	
Cause	**No.**	**%**	**No.**	**%**	**No.**	**%**
Allergic	3	0.1	1	0.0	4	0.1
Assault	151	3.9	85	3.2	236	3.6
Bite	43	1.1	59	2.2	102	1.6
Blunt trauma	909	23.3	503	19.1	1412	21.6
Drowning	0	0.0	2	0.1	2	0.0
Electrical	1	0.0	2	0.1	3	0.0
Fall	1166	29.9	1124	42.8	2290	35.1
Foreign body	278	7.1	82	3.1	360	5.5
Overdose	25	0.6	17	0.6	42	0.6
Penetrating trauma	585	15.0	232	8.8	FS817	12.5
Strain	373	9.6	291	11.1	664	10.2
Thermal	92	2.4	50	1.9	142	2.2
Other injury	276	7.1	181	6.9	457	7.0
Total injury	3902	100.0	2629	100.0	6531	100.0

Source: Raw data supplied by Taranaki Health.

TABLE A.28: NUMBERS AND AGE-STANDARDISED RATES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES (PER 100,000), NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY SEX AND CAUSE OF INJURY

	Males		Females		Total	
Cause	**No.**	**ASR**	**No.**	**ASR**	**No.**	**ASR**
Assault	151	479.3	85	257.0	236	369.0
Blunt trauma	909	2948.5	503	1610.3	1412	2285.2
Falls	1166	3731.0	1124	3236.3	2290	3493.6
Foreign body	278	826.4	82	256.3	360	538.5
Penetrating trauma	585	1814.7	232	690.2	817	1249.4
Strain	373	1148.4	291	900.1	664	1021.8
Thermal	92	302.5	50	156.6	142	229.6
Other	348	1106.0	262	791.1	610	948.7
Total	3902	12356.9	2629	7897.9	6531	10135.6

Source: Raw data supplied by Taranaki Health.
ASR = age standardised rate.

TABLE A.29: NUMBERS AND RATES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES (PER 100,000), NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY AGE GROUPS AND CAUSE OF INJURY

	0-9		10-19		20-29		30-59		60+	
Cause	**No.**	**Rates**	**No.**	**Rates**	**No.**	**Rates**	**No.**	**Rates**	**No.**	**Rates**
Assault	0	0.0	68	663.5	77	880.5	89	334.8	2	16.8
Blunt trauma	201	1894.3	456	4449.6	278	3179.0	403	1516.0	74	620.7
Falls	489	4608.4	619	6040.2	284	3247.6	452	1700.3	446	3741.0
Foreign body	54	508.9	45	439.1	51	583.2	189	711.0	21	176.1
Penetrating trauma	98	923.6	175	1707.7	175	2001.1	280	1053.3	89	746.5
Strain	46	433.5	161	1571.0	159	1818.2	260	978.1	38	318.7
Thermal	23	216.8	23	224.4	38	434.5	54	203.1	4	33.6
Other	108	1017.8	119	1161.2	113	1292.2	195	733.6	75	629.1
Total	1019	9603.2	1666	16256.8	1175	13436.2	1922	7230.2	749	6282.5

Source: Raw data supplied by Taranaki Health.

TABLE A.30: NUMBERS AND PERCENTAGES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES, NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY SEX AND INJURY LOCATION

	Males		Females		Total	
Location	**No.**	**%**	**No.**	**%**	**No.**	**%**
Domestic	1743	44.7	1575	59.9	3318	50.8
Farm	25	0.6	9	0.3	34	0.5
Public area	388	9.9	246	9.4	634	9.7
School	132	3.4	117	4.5	249	3.8
Sports / recreation	677	17.4	275	10.5	952	14.6
Vehicle	379	9.7	235	8.9	614	9.4
Water	3	0.1	4	0.2	7	0.1
Work	472	12.1	115	4.4	587	9.0
Other injury	83	2.1	53	2.0	136	2.1
TOTAL INJURY	3902	100.0	2629	100.0	6531	100.0

Source: Raw data supplied by Taranaki Health.

TABLE A.31: NUMBERS AND AGE-STANDARDISED RATES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES (PER 100,000), NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY SEX AND INJURY LOCATION

	Males		Females		Total	
Location	**No.**	**ASR**	**No.**	**ASR**	**No.**	**ASR**
Domestic	1743	5472.1	1575	4496.4	3318	4991.3
Public area	388	1242.9	246	756.2	634	999.8
School	132	470.0	117	454.0	249	462.9
Sports / recreation	677	2228.2	275	925.1	952	1585.0
Vehicle	379	1229.7	235	737.5	614	986.6
Work	472	1375.5	115	320.2	587	838.8
Other locations	111	338.6	66	208.5	177	271.2
TOTAL	3902	12356.9	2629	7897.9	6531	10135.6

Source: Raw data supplied by Taranaki Health.
ASR = age standardised rate.

TABLE A.32: NUMBERS AND RATES OF TARANAKI HEALTH EMERGENCY DEPARTMENT ATTENDANCES (PER 100,000), NEW PLYMOUTH DISTRICT RESIDENTS IN 2000, BY AGE GROUPS AND INJURY LOCATION

	0-9		10-19		20-29		30-59		60+	
Location	**No.**	**Rates**	**No.**	**Rates**	**No.**	**Rates**	**No.**	**Rates**	**No.**	**Rates**
Domestic	679	6399.0	599	5845.0	493	5637.5	958	3603.8	589	4940.4
Public area	66	622.0	193	1883.3	153	1749.6	165	620.7	57	478.1
School	86	810.5	160	1561.3	0	0.0	3	11.3	0	0.0
Sports / recreation	71	669.1	426	4156.9	235	2687.2	202	759.9	18	151.0
Vehicle	83	782.2	205	2000.4	118	1349.3	164	616.9	44	369.1
Work	0	0.0	47	458.6	150	1715.3	372	1399.4	18	151.0
Other locations	34	320.4	36	351.3	26	297.3	58	218.2	23	192.9
TOTAL	1019	9603.2	1666	16256.8	1175	13436.2	1922	7230.2	749	6282.5

Source: Raw data supplied by Taranaki Health.

TABLE A.33: ACC ENTITLEMENT CLAIMS, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY LOCATION OF INJURY, YEAR ENDING 30 JUNE 2001

A) All entitlement claims

	New Plymouth District		New Zealand	
Location	**Number**	**%**	**Number**	**%**
Work	586	24.9	31710	23.2
Road	140	6.0	6692	4.9
Sport / recreation	461	19.6	19076	13.9
Home / community	874	37.2	30559	22.3
Other	289	12.3	48757	35.6
TOTAL	2350	100.0	136794	100.0

B) "Serious"[32] claims

	New Plymouth District		New Zealand	
Location	**Number**	**%**	**Number**	**%**
Work	1	5.3	46	6.6
Road	9	47.4	284	40.7
Sport / recreation	0	0.0	73	10.5
Home / community	6	31.6	148	21.2
Other	3	15.8	147	21.1
TOTAL	19	100.0	698	100.0

C) Deaths

	New Plymouth District		New Zealand	
Location	**Number**	**%**	**Number**	**%**
Work	0	0.0	51	5.3
Road	11	45.8	464	48.0
Sport / recreation	2	8.3	68	7.0
Home / community	5	20.8	212	21.9
Other	6	25.0	171	17.7
TOTAL	24	100.0	966	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

[32] "Serious" claims are for irreversible injuries requiring ongoing intensive support from ACC.

TABLE A.34: NUMBERS AND RATES (PER 100,000) OF ACC ENTITLEMENT CLAIMS, NEW PLYMOUTH DISTRICT, BY LOCATION OF INJURY, AGE AND SEX, YEAR ENDING 30 JUNE 2001

MALES	0-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75+		TOTAL	
Location	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**ASR**
Work	0	0.0	0	0.0	50	1128.7	76	1885.9	111	2163.7	108	2348.1	67	2189.5	29	1188.5	5	297.6	446	1218.3
Road	0	0.0	2	35.7	28	632.1	17	421.8	18	350.9	15	331.1	5	163.4	2	82.0	0	0.0	87	269.0
Sport / recreation	1	42.2	24	428.6	129	2912.0	74	1836.2	50	974.7	25	551.9	14	457.5	3	123.0	2	119.0	322	1061.4
Home / community	1	42.2	17	303.6	53	1196.4	51	1265.5	82	1598.4	85	1876.4	39	1274.5	27	1106.6	39	2321.4	394	1045.2
Other	1	42.2	3	53.6	36	812.6	28	694.8	20	389.9	18	397.4	17	555.6	18	737.7	6	357.1	147	429.6
TOTAL	3	126.6	46	821.4	296	6681.7	246	6104.2	281	5477.6	251	5540.8	142	4640.5	79	3237.7	52	3095.2	1396	4023.6

FEMALES	0-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75+		TOTAL	
Location	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**ASR**
Work	0	0.0	0	0.0	25	657.9	24	558.1	45	813.7	33	722.1	11	354.8	2	74.1	0	0.0	140	399.2
Road	0	0.0	2	38.0	7	184.2	11	255.8	12	217.0	3	65.6	7	225.8	4	148.1	7	238.1	53	137.8
Sport / recreation	1	44.4	13	247.1	35	921.1	29	674.4	33	596.7	15	328.2	7	225.8	5	185.2	1	34.0	139	439.0
Home / community	3	133.3	20	380.2	30	789.5	57	1325.6	72	1302.0	74	1619.3	56	1806.5	55	2037.0	113	3843.5	480	1065.6
Other	2	88.9	3	57.0	13	342.1	22	511.6	28	506.3	21	459.5	16	516.1	11	407.4	26	884.4	142	341.9
TOTAL	6	266.7	38	722.4	110	2894.7	143	3325.6	190	3435.8	146	3194.7	97	3129.0	77	2851.9	147	5000.0	954	2383.6

TOTAL (M+F)	0-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75+		TOTAL	
Location	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**ASR**
Work	0	0.0	0	0.0	75	911.3	100	1200.5	156	1463.4	141	1551.2	78	1266.2	31	604.3	5	108.2	586	802.9
Road	0	0.0	4	36.8	35	425.3	28	336.1	30	281.4	18	198.0	12	194.8	6	117.0	7	151.5	140	206.4
Sport / recreation	2	43.3	37	340.7	164	1992.7	103	1236.5	83	778.6	40	440.0	21	340.9	8	155.9	3	64.9	461	760.0
Home / community	4	86.6	37	340.7	83	1008.5	108	1296.5	154	1444.7	159	1749.2	95	1542.2	82	1598.4	152	3290.0	874	1062.9
Other	3	64.9	6	55.2	49	595.4	50	600.2	48	450.3	39	429.0	33	535.7	29	565.3	32	692.6	289	389.7
TOTAL	9	194.8	84	773.5	406	4933.2	389	4669.9	471	4418.4	397	4367.4	239	3879.9	156	3040.9	199	4307.4	2350	3222.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

ASR = Age-standardised rate.

TABLE A.35: NUMBERS AND RATES (PER 100,000) OF ACC ENTITLEMENT CLAIMS IN NEW ZEALAND, BY LOCATION OF INJURY, AGE AND SEX, YEAR ENDING 30 JUNE 2001

MALES	0-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75+		TOTAL	
Location	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**ASR**
Work	3	2.0	10	0.3	2914	3.3	5280	1097.6	6177	1813.1	5182	2510.5	3514	3130.7	1119	2926.1	346	1451.2	24545	1074.0
Road	38	25.9	160	19.1	1239	37.7	938	466.7	788	322.1	481	320.3	281	290.6	126	234.0	80	163.4	4131	190.6
Sport / recreation	14	9.5	493	20.4	4551	159.2	4052	1714.1	2457	1391.4	1177	998.6	447	711.1	160	372.2	67	207.5	13418	628.5
Home / community	212	144.4	539	69.4	1905	121.1	2362	717.5	2934	811.1	2335	1192.4	1705	1410.7	1095	1419.8	1053	1420.0	14140	592.3
Other	714	486.3	3939	421.9	5764	981.3	4215	2171.0	3598	1447.4	2696	1462.3	1900	1628.8	1601	1582.1	1010	2076.3	25437	1194.8
TOTAL	981	668.1	5141	531.2	16373	1302.6	16847	6166.9	15954	5785.2	11871	6484.0	7847	7171.9	4101	6534.3	2556	5318.4	81671	3680.2

FEMALES	0-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75+		TOTAL	
Location	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**ASR**
Work	0	0.0	3	0.0	919	1.2	1403	322.5	1989	460.5	1914	802.3	791	1137.5	117	615.1	25	93.4	7161	312.5
Road	21	15.1	127	18.5	601	28.6	455	210.9	430	149.3	394	173.5	214	234.1	152	166.4	167	121.3	2561	106.2
Sport / recreation	11	7.9	387	18.1	1383	129.7	1389	485.3	1215	455.9	698	490.1	317	414.8	162	246.5	96	129.3	5658	251.1
Home / community	163	117.5	506	70.3	995	117.7	1872	349.1	2579	614.4	2618	1040.3	2003	1555.8	1770	1557.7	3905	1412.8	16411	515.1
Other	597	430.5	2964	401.5	2661	701.0	2831	933.7	3252	929.2	3197	1311.8	2634	1899.9	2393	2048.4	2786	1910.1	23315	926.3
TOTAL	792	571.1	3987	508.4	6559	978.2	7950	2301.5	9465	2609.4	8821	3817.9	5959	5242.2	4594	4634.1	6979	3667.0	55106	2111.1

TOTAL (M+F)	0-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		75+		TOTAL	
Location	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**ASR**
Work	3	1.1	13	0.2	3833	2.3	6683	696.3	8166	1121.5	7096	1653.2	4305	2125.9	1236	1731.1	371	610.7	31706	683.3
Road	59	20.7	287	18.8	1840	33.3	1393	334.2	1218	233.8	875	246.6	495	262.1	278	199.1	247	137.4	6692	147.3
Sport / recreation	25	8.8	880	19.3	5934	144.8	5441	1077.9	3672	913.1	1875	743.4	764	561.7	322	307.2	163	159.1	19076	435.1
Home / community	375	131.3	1045	69.9	2900	119.4	4234	526.8	5513	710.5	4953	1116.1	3708	1483.9	2865	1491.1	4958	1415.6	30551	552.7
Other	1311	459.2	6903	412.0	8425	844.4	7046	1530.5	6850	1182.5	5893	1386.8	4534	1765.5	3994	1823.2	3796	1973.4	48752	1057.5
TOTAL	1773	621.0	9128	520.1	22932	1144.2	24797	4165.7	25419	4161.4	20692	5146.0	13806	6199.1	8695	5551.7	9535	4296.2	136777	2875.9

Source: ACC Scheme Reporting and Forecasting Unit 2001.

ASR = Age-standardised rate. Note: The age of 7 males and 10 females was unknown and therefore these claims have been excluded from the above table.

TABLE A.36: NUMBER AND PERCENTAGE OF ACC ENTITLEMENT CLAIMS FOR ROAD INJURIES, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY TYPE OF VEHICLE, YEAR ENDING 30 JUNE 2001

	New Plymouth District		New Zealand	
Vehicle type	**No.**	**%**	**No.**	**%**
Car	62	49.6	2878	55.6
Motorcycle	24	19.2	880	17.0
Truck	19	15.2	501	9.7
Bus	2	1.6	40	0.8
Other vehicle	3	2.4	79	1.5
Cycling	8	6.4	384	7.4
Pedestrian	4	3.2	325	6.3
Other	3	2.4	90	1.7
Unknown	15	12.0	1515	29.3
Total	140	112.0	6692	129.3
Total, known	125	100.0	5177	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

TABLE A.37: NUMBER AND PERCENTAGE OF ACC ENTITLEMENT CLAIMS FOR TOP TEN SPORTS / RECREATION INJURIES, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY TYPE OF SPORT, YEAR ENDING 30 JUNE 2001

New Plymouth District			New Zealand		
Type of sport / recreation	**No.**	**%**	**Type of sport / recreation**	**No.**	**%**
Rugby	86	18.7	Rugby	3907	20.5
General recreation	79	17.1	General recreation	3196	16.8
Netball	37	8.0	Netball	1350	7.1
Soccer	32	6.9	Soccer	1305	6.8
Basketball	17	3.7	Skiing - snow	904	4.7
Cricket	16	3.5	Touch rugby	646	3.4
Skateboarding	14	3.0	Cricket	478	2.5
Touch rugby	14	3.0	Tennis	449	2.4
Squash	12	2.6	Rugby league	440	2.3
Golf	11	2.4	Basketball	413	2.2
All other sports	143	31.0	All other sports	5988	31.4
TOTAL	461	100.0	TOTAL	19076	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001. Based on data for top ten sports in each region.

TABLE A.38: ACC ENTITLEMENT CLAIMS FOR WORKPLACE INJURIES BY INDUSTRY TYPE, YEAR ENDING 30 JUNE 2001

	New Plymouth District			New Zealand		
Industry	No.	%	Rate per 100,000 workers	No.	%	Rate per 100,000 workers
Agriculture, forestry & fishing	127	21.7	4552.0	4766	15.0	3175.1
Manufacturing	115	19.6	2547.1	6415	20.2	2758.8
Construction	70	11.9	3472.2	3622	11.4	3851.6
Retail trade	46	7.8	1165.1	2069	6.5	1034.6
Property and business services	27	4.6	1039.3	1414	4.5	876.3
Transport and storage	24	4.1	2461.5	1717	5.4	2761.2
Health and community services	21	3.6	900.9	1427	4.5	1321.1
Cultural and recreational services	13	2.2	3095.2	650	2.0	1918.8
Personal and other services	11	1.9	892.1	770	2.4	1247.5
Accommodation, cafés & restaurants	10	1.7	868.1	669	2.1	963.9
Education	9	1.5	468.8	600	1.9	572.4
Wholesale trade	9	1.5	699.3	868	2.7	919.4
Government administration	7	1.2	760.0	464	1.5	690.8
Mining	4	0.7	1084.0	132	0.4	3230.5
Finance and insurance	4	0.7	603.3	189	0.6	358.7
Communication services	2	0.3	542.0	280	0.9	1146.3
Electricity, gas and water supply	1	0.2	282.5	168	0.5	1885.5
Unknown	86	14.7	4793.8	5490	17.3	2952.4
Total	586	100.0	1976.1	31710	100.0	1848.3

Source: Claims data from ACC Scheme Reporting and Forecasting Unit 2001. Industry data from Statistics New Zealand 2001 (1996 census data) (see Appendix Table A2).

TABLE A.39: ACC ENTITLEMENT CLAIMS BY INJURY DIAGNOSES AND LOCATION, NEW PLYMOUTH DISTRICT, YEAR ENDING 30 JUNE 2001

Location	Work		Road		Sport / recreation		Home / community		Other		Total	
Injury diagnosis	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Soft tissue injury	300	51.2	43	30.7	279	60.5	414	47.4	153	52.9	1189	50.6
Laceration, puncture wound	59	10.1	14	10.0	11	2.4	118	13.5	24	8.3	226	9.6
Fracture / dislocation	72	12.3	67	47.9	144	31.2	254	29.1	68	23.5	605	25.7
Concussion / brain injury	2	0.3	5	3.6	3	0.7	3	0.3	4	1.4	17	0.7
Dental injuries	0	0.0	1	0.7	2	0.4	0	0.0	4	1.4	7	0.3
Foreign bodies	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	1	0.0
Gradual Process	63	10.8	1	0.7	12	2.6	37	4.2	4	1.4	117	5.0
Burns / scalds	5	0.9	0	0.0	0	0.0	11	1.3	2	0.7	18	0.8
Other & multiple injuries	85	14.5	9	6.4	10	2.2	36	4.1	30	10.4	170	7.2
Total	586	100.0	140	100.0	461	100.0	874	100.0	289	100.0	2350	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

TABLE A.40: ACC ENTITLEMENT CLAIMS BY INJURY DIAGNOSES AND LOCATION, NEW ZEALAND, YEAR ENDING 30 JUNE 2001

Location	Work		Road		Sport / recreation		Home / community		Other		Total	
Injury diagnosis	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Soft tissue injury	16083	50.7	2217	33.1	11590	60.8	14041	45.9	25863	53.0	69794	51.0
Laceration, puncture wound	3398	10.7	921	13.8	559	2.9	3746	12.3	4093	8.4	12717	9.3
Fracture / dislocation	3910	12.3	2733	40.8	5886	30.9	9194	30.1	14619	30.0	36342	26.6
Concussion / brain injury	122	0.4	249	3.7	151	0.8	197	0.6	221	0.5	940	0.7
Dental injuries	35	0.1	42	0.6	102	0.5	142	0.5	165	0.3	486	0.4
Foreign bodies	17	0.1	0	0.0	1	0.0	13	0.0	15	0.0	46	0.0
Gradual Process	3375	10.6	66	1.0	317	1.7	1124	3.7	740	1.5	5622	4.1
Burns / scalds	381	1.2	13	0.2	26	0.1	540	1.8	312	0.6	1272	0.9
Other & multiple injuries	4389	13.8	451	6.7	444	2.3	1562	5.1	2729	5.6	9575	7.0
Total	31710	100.0	6692	100.0	19076	100.0	30559	100.0	48757	100.0	136794	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

TABLE A.41: ACC ENTITLEMENT CLAIMS BY INJURY SITES AND LOCATION, NEW PLYMOUTH DISTRICT, YEAR ENDING 30 JUNE 2001

Location	Work		Road		Sport / recreation		Home / community		Other		Total	
Injury site	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Back / neck / spine	127	21.7	20	14.3	36	7.8	135	15.4	14	4.8	332	14.1
Chest / internal / torso / pelvis	15	2.6	16	11.4	10	2.2	37	4.2	12	4.2	90	3.8
Head / face / dental	59	10.1	20	14.3	19	4.1	51	5.8	29	10.0	178	7.6
Upper limbs	213	36.3	39	27.9	125	27.1	262	30.0	83	28.7	722	30.7
Lower limbs	151	25.8	28	20.0	260	56.4	367	42.0	132	45.7	938	39.9
Other & multiple injuries	21	3.6	17	12.1	11	2.4	22	2.5	19	6.6	90	3.8
Total	586	100.0	140	100.0	461	100.0	874	100.0	289	100.0	2350	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

TABLE A.42: ACC ENTITLEMENT CLAIMS BY INJURY SITES AND LOCATION, NEW ZEALAND, YEAR ENDING 30 JUNE 2001

Location	Work		Road		Sport / recreation		Home / community		Other		Total	
Injury site	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Back / neck / spine	6753	21.3	1041	15.6	1586	8.3	5103	16.7	4715	9.7	19198	14.0
Chest / internal / torso / pelvis	1098	3.5	690	10.3	395	2.1	1237	4.0	1015	2.1	4435	3.2
Head / face / dental	3170	10.0	1213	18.1	923	4.8	1862	6.1	3292	6.8	10460	7.6
Upper limbs	11413	36.0	1479	22.1	5712	29.9	9408	30.8	18757	38.5	46769	34.2
Lower limbs	7923	25.0	1695	25.3	10140	53.2	12106	39.6	19051	39.1	50915	37.2
Other & multiple injuries	1353	4.3	574	8.6	320	1.7	843	2.8	1927	4.0	5017	3.7
Total	31710	100.0	6692	100.0	19076	100.0	30559	100.0	48757	100.0	136794	100.0

Source: ACC Scheme Reporting and Forecasting Unit 2001.

TABLE A.43: ACC ENTITLEMENT CLAIMS EXPENDITURE, NEW PLYMOUTH DISTRICT AND NEW ZEALAND, BY INJURY LOCATION, YEAR ENDING 30 JUNE 2001

	New Plymouth District			New Zealand		
Location	**Expenditure ($)**	**%**	**Average cost per claim ($)**	**Expenditure ($)**	**%**	**Average cost per claim ($)**
Work	3,052,387	26.0	5,209	365,402,982	34.7	11,523
Road	2,728,122	23.3	19,487	151,760,874	14.4	22,678
Sport / recreation	1,497,882	12.8	3,249	220,927,776	21.0	11,581
Home / community	2,986,490	25.5	3,417	112,490,186	10.7	3,681
Other	1,462,316	12.5	5,060	201,492,772	19.2	4,133
Total	11,727,197	100.0	4,990	1,052,074,590	100.0	7,691

Source: ACC Scheme Reporting and Forecasting Unit 2001.

TABLE A.44: NUMBERS AND PERCENTAGES OF DIFFERENT TYPES OF ROAD-USER CASUALTIES INVOLVED IN INJURY CRASHES ON URBAN AND RURAL ROADS, NEW PLYMOUTH DISTRICT 1996-2000

	Urban		Rural		Total	
Type of road user	**No.**	**%**	**No.**	**%**	**No.**	**%**
Car / van drivers	296	43.0	312	53.0	608	47.6
Car / van passengers	142	20.6	175	29.7	317	24.8
Motor-cyclists	99	14.4	60	10.2	159	12.4
Pedestrians	80	11.6	5	0.8	85	6.7
Cyclists	69	10.0	11	1.9	80	6.3
Heavy vehicles	3	0.4	26	4.4	29	2.3
TOTAL	689	100.0	589	100.0	1278	100.0

Source: Data from LTSA 2001a, Figures 6 and 7.

TABLE A.45: NUMBERS AND PERCENTAGES OF MOVEMENT TYPES INVOLVED IN INJURY CRASHES ON URBAN AND RURAL ROADS, NEW PLYMOUTH DISTRICT 1996-2000

	Urban		Rural		Total	
Type of movement	**No.**	**%**	**No.**	**%**	**No.**	**%**
Crossing / turning	215	41.3	77	21.0	292	33.0
Bend - lost control / head on	69	13.3	147	40.2	216	24.4
Rear end / obstruction	120	23.1	52	14.2	172	19.4
Straight - lost control / head on	22	4.2	64	17.5	86	9.7
Pedestrian vs. vehicle	77	14.8	5	1.4	82	9.3
Overtaking	15	2.9	19	5.2	34	3.8
Other	2	0.4	2	0.5	4	0.5
TOTAL	520	100.0	366	100.0	886	100.0

Source: Data from LTSA 2001a, Figures 20 and 21.

TABLE A.46: NUMBERS AND PERCENTAGES OF CONTRIBUTING FACTORS TO INJURY CRASHES ON URBAN AND RURAL ROADS, NEW PLYMOUTH DISTRICT 1996-2000

	Urban		Rural		Total	
Type of movement	**No.**	**%**	**No.**	**%**	**No.**	**%**
Poor observation	179	24.3	98	16.0	277	20.5
Failed to give way / stop	212	28.8	64	10.5	276	20.5
Too fast	48	6.5	68	11.1	116	8.6
Alcohol involved	51	6.9	49	8.0	100	7.4
Poor handling	28	3.8	71	11.6	99	7.3
Road factors	27	3.7	69	11.3	96	7.1
Poor judgement	30	4.1	31	5.1	61	4.5
Pedestrian factors	48	6.5	4	0.7	52	3.9
Vehicle factors	13	1.8	31	5.1	44	3.3
Failed to keep left	7	0.9	37	6.1	44	3.3
Fatigue	5	0.7	36	5.9	41	3.0
Incorrect lanes / position	20	2.7	21	3.4	41	3.0
Cyclist factors	34	4.6	2	0.3	36	2.7
Disabled / old / ill	15	2.0	13	2.1	28	2.1
Overtaking	9	1.2	11	1.8	20	1.5
Weather	11	1.5	6	1.0	17	1.3
TOTAL	737	100.0	611	100.0	1348	100.0

Source: Data from LTSA 2001a, Figures 24 and 25.

TABLE A.47: PERCENTAGE OF SEAT BELT, CHILD RESTRAINT AND CYCLE HELMET USE IN TARANAKI AND NEW ZEALAND, 1995-2001

	1995	1996	1997	1998	1999	2000	2001
TARANAKI							
Front seat adults	n/a	86	91	96	98	95	93
Rear seat adults	n/a	51	63	64	71	66	n/a
Child restraints	87	n/a	95	75	82	77	n/a
Cycle helmets	n/a	n/a	93	97	96	94	95
NEW ZEALAND							
Front seat adults	n/a	86	88	88	89	90	92
Rear seat adults	n/a	55	56	62	67	76	n/a
Child restraints	80	n/a	74	76	75	79	n/a
Cycle helmets	n/a	n/a	94	95	95	93	94

Source: Data from LTSA 2001b.

Note: n/a=data not available

TABLE A.48: NUMBERS AND RATES (PER 10,000 POPULATION) OF VIOLENT AND SEXUAL CRIMES RECORDED BY POLICE, NEW PLYMOUTH AREA AND NEW ZEALAND, 1998-2000

NEW PLYMOUTH	**98/99**		**99/00**		**00/01**	
Type of crime	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
Homicide	0	0.0	6	0.9	2	0.3
Robbery	31	4.5	14	2.0	17	2.6
Grievous assaults	36	5.2	53	7.7	47	7.1
Serious assaults	288	41.8	283	41.1	284	42.9
Minor assaults	235	34.1	261	37.9	231	34.9
Other violence	176	25.5	159	23.1	186	28.1
TOTAL VIOLENT CRIMES	*776*	*111.2*	*776*	*112.6*	*767*	*115.9*
Sexual violation	13	1.9	13	1.9	12	1.8
Other sexual attacks	35	5.1	26	3.8	25	3.8
Other sexual offences	25	3.6	19	2.8	21	3.2
TOTAL SEXUAL CRIMES	*73*	*10.6*	*58*	*8.4*	*58*	*8.8*
TOTAL CRIMES	***7383***	***1071.5***	***7227***	***1048.8***	***6456***	***975.7***
NEW ZEALAND	**1998**		**1999**		**2000**	
Type of crime	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
Homicide	99	0.3	99	0.3	99	0.3
Robbery	2004	5.3	1585	4.1	1779	4.6
Grievous assaults	2512	6.6	2495	6.5	2714	7.1
Serious assaults	13305	35.0	13463	35.2	14154	36.8
Minor assaults	13956	36.7	13229	34.6	13309	34.6
Other violence	8565	22.5	8817	23.0	9518	24.8
TOTAL VIOLENT CRIMES	*40441*	*106.3*	*39688*	*103.7*	*41573*	*108.2*
Sexual violation	816	2.1	673	1.8	791	2.1
Other sexual attacks	1333	3.5	1312	3.4	1316	3.4
Other sexual offences	1144	3.0	1041	2.7	1207	3.1
TOTAL SEXUAL CRIMES	*3293*	*8.7*	*3026*	*7.9*	*3314*	*8.6*
TOTAL CRIMES	***461677***	***1213.2***	***438074***	***1145.1***	***427230***	***1111.8***

Source: Data supplied by New Plymouth Police.

Note: Data for New Plymouth are for financial years, whereas data for New Zealand are for calendar years.

APPENDIX B

INTERVIEW SCHEDULE USED FOR COMMUNITY CONSULTATION

New Plymouth District

Community Injury Prevention Project
Needs Assessment

2001

Survey Questionnaire

ID number……

Why is this needs assessment being done?

Injuries are a major cause of preventable death and suffering throughout New Zealand and the Taranaki District is no exception. ACC paid claims data for 1999/2000 show that, between 1999/2000, 3,654 people suffered moderate to serious injuries in the Taranaki region while another 30 died from their injuries.

Earlier this year, a small group of New Plymouth-based health and community professionals came together and successfully bid for ACC funding to conduct an injury prevention needs assessment in the New Plymouth District. The Community Injury Prevention Advisory Group, as it is now more formally known, consists of Health, ACC and New Plymouth Council representatives. This Group, led by the Public Health Manager, Tui Ora, is now managing the community consultation, injury information data collection process and report preparation process.

I have been contracted by the Advisory Group to conduct the needs assessment on their behalf and prepare a report based on the information gathered. A copy of that report will be sent to all the contributors for comment and feedback. The needs assessment also entails an analysis of health, census and other relevant data and a review of the literature on injury prevention. The needs assessment covers both intentional and unintentional injury.

What is the needs assessment for?

The aim of the injury prevention needs assessment is to:

- Identify injury-related data from local sources
- Establish the main types of injuries that are occurring in the New Plymouth District
- Establish who is being injured (e.g. children, the elderly)
- Why, how and where are the injuries occurring
- Identify what people think could be done to reduce these injuries.

Confidentiality

Results of this interview will not be reported on an individual basis.

For further information about the community injury prevention needs assessment please contact:

Ngamata Skipper Matthews
Public Health Manager
Tui Ora Ltd
Barrett Street Complex
New Plymouth
Phone: 06-759-4064

Needs Assessment Questions

Name of organisation:……

Q1 In what way are you / your organisation involved in dealing with injuries in the New Plymouth District?

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Based on your personal and professional experience within the new Plymouth District:

Q2 Who, or which groups, is/are prone to injury? e.g. children, older people, different ethnic groups.

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Q3 What kinds of injuries are we talking about, e.g. fractures, head injuries?

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Q4 What is the main cause of the injuries you mentioned, e.g. falls, vehicle, violence?

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Q5 Where do these injuries most frequently occur e.g. in the home, on the road?

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Q6 When do these injuries mainly occur e.g. daytime, nighttime?

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Q7 Of the injuries you've spoken of, which do you consider are of highest priority to try and prevent?

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Q8 To your knowledge, what is already being done to prevent this / these types of injuries?

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Q9 What more could be done to prevent this / these types of injuries?

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Q10 Do you have any information or statistics that you could give me to help in the preparation of the needs assessment report?

Yes……..☐

No……...☐

Q11 What is this data?

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Copy obtained…….☐

Will send on later……☐

Q12 What do you think of taking a community based approach to preventing injuries? (Will explain if required)

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Q13 Is there anything else that we haven't covered here that you would like to add?

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Thank you for talking to me today.