



Future Focus

Section 10 Injuries

2010
Population Health | Health Waikato



Injuries

10.1. Introduction

This *Future Focus* section contains a profile of preventable and unintentional injury within the Waikato DHB region. The section begins by presenting available mortality and hospitalisation data on preventable/unintentional injuries by area. Next, under ‘Population structure’, motor vehicle related injury, external cause mortality and drowning are discussed. Health priorities are outlined for the Waikato DHB region in relation to preventable and unintentional injuries. This is followed by a very brief comment on health services, wider socio-economic and cultural factors, and national and regional strategic policy development related to injuries. Finally, the ‘Evidence-based interventions’ section has guidance to support reducing the incidence of preventable and unintentional injury with a focus on lead and support agencies, regulatory interventions and collaboration.

These are discussed under the following headings:

[10.1. Introduction](#)

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By viewing the data in a variety of ways, such as by age, ethnicity, then cause, it is possible to detect significant factors in cause of injury and those most at risk. Where available, national data is also presented to allow for more complete comparisonsⁱ.

Interventions to reduce the incidence of preventable/unintentional injuries need to

ⁱ In an attempt to ensure the quality of injury prevention analysis, steps have been taken to prevent over-counting of injury incidence, including that accidents are only counted once, and that only accidents with a primary diagnosis of injury are included, that is, readmission is not counted and only accidents with the injury codes (ICD 10 S00 – T78) as primary diagnosis are included. External cause injuries are taken from those listed in the report *Impact of Injury in New Zealand* (Stephenson et al, 2005). It is intended that analysis of injury data will enable Waikato DHB Population Health to target ethnic populations, age groups and territorial authorities with the highest apparent injury prevention needs.

acknowledge and reflect consideration of the wider determinants of health to be effective.

10.2. Preventable and unintentional injury

From a global perspective, New Zealand is lagging behind other countries in preventing injuries¹. Some injuries are a normal part of life, especially for children exploring new environments. However, most serious injuries and deaths are foreseeable and therefore preventable.

Falls remain the number one cause of injury hospitalisation for the five-year period (2002 – 2007), for both Māori and non-Māori across all territorial authorities (

Table 1). Motor vehicle transport crashes (Motor VTCs) are generally the second most common cause of injury, often followed by cut/pierce injuries. In some instances, cut/pierce injuries exceed motor vehicle transport crashes however, both generally have similar rates.

Table 1: Top three hospitalisation(1) causes for injuries all ages by Māori and non-Māori, territorial authority and Waikato DHB, July 2002 - June 2007.

Area	Māori			Non-Māori		
	1st	2nd	3rd	1st	2nd	3rd
Thames-Coromandel	Falls 81	Motor VTC 33	Cut/Pierce 22	Falls 725	Motor VTC 194	Cut/Pierce 107
Hauraki	Falls 49	Motor VTC 25	Cut/Pierce 21	Falls 378	Motor VTC 123	Other LTC 69
Waikato	Falls 297	Motor VTC 156	Cut/Pierce 134	Falls 705	Motor VTC 244	Cut/Pierce 187
Matamata-Piako	Falls 68	Motor VTC 44	Cut/Pierce 43	Falls 635	Motor VTC 184	Other LTC 155
Hamilton	Falls 628	Assaults 269	Motor VTC, Cut/Pierce 240	Falls 3047	Motor VTC 796	Self-Inflicted 640
Waipa	Falls 132	Motor VTC 57	Assaults 45	Falls 1045	Motor VTC 311	Other LTC 235
Otorohanga	Falls 42	Motor VTC 25	Cut/Pierce 18	Falls 144	Other LTC 65	Motor VTC 54
South Waikato	Falls 132	Cut/Pierce 59	Motor VTC 52	Falls 392	Motor VTC 135	Other LTC 89
Waitomo	Falls 87	Cut/Pierce 68	Motor VTC 45	Falls 186	Other LTC 85	Cut/Pierce 59
Ruapehu (part)	Falls 89	Motor VTC 45	Cut/Pierce 30	Falls 225	Other LTC 64	Cut/Pierce 54
Waikato DHB	Falls 1605	Motor VTC 722	Cut/Pierce 673	Falls 7482	Motor VTC 2146	Cut/Pierce 1528

Note: (1) Readmission is not counted and only accidents with the injury codes (ICD 10 S00-T78) as primary diagnosis are included.

Sources: Waikato DHB, various hospital discharge collections.

Of note is that for non-Māori, other land transport crashes (LTCs) are the second or third most common cause of injury in all territorial authorities except for Hamilton City and Thames-Coromandel and Waikato.

The only other variation from the norms described above, are that assaults for Māori are the second and third most common cause of injuries in Hamilton City and Waipa territorial authorities respectively, and self-inflicted injury is the third most common in non-Māori in Hamilton City.

Table 2 below first describes the number of injuries by age and territorial authority, then the rates per 100,000 of population for comparison.

Table 2: Total hospitalisation(1) for injuries summary by age groups, territorial authority and Waikato DHB, July 2002 - June 2007.

Area	Number for 5 Years (July 2002-June 2007)						
	0 - 4 years	5 - 14 years	15 - 24 years	25 - 44 years	25 - 64 years	65+ years	Total
Thames-Coromandel	82	195	257	422	383	597	1936
Hauraki	82	159	185	241	235	280	1182
Waikato	275	583	636	870	545	430	3339
Matamata-Piako	130	302	470	508	333	397	2140
Hamilton	822	1447	2248	2516	1373	1787	10,193
Waipa	206	488	636	904	530	687	3451
Otorohanga	47	97	126	156	116	92	634
South Waikato	125	298	283	387	244	248	1585
Waitomo	64	133	218	253	140	149	957
Ruapehu (part)	56	124	176	203	151	191	901
Waikato DHB	1889	3826	5235	6460	4050	4858	26,318
Rate per 100,000 people per year(2)							
Thames-Coromandel	1192	1201	2272	1491	980	2196	1502
Hauraki	1462	1134	2053	1197	1038	1981	1382
Waikato	1585	1527	2328	1491	1029	2000	1548
Matamata-Piako	1201	1226	2588	1293	944	1710	1413
Hamilton	1745	1568	1901	1377	1066	2792	1610
Waipa	1432	1460	2563	1622	1033	2342	1651
Otorohanga	1352	1264	1999	1219	1084	2000	1391
South Waikato	1363	1372	2015	1306	946	1812	1390
Waitomo	1661	1568	3738	2001	1263	2786	2027
Ruapehu (part)	1730	1568	3494	1864	1348	3423	2052
Waikato DHB	1550	1446	2181	1434	1042	2329	1572

Notes: (1) Readmission is not counted and only accidents with the injury codes (ICD 10 S00-T78) as primary diagnosis are included. (2) A linear interpolation between 2001 population and 2006 population was used to get the required population for March 2005.

Sources: Waikato DHB, various hospital discharge collections. Statistics New Zealand, 2001 and 2006 Census of Population and Dwellings.

When actual numbers are compared by territorial authority and age category, Hamilton City stands out, as would be expected due to having the greatest population. The rate for Hamilton City is highest for those aged 5 - 14 years and high in 0 - 4 years and 65 years and over age groups as well. Ruapehu (part) and Waitomo rates are the highest

across all ages (Table 2). For youth, Hamilton City is the lowest, while for 0 - 4 years, Thames-Coromandel is lowest and in the 5 -14 years age group, Hauraki is the lowest.

When reviewing data by age category, certain injury types emerge as being more commonly experienced by some ages than others (Table 3). Falls were the most common injury type for all age groups for this five year period, except those aged 15 - 24 years, for which there were a greater number of injuries from motor vehicle traffic crashes, than falls.

Table 3: Number of hospitalisation(I) causes for the total population for injuries by cause and age category, Waikato DHB, July 2002 - June 2007.

External cause (total population)	0 - 4 years	5 - 14 years	15 - 24 years	25 - 44 years	25 - 64 years	65+ years	Total
Falls	668	1765	790	1095	1216	3553	9087
Motor vehicle traffic crashes	66	256	892	888	476	290	2868
Cut/pierce	76	287	594	730	409	105	2201
Struck by/against	113	362	495	499	233	113	1815
Self-inflicted	1	59	556	613	223	34	1486
Assault	23	25	532	620	163	20	1383
Other land transport crashes	30	233	368	449	223	60	1363
Other mechanism, specified	325	191	144	276	236	88	1260
Over exertion	6	58	100	271	182	185	802
Natural/environmental	63	96	113	188	165	73	698
Poisoning	247	30	98	148	74	58	655
Machinery	10	16	136	242	164	49	617
Pedal cyclist,other	39	281	118	89	63	19	609
Unspecified mechanism	52	53	91	119	101	107	523
Fire, flames/hot substances	103	46	78	107	42	30	406
Other	67	68	130	126	80	74	545
Total	1889	3826	5235	6460	4050	4858	26,318

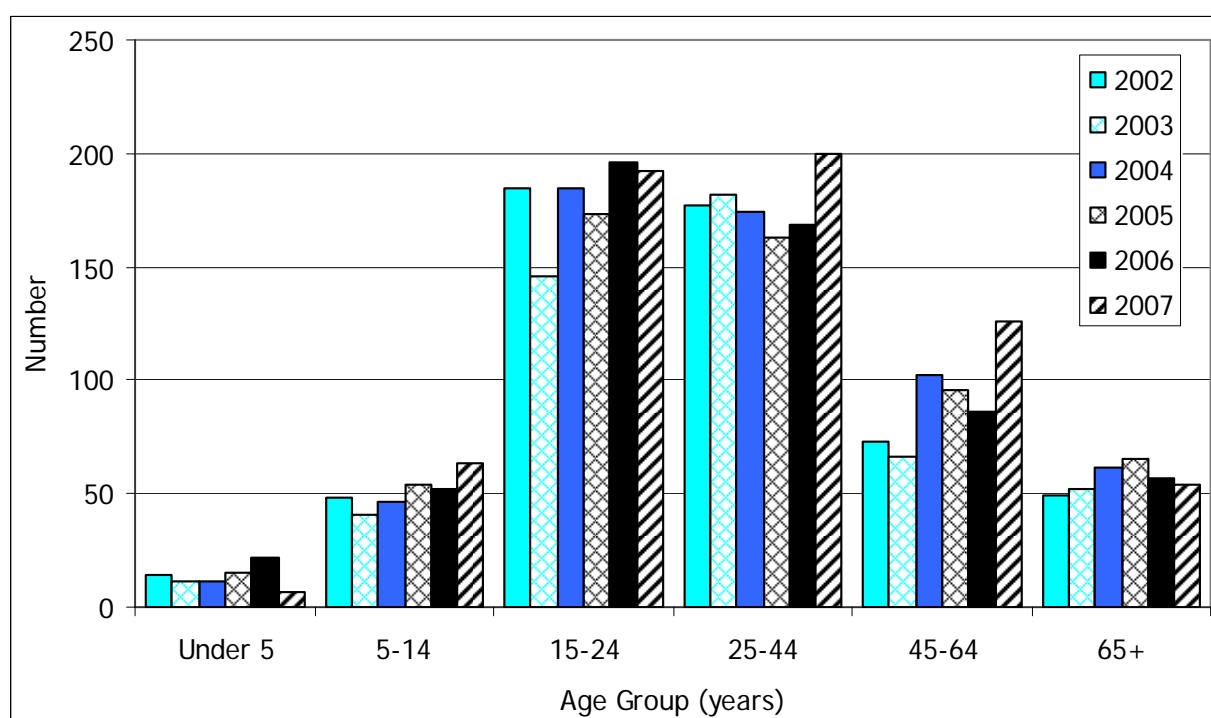
Note: (I) Readmission is not counted and only accidents with the injury codes (ICD 10 S00-T78) as primary diagnosis are included.

Source: Waikato DHB, various hospital discharge collections.

10.2.1. Motor vehicle related injury

As noted above, motor vehicle traffic crashes are often the second or third most common cause of injury across all territorial authorities. Of these, the numbers for those aged 15 - 44 years have exceeded all other age categories for the five-year period, often by more than three times the number. It is also worth noting that trends by year are fairly consistent, that is, each year numbers rise and fall similarly across each age category. This might suggest that certain interventions in one year were more or less effective than ones in other years, over the five-year period.

Figure 1: Total hospitalisations(I) for motor vehicle traffic crash injuries by age group, Waikato DHB, July 2002 - June 2007.



Note: (I) Readmission is not counted and only accidents with the injury codes (ICD 10 S00-T78) as primary diagnosis are included.

Source: Waikato DHB, various hospital discharge collections.

Land Transport New Zealand estimates use of safety belts, including correct use of child restraints, can reduce road traffic mortality or morbidity by up to 40%². Yet despite the consistently high number of injuries from motor vehicle traffic crashes, safety belt wearing rates (front seat) for Environment Waikato and Hamilton metropolitan areas, per the Ministry of Transport² Annual Survey, are generally higher than national rates and Hamilton metropolitan area's rates slightly higher than for the region (Table 4).

Table 4: Front seat safety belt wearing rates (%), annual survey, by Environment Waikato, Hamilton metropolitan area and New Zealand, 2001 - 2007.

Area	2001	2002	2003	2004	2005	2006	2007
Environment Waikato	93	94	93	94	96	94	95
Hamilton metropolitan area	96	91(I)	96	96	99	98	95
New Zealand	92	92	92	94	95	95	95

Note: (I) This variation in average rates for Hamilton Metropolitan area is mostly likely due to the small sample size in 2002.

Source: Ministry of Transport (2006), Car Restraint Survey, Retrieved January 24, 2008 from <http://www.transport.govt.nz/safety-belt-statistics-front-seat-200-1/>.

The use of child restraints has been less consistent than for safety belt wearing, but rates equal or exceed overall national rates (Table 5).

Table 5: Child restraint wearing rates (%), annual survey, by Environment Waikato, Hamilton metropolitan area and New Zealand, 2001 - 2006.

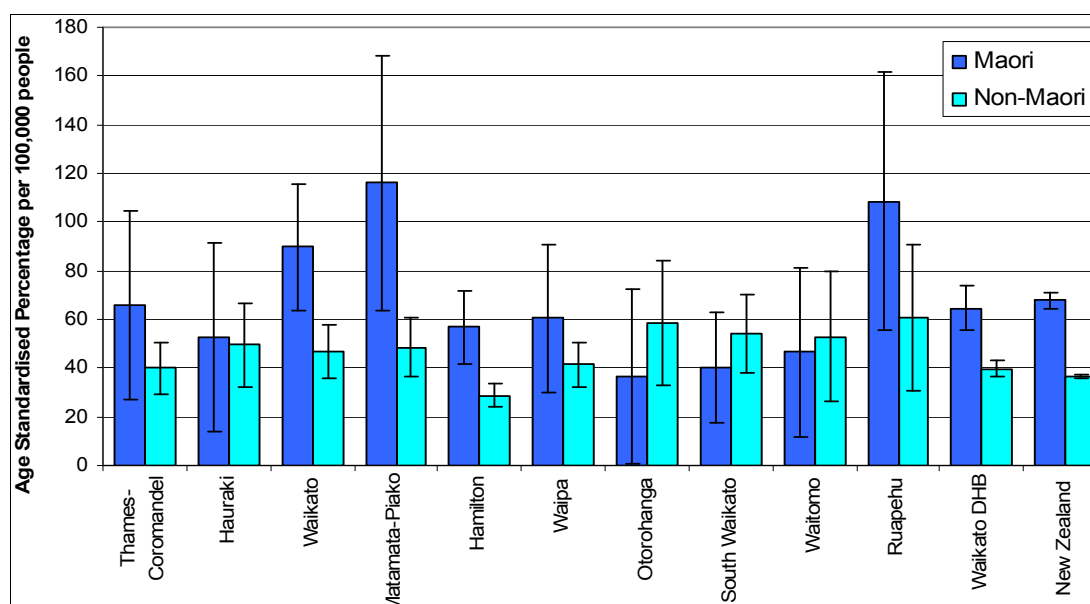
Area	2001	2002	2003	2004	2005	2006
Environment Waikato	81	88	90	87	89	87
Hamilton metropolitan area	84	90	95	80	94	87
New Zealand	82	86	86	87	89	91

Source: Ministry of Transport (2006), Car Restraint Survey, Retrieved January 24, 2008 from <http://www.transport.govt.nz/child-restraint-statistics-2006-1/>

10.2.2. External cause injury mortality

Mortality rates for external cause injuries show clear inequalities between Māori and non-Māori (Figure 2). Māori mortality rates are higher than that of non-Māori both in the Waikato DHB region as a whole and within all territorial authorities excluding Otorohanga, South Waikato and Waitomo.

Figure 2: Age standardised(I) mortality rate per 100,000 people, external cause(II), by ethnicity, territorial authority, Waikato DHB and New Zealand, 1999 - 2003.



Notes: Lines Indicate the 95% Confidence Interval. (I) Standardised to World Health Organisation Standard Population using the five year average for 1999-2003. (II) ICD9 E800-E999 (1999), ICD10 V00-Y99 (2000-2003)(III).

Source: New Zealand Health Information Service, National Minimum Data Set – Mortality. Statistics New Zealand, 2001 Census of Population and Dwellings.

10.2.3. Drownings

Drownings mortality data within the Waikato DHB region shows Māori have slightly higher numbers of drownings compared to other ethnic groups (Table 6). The number of Māori drownings within the Waikato DHB region, were also higher than the number of Māori drownings nationally. In the Waikato DHB region, the greatest number of drownings occurs in the 0 - 14 years age group.

Table 6: Number of total deaths by drowning(I), by ethnicity, territorial authority, Waikato DHB, 1999 - 2003.

Area	Māori	Pacific	Other	Total
Thames-Coromandel	2	0	2	4

Hauraki	1	0	1	2
Waikato	4	0	3	7
Matamata-Piako	0	0	0	0
Hamilton	9	0	6	15
Waipa	0	0	1	1
Otorohanga	0	0	1	1
South Waikato	0	0	1	1
Waitomo	1	0	1	2
Ruapehu (part)	1	0	1	2
Waikato DHB	18	0	17	35
New Zealand	100	22	179	301

Note: (I) 1999 ICD-9 E910, 2000-2003 ICD-10 W65-W74.

Source: New Zealand Health Information Service, National Minimum Data Set - Mortality.

10.3. Population structure

10.3.1. 0 - 4 years

Those within the under 5 years age group experienced the highest numbers of injuries from falls, other mechanism-specifiedⁱⁱ, poisoning, struck by/against and fire/flames, hot substances, with falls still the leading cause of injury. In the cases of poisoning and other mechanism-specified their numbers exceeded all other age groups.

10.3.2. 5 - 14 years

Children had the highest number of pedal cyclist/other injuries for the five-year period described, more than twice that of any other age category. The other most frequent causes of injuries for children were falls, cut/pierce, struck by/against, motor vehicle traffic crashes and other land transport crashes, with falls still the leading cause of injury. In none of these four injury types were the numbers in excess of, nor disproportionately high relative to, any other age group.

10.3.3. 15 - 24 years

Other than falls and motor vehicle traffic crashes, youth had high numbers of injury in most injury types, but particularly by cut/pierce, struck by/against, assault and self-inflicted (for further related information please refer to the *Future Focus* [Mental illness and addictions](#) section). This suggests youths are often injured through violence, assuming at least some of the injuries from cut/pierces are from weapons.

10.3.4. 25 - 44 years and 45 - 64 years

When analysing these two age groups by cause, the 25 - 44 years group was often approaching double the number of injuries as those aged 45 - 64 years. However, similar to those aged 15 -24 years, the most common causes of injury for both groups

ⁱⁱ This category is quite broad covering things such as explosion, electric shocks, radiation, foreign bodies in the eye, mouth, crushed, etc.

were falls, motor vehicle traffic crashes, cut/pierce, struck by/against, assault and self-inflicted.

10.3.5. 65 years and over

By far, the greatest cause of injury in the 65 years and over age group was from falls, being more than 10 times greater than any other cause. Otherwise, the most common causes of injury for this age group were motor vehicle traffic crashes, over exertion, struck by/against, cut/pierce and unspecified mechanismⁱⁱ.

10.3.6. Māori

When comparing the number of injuries by both age group and ethnicity, it becomes apparent that Māori are more likely to experience injury than non-Māori (Table 3 and Table 7). Whereas Māori account for approximately 20% of the Waikato DHB population, the number of injuries by most common causes for Māori, ranges from 20 - 45% of the total for the population of the whole region. Overall, the percentage is 23%.

Table 7: Number of hospitalisation(I) causes for the Māori population for injuries by cause and age category, Waikato DHB, July 2002 - June 2007.

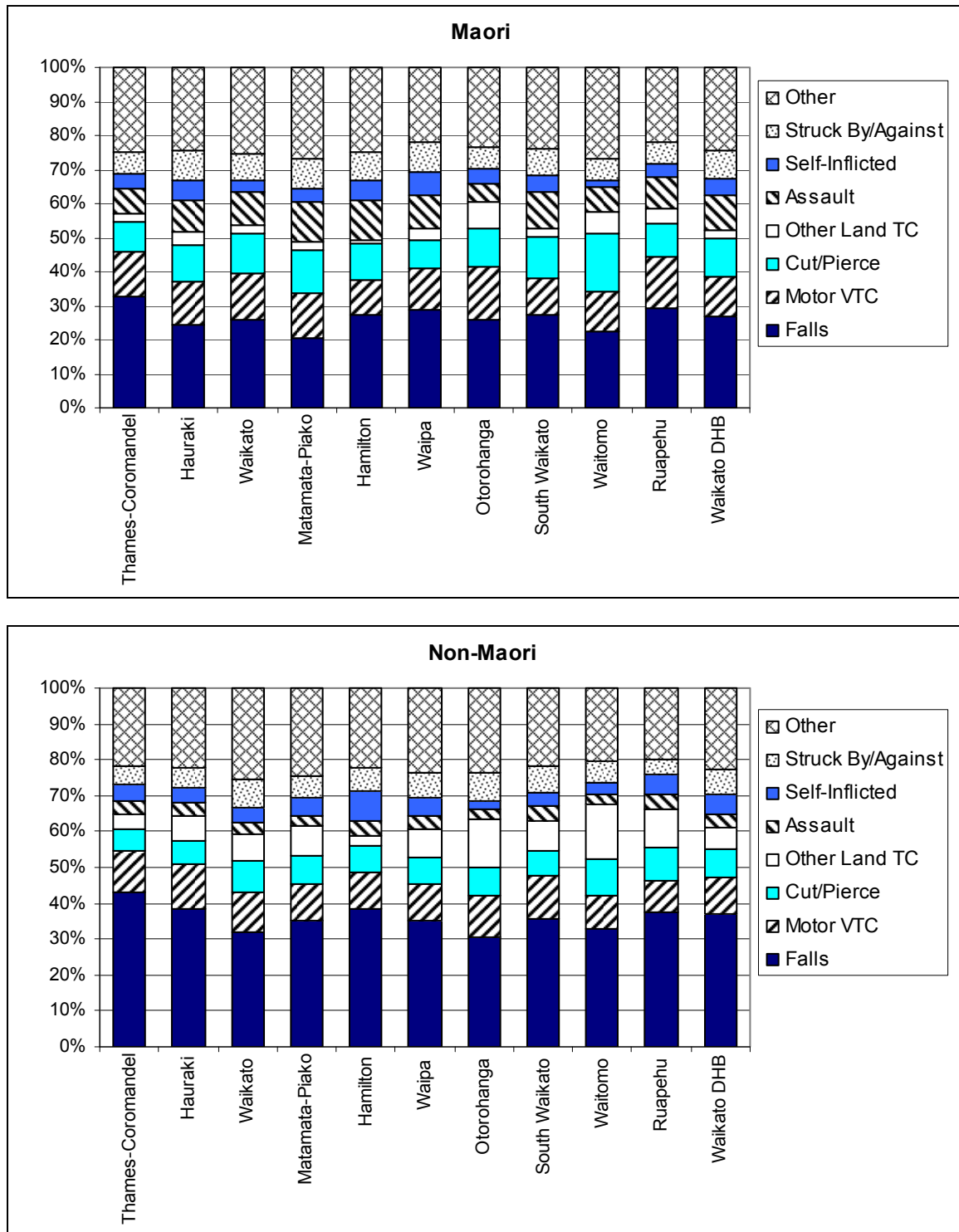
External cause (Māori population)	0 - 4 years	5 - 14 years	15 - 24 years	25 - 44 years	25 - 54 years	55+ years	Total
Falls	225	558	224	289	110	199	1605
Motor vehicle traffic crashes	33	101	244	237	68	39	722
Cut/pierce	34	93	246	229	43	28	673
Assault	13	9	243	303	43	9	620
Struck by/against	43	103	144	149	28	10	477
Other mechanism, specified	118	63	32	81	19	20	333
Self-inflicted	1	15	132	122	20	2	292
Poisoning	69	9	30	35	8	9	160
Natural/environmental	30	36	28	36	14	15	159
Other land transport crashes	15	33	31	45	12	13	149
Over exertion	2	14	21	74	19	14	144
Machinery	2	4	55	58	19	5	143
Fire, flames/hot substances	50	19	23	30	6	14	142
Pedal cyclist, other	15	93	16	13	2	2	141
Unspecified mechanism	22	14	32	33	15	6	122
Other	32	32	32	32	32	32	32
Total	704	1184	1541	1767	435	390	6021

Note: (I) Readmission is not counted and only accidents with the injury codes (ICD 10 S00-T78) as primary diagnosis are included.

Source: Waikato DHB, various hospital discharge collections.

Whilst percentage distribution trends across the territorial authorities are fairly consistent, some variations do exist between Māori and non-Māori when assessing the distribution of injury type by their respective totals (Figure 3). It would appear Māori are more likely than non-Māori to experience injury from assaults and cut/pierces and conversely non-Māori are more likely than Māori to experience injury from other land transport crashes and falls.

Figure 3: Percentage distribution of injury(I) by Māori and non-Māori, territorial authority and Waikato DHB, July 2002 - June 2007.



Note: (I) Readmission is not counted and only accidents with the injury codes (ICD 10 S00-T78) as primary diagnosis are included.

Sources: Waikato DHB, various hospital discharge collections.

10.4. Health priorities

Several injury causes are predominant across all territorial authorities, age groups and for both Māori and non-Māori, making them health priorities for the Waikato DHB. Each of these health priorities, namely, falls, motor vehicle-related injury, cut/pierce, struck by/against and assault is discussed below, with further discussion around age and ethnicity specific priorities.

10.4.1. Falls

Falls remain, by far, the most common cause of preventable injury across all territorial authorities, age groups, with the sole exception of those aged 15 - 24 years and for both Māori and non-Māori. Further to this, falls are the most likely cause of injury for those within the 65 years and over age group, with rates in excess of five times the likelihood of any other injury type.

10.4.2. Motor vehicle related injury

Motor vehicle traffic crashes (Motor VTCs)

Motor vehicle traffic crashes continue to be a leading cause of hospitalisation injury for the whole of the Waikato DHB, particularly for those aged 15 - 24 years and 25 - 44 years. While it is not clear that these injuries are caused as a result of the injured person's driving, these numbers may indicate a need to address driver safety in a broader sense within these age groups. Child (0 – 14 years) injuries related to motor vehicles, including struck by/against and pedal cyclist-other are of concern also and indicate a potential need for other types of road safety programmes. Whilst safety belt and car restraint wearing might reduce the severity of injuries, it is an incomplete means by which to address overall issue of hospitalisation injury.

Other land transport crashes (LTCs)

One cause of injury which is consistently high across all age groups except the 0 - 4 years and 65 years and over, whilst not ranking within the top five causes in any age category, is other land transport crashes (Table 3). These relate to transport crashes on land excluding those counted in the motor vehicle traffic crashes and includes quad bike and tractor crashesⁱⁱⁱ. Whilst these might be at least partially explained by the largely rural nature of the Waikato region, it might be beneficial to address some sort of injury prevention work around.

ⁱⁱⁱ For a more detailed description refer to Stephenson, S., Langley, J., Trotter, M. (2005). Impact of injury in New Zealand: New Zealand injury prevention strategy. Dunedin: Injury Prevention Unit, University of Otago.

10.4.3. Cut/pierce, struck by/against and assault

The high levels of cut/pierce, struck by/against and assault across all age categories and territorial authorities, particularly for Māori aged 15 - 44 years, suggests services should focus on reducing injuries due to violence, including family violence. Refer to the 'Overarching environment' section (10.7) below for an explanation of Population Health family violence drivers and rationale for targeting family violence for children in the absence of dedicated regional needs analysis data.

Māori

When analysing preventable/unintentional injury and mortality health needs by ethnicity Māori injury rates appear to be higher overall. In particular, drowning for those aged 0 - 14 years, although not especially high in number, are often equal to, or twice that for the rest of the population.

10.4.4. External cause injury mortality

The Waikato DHB rate of external cause injury mortality is slightly higher than the overall national rate. Territorial authorities with the highest mortality rates include Matamata-Piako, Waikato and Ruapehu (part), indicating a higher overall need for injury prevention services. This need may be particularly marked in the Ruapehu (part), given that this area has a high overall level of deprivation. Ruapehu (part) also has the second highest percentage of Māori and the highest external cause injury mortality rate for Māori than any other territorial authority within the Waikato DHB region.

10.5. Services network

10.5.1. Health services

Health services that support reducing the incidence of preventable/unintentional injuries across the Waikato DHB region include primary, secondary and tertiary services. The majority of services are provided at a primary care level. Refer to the *Future Focus Appendix* section for a stocktake of current Ministry of Health funded service provision related to reducing the incidence of preventable/unintentional injuries across the Waikato DHB region.

10.5.2. Other services

In New Zealand, ACC is a lead agency in injury prevention service activity.

10.6. Living and working conditions

Injury prevention, although integral to health and wellbeing, is largely addressed through the Accident Compensation Corporation (ACC). The ACC funds and provides social marketing and education related injury prevention activity at both a national and regional level. However, Population Health has the potential to incorporate injury prevention

activities through other community directed actions. Refer to the *Future Focus* [Population profile](#) section and the strategies outlined below for further related information.

Given the high levels of deprivation and geographical isolation of Ruapehu (part) and Waitomo territorial authorities (refer to the *Future Focus* [Population profile](#) section for further explanation) their relatively high rates of preventable/unintentional injury, is of concern.

High needs include living with determinants of health that act as barriers to accessing resources including car restraint purchase and rental.

10.7. Overarching environment

Injury has been identified as a leading cause of premature death and disability in New Zealand. The impact of injury on individuals, families/whānau and communities is pervasive. The social and economic costs at all levels are considerable and are estimated to be \$6 - 7 billion per year, yet most injuries and their consequences are preventable³. For these reasons, ACC has led the development of the New Zealand Injury Prevention Strategy (NZIPS)³.

The New Zealand Injury Prevention Strategy is an expression of the intent to work with organisations and groups in the wider community to improve the country's injury prevention efforts. The strategy provides objectives and outlines key activities for these agencies in contributing to the strategy's goal of "a safe New Zealand, becoming injury free" (p. 4)³.

The New Zealand Injury Prevention Strategy identified the following objectives:

- Raise awareness and commitment to injury prevention.
- Strengthen injury prevention capacity and capability.
- Design and develop safe environments, systems and products.
- Maintain and enhance the legislative and policy framework supporting injury prevention.
- Integrate injury prevention activity through collaboration and co-ordination.
- Advance injury prevention knowledge and information.
- Develop and implement effective injury prevention interventions.
- Ensure appropriate resource levels for injury prevention.
- Develop, implement and monitor national injury prevention strategies for priority areas.
- Foster leadership in injury prevention.

The New Zealand Injury Prevention Strategy also identified six national injury prevention priority areas, being: motor vehicle traffic crashes, suicide and deliberate self-harm, falls, workplace injuries (including occupational diseases), assault, drowning and near

drowning. Specific government agencies are identified in the New Zealand Injury Prevention Strategy to lead the co-ordination of national strategies and support action plans for the priority areas. This will involve lead agencies co-ordinating the appropriate involvement of contributing agencies, as well as ensuring an appropriate governance structure for these national strategies is in place.

The New Zealand Injury Prevention Strategy 2005 - 2008 Implementation Plan⁴ was developed to outline the programme of activity needed to achieve the objectives identified in the New Zealand Injury Prevention Strategy. It also identifies the lead agency for each priority area, and identifies key strategies and action plans, roles and responsibilities of key stakeholders and accountability mechanisms. An overview of this is below:

The New Zealand Injury Prevention Strategy is broadly linked to the New Zealand Health Strategy⁵ (refer *Future Focus* [Appendix](#) section) through connections that injury prevention has with some of the stated health priority areas, including:

- Minimising harm caused by alcohol and illicit and other drug use to individuals and the community
- Reducing the rate of suicides and suicide attempts; and
- Reducing violence in interpersonal relationships, families, schools, and communities

The strategy has a direct link with 'He Korowai Oranga'⁶ (refer *Future Focus* [Appendix](#) section) as injury prevention is one of the existing eight Māori health priority areas.

The following documents and programmes have fallen out of the New Zealand Injury Prevention Strategy:

- New Zealand Youth Suicide Prevention Strategy⁷: sets out a series of 25 policy recommendations to address issues of youth suicide. (refer to *Future Focus* [Mental illness and addictions](#) section). These recommendations may be classified into a number of related themes including:
 - the provision of family support and early intervention programmes to families in which children are perceived to be at high risk for a range of adverse outcomes, including suicidal behaviour, in adolescence and young adulthood
 - improvements in mental health education and awareness, treatment and management
 - restriction of access to means of suicide
 - macro social changes including increased social equity and the management of publicity issues about suicide; and
 - improved statistical information and research about suicide issues.
- Te Rito Family Violence⁸: the official response to and framework for, implementing the family violence prevention plan of action released in September 2001. Te Rito is linked to a number of international conventions and covers violence in its broadest sense including a range of controlling and harmful behaviours.

- Road Safety Strategy 2010⁹: this strategy includes a balanced approach using initiatives that are built around the ‘three Es’ — engineering, education and enforcement.
- Crime Reduction Strategy¹⁰: strategies focus on crime prevention, alternative sentencing and rehabilitation. This strategy links to the Road Safety Strategy 2010 the Te Rito Family Violence Strategy and links to public health in the areas of drink driving and violent crime causing injury or death.
- Crime prevention through environmental design (CPTED) in New Zealand¹¹: Crime prevention through environmental design is a crime prevention philosophy based on proper design and effective use of the built environment. The use of crime prevention through environmental design is intended to reduce crime and fear of crime by reducing criminal opportunity and fostering positive social interaction among legitimate users of space.
- National Alcohol Strategy¹²: this strategy aims to minimise the harm associated with alcohol (refer to *Future Focus* [Mental illness and addictions](#) section).

10.8. Evidence-based interventions

10.8.1. Lead agency roles versus support agency roles

The analysis of the injury prevention data and policy indicates that Population Health should primarily be supporting work in the area of injury prevention related to deliberate harm. For the purposes of this document, deliberate harm is discussed in the *Future Focus* [Mental illness and addictions](#) section.

Injury prevention is not an issue that sits in isolation; any work should be linked to other population groups and health issues such as the *Future Focus* [Children and youth](#) and [Healthy environments](#) sections.

The majority of Population Health injury prevention work will focus on supporting the other lead agencies in achieving their injury prevention responsibilities. Population Health will look to develop and/or strengthen existing intersectoral relationships with a view to influencing the intent of external agency programmes to align with a reducing inequalities approach.

10.8.2. Identifying potential intersectoral partners

While the Population Health injury prevention services stocktake (refer 10.5 Services network) identifies Ministry of Health funded service providers, more information is needed on non-health funded injury prevention providers. Population Health aims to contribute to a more complete stocktake over the next two to five years.

10.8.3. Regulatory interventions

There are also a number of regulatory interventions that have the potential to impact on injury prevention. One such setting is early childhood centres. These centres are required to be licensed and as part of the licensing requirement need to be inspected for health and safety issues by a Population Health health protection officer. These officers' inspection regime includes a number of injury prevention requirements such as safe fall

areas around play equipment and ensuring that large objects are well secured to avoid accidental toppling. This service activity relates to the *Future Focus* [Healthy environments](#) section.

There are also a number of strategies employed as part of the emergency management, hazardous substances and water programmes that can be considered injury prevention interventions. This includes strategies related to accidental poisonings, which feature significantly in Waikato data for children aged 0 - 4 years.

10.8.4. Partnerships with communities

Partnerships with community and with other government agencies are particularly important when considering addressing many of the issues of injury prevention. This includes community coalitions where both government and non-government agencies work collaboratively in an attempt to tackle issues regarding injury prevention.

For instance, the key players in influencing the reduction of the incidence of motor vehicle crashes include community coalitions, ACC, Land Transport and territorial authorities. These relationships can be utilised to explore more in-depth, the issue of motor vehicle crashes such as available data and research that can be shared amongst one another as it comes to hand.

Within the area of family violence various agencies have come together in some communities throughout the Waikato DHB region to address the issue, for example, Hauraki Domestic Violence Intervention Network, Huntly District Agencies Addressing Violence Group, Northern King Country Strengthening Families Forum. Maintaining these relationships and supporting the development of family violence prevention networks in other communities is a role that Population Health could become involved in.

A co-ordinated community response to family violence is an important strategy where key agencies exchange information (such as data showing family violence trends¹³), promote good practice, develop and implement shared policies and promote community awareness of prevention work¹⁴. Engaging with the newly Waikato DHB Family Violence Intervention Co-ordinator will also contribute towards a co-ordinated response.

Assaults and crimes resulting in injury provide a good example of where partnerships at all levels are important. Crime prevention through environmental design¹¹ is intended to reduce crime and fear of crime by reducing criminal opportunity and fostering positive social interaction among legitimate users of space.

Territorial authorities have most of the influence over how the urban environment develops in the cities and regions that they are responsible for, making it important to

work with these groups in addressing this issue. However, other groups such as business owners, community leaders and resident association also need to be involved. The New Zealand Police and Ministry of Justice also have a significant role to play.

10.9. References

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