

Report on Drowning 2011



Our Partners



Water Safety New Zealand

Water Safety New Zealand (WSNZ) is an incorporated charitable society that leads water safety education, awareness and prevention for the community.

Vision

Everyone in New Zealand will have the water safe skills and behaviours necessary to use and enjoy the water.

Mission

Through water safety education, prevent injury and drowning.

What is Drowning?

Drowning is the process of experiencing respiratory impairment from submersion/immersion in liquid. (International Life Saving Federation, 2002).

In effect, drowning occurs by submerging and suffocating in water or another liquid.

DrownBase™

All drowning incidents in New Zealand are recorded in DrownBase (TM). All drowning data is provisional until coronial inquests are completed.

DrownBase™ records all mortality (fatality) data since 1980 and all morbidity (hospitalisation) data since 2003 in New Zealand

2011 drowning data is compared against the five year average, 2006-2010.

2011 DROWNING INCIDENTS

131 people drowned in New Zealand during 2011

- This is the highest annual toll since 2003.
- It is a 51% increase from the 2010 toll (87).
- New Zealand's per capita toll for 2011 was 3.1.
- Ten Regions (Northland, Auckland, Waikato, Bay of Plenty, Gisborne, Tasman, Marlborough, Canterbury, West Coast and Southland) had increased drowning tolls from 2010.
- Auckland recorded its highest drowning toll since 2002.

152 people were hospitalised due to immersion incidents in New Zealand during 2011

- This is the highest annual toll since 2008.
- The five year average is 149 hospitalisations per year.



Note: 5 hospitalisations were recorded with *Unknown* locations

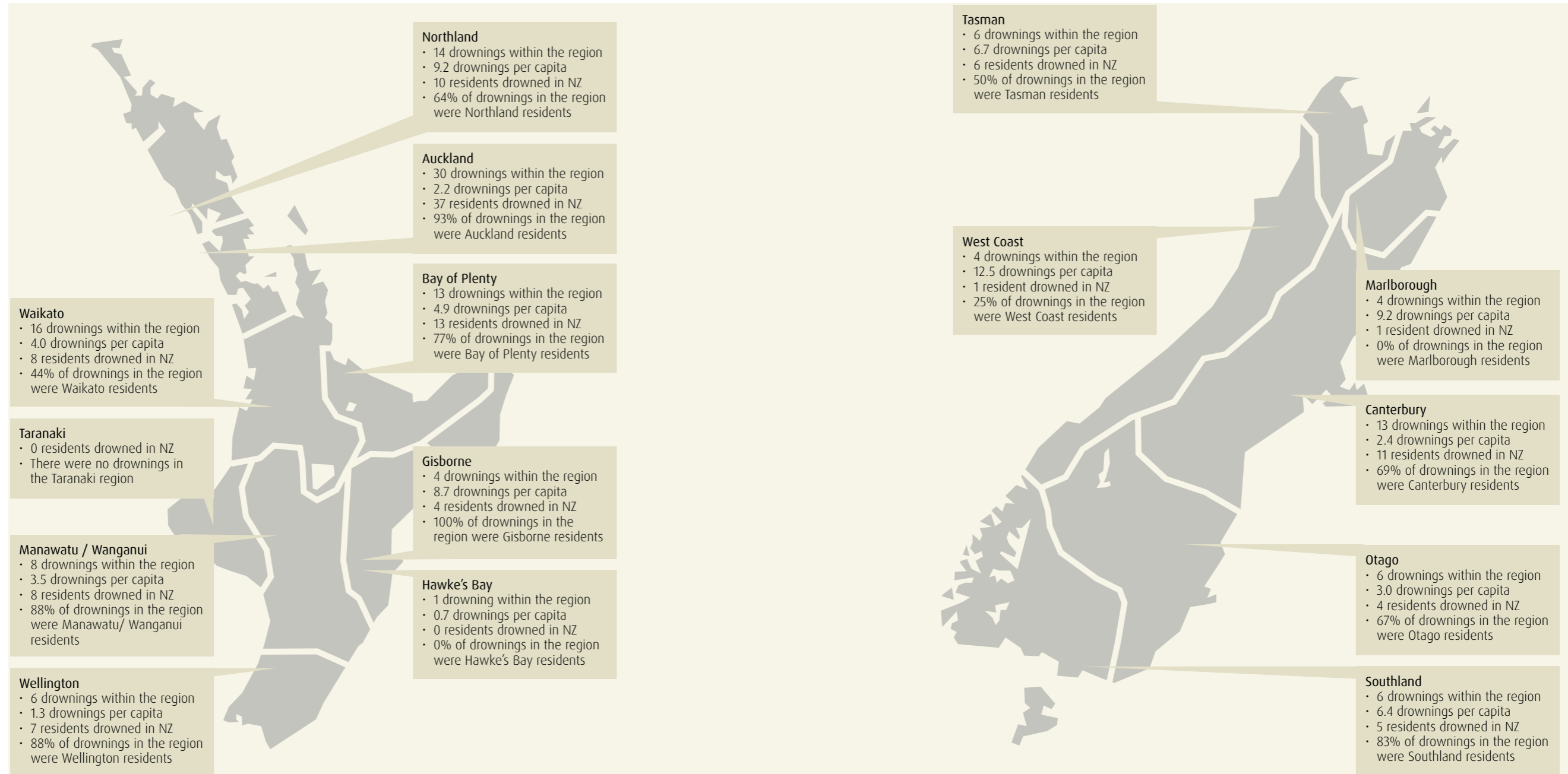


Acknowledgement

WSNZ gratefully acknowledges the New Zealand Lottery Grants Board for its ongoing support of water safety education, awareness and prevention in New Zealand.



131 People drowned during 2011



Note: 10 drownings were recorded with *Unknown* NZ residences and 6 with *Foreign* residences

Mortality (Fatalities)

Where are people drowning?

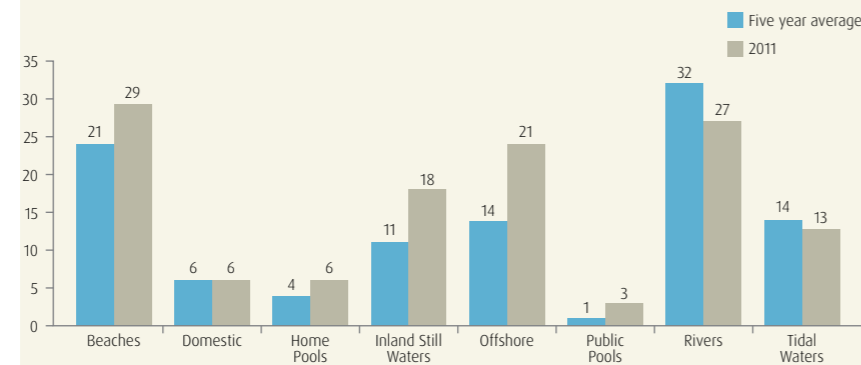


Figure 1. Drowning Deaths by Environment—Five Year Average and 2011

Beaches were the most dangerous environment in 2011 with 29 fatalities. This is a 38% increase on the five year average. *Rivers* - which had the most drownings in 2008, 2009 and 2010 - has decreased from the five year average by 16%.

Drownings increased from the five year average in *Home Pools* (by 50%), *Inland Still Waters* (by 64%), *Offshore* (by 50%) and *Public Pools* (by 200%).

Drownings in *Domestic* settings (including Baths, Buckets and other domestic locations) and *Tidal Waters* (including Harbours, Marinas, Estuaries and River/Harbour bars) have remained static.



What activities were people undertaking prior to drowning?

When recording data relating to what the deceased was doing at the time of death, WSNZ classifies incidents into one of three categories - *Recreational*, *Non Recreational* and *Other Activity*.

Recreational activities are those where the person intended to be in the water for recreational purposes e.g. Fishing, Sailing, Swimming and Diving.

Non Recreational is where the person had no intention of being in the water for recreational purposes e.g. Immersion Incidents and Occupational Related drownings.

Other Activity includes Suicide, Homicide and Road Vehicle incidents.

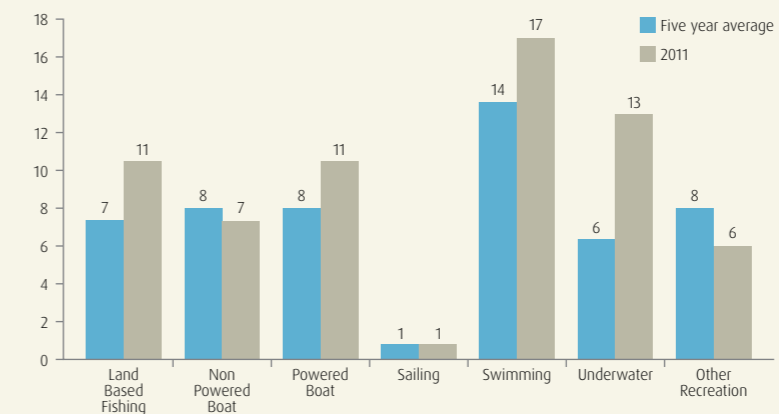


Figure 2. Drowning Deaths by Recreational Activity—Five Year Average and 2011

In 2011 there were 66 *Recreational* drownings, 24 *Non Recreational* drownings and 23 recorded as *Other Activities*.

Swimming had the highest recreational drowning toll of 17 in 2011 - this is equal to the 2010 toll. It is an increase 21% on the five year average.

Underwater related activities such as Free Diving, Snorkeling, and Scuba Diving recorded 13 drownings. This is an increase of 117% from the five year average. In particular in this category, there were five Free Diving deaths in 2011 - the five year average for fatalities associated with this recreational activity is just one per annum.

Land Based Fishing and *Powered Boating* drownings also increased on their five year averages by 57% and 38% respectively.

Who drowns in New Zealand?

Age groups

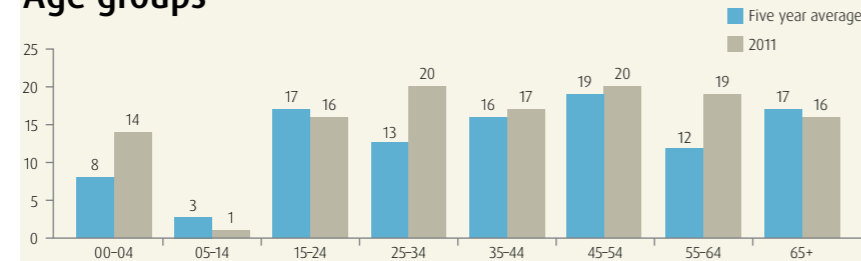


Figure 3. Drowning Deaths by Age Group – Five Year Average and 2011

There were 14 drownings of Pre-Schoolers (Under 5's) in 2011 – this is the highest since 2002 and an increase on the five year average by 75%.

There were also large increases on the five year average in the 25-34 (by 54%) and 55-64 (by 58%) age groups. The 25-34 age group jumped from four drowning deaths in 2010 to 20 in 2011. The 55-64 age group recorded a record high toll of 19 drownings in 2011.

The school aged children drowning toll continues to be encouragingly low, dropping by 67% on the five year average in the 5-14 age group.

The 15-24, 35-44, 45-54 and 65+ age groups remain fairly static on their five year averages.

Ethnicity

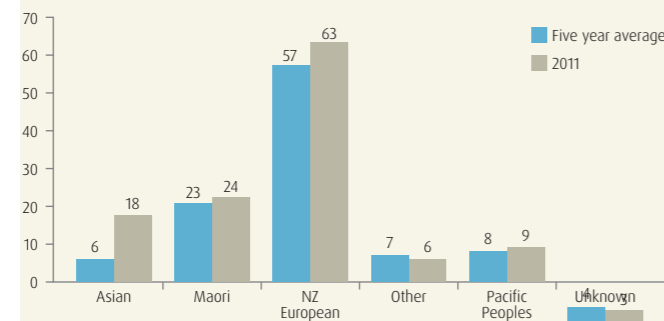


Figure 4. Drowning Deaths by Ethnicity – Five Year Average and 2011

NZ Europeans accounted for 51% of the 2011 drowning toll.

20% of drowning victims were Maori. This is lower than the five year average of 22%, but continues to highlight years of overrepresentation for Maori in drowning statistics. Maori constitute 15% of the population*.

2011 had the highest number of Asian drownings on record. At 18, this is triple the five year average.

The drowning toll of Others (non-residents, tourists etc from the rest of the world) was slightly lower than the five year average.

*2008 New Zealand Census

Gender

80% (98) of drowning victims in 2011 were male. This is an increase from the five year average of 76%. 98 drownings is the highest male toll since 2002. Within the 55-64 age group, 18 (95%) were male.

When are people drowning?

The months of January (20), February (22), April (14) and December (14) had the highest number of fatalities; traditionally January, February and December are the highest months. The five year average is 16 for January, 12 for February and 11 for December. April had an unusually high number of drownings – the five year average for April is nine.

There were three drownings in the month of March (the five year average for March is seven).

Which regions have the highest toll per capita?

The following table indicates the top regions for drowning on a per capita (n=100,000) basis in 2011:

Rank	Region	Drowning Deaths per Capita
1	West Coast	12.3
2	Marlborough	9.2
2	Northland	9.2
4	Gisborne	8.7
5	Nelson/Tasman	6.7
6	Southland	6.4
7	Bay of Plenty	4.9
8	Waikato	4.0
9	Manawatu/Wanganui	3.5
10	Otago	3.0

New Zealand's five year average drowning toll (2007-2011) on a per capita basis is 2.7 deaths per 100,000 people.

Morbidity (Hospitalisations)

Region

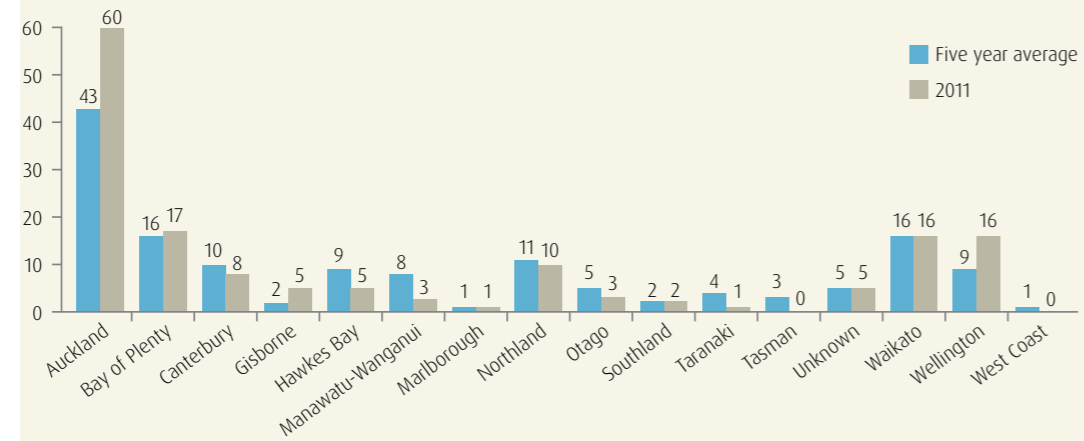


Figure 1. Hospitalisations by Region – Five Year Average and 2011

Gisborne (150%) and Auckland (40%) had a significant increase in hospitalisations in 2011 compared to the five year average and also increased on their 2010 total – Gisborne by 400%, Auckland by 13%.

Wellington hospitalisations remained static compared to the 2010 total (16), however this is an increase of 88% on the five year average.

Hawke’s Bay, Manawatu-Wanganui, Otago, Taranaki and Tasman had decreases in 2011 hospitalisations compared with the five year average, while other regions remained static.

Of note, 2011 hospitalisations in Taranaki were down by 86% on the 2010 total, Hawke’s Bay by 58% and Northland by 47%.



Environment

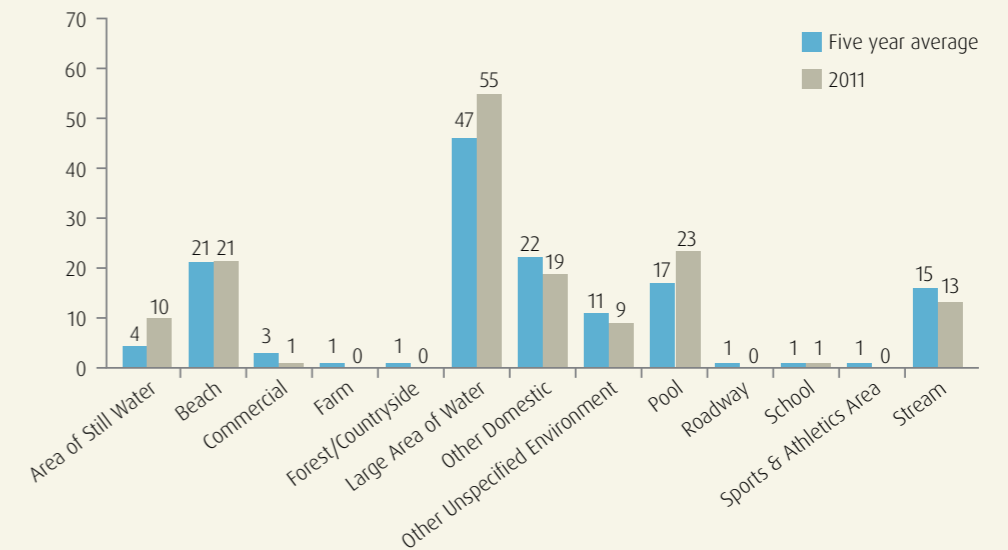


Figure 2. Hospitalisations by Environment – Five Year Average and 2011

Hospitalisations increased in 2011 on the five year average in the following environments: *Area of Still Water* [which includes lakes and ponds*] (by 150%), *Large Area of Water* [which includes lakes and rivers*] (by 17%) and *Pool* (by 35%).

In 2011, *Area of Still Water* and *Pool* environments were above the 2010 total of 5 and 18 respectively. The other environments remained static or showed slight decreases on the five year averages.

*New Zealand uses the ICD-10-AM/ACHI/ACS coding system which uses broad fields on input



Activity

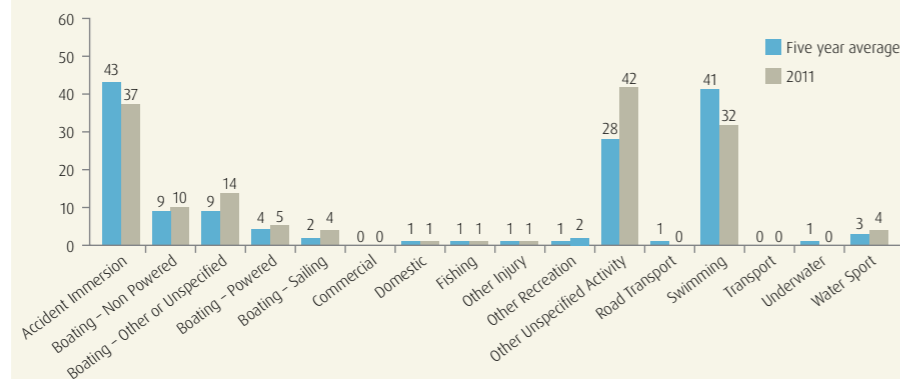


Figure 3. Hospitalisations by Activity - Five Year Average and 2011

Specified activities resulting in incidents requiring hospitalisation are compared to the five year average.

Hospitalisations due to *Boating* related activities showed increases on the five year average in 2011.

Swimming incidents in 2011, although down on the five year average, increased on the 2010 total by 52%.

Accidental Immersion hospitalisations were down both on the five year average and the 2010 total by 16%.

Other activities remained static on their five year averages.

Gender

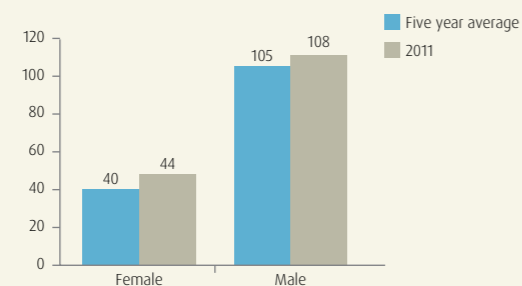


Figure 4. Hospitalisations by Gender - Five Year Average and 2011

Both genders showed slight increases on the five year average in 2011. The number of female hospitalisations remains static from 2010, however the number of male hospitalisations has decreased by 11%.

Ethnicity

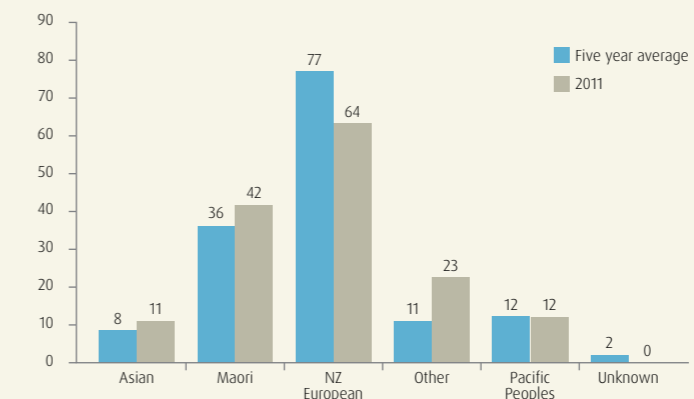


Figure 5. Hospitalisations by Ethnicity - Five Year Average and 2011

Pacific Peoples hospitalisations remained on par with the five year average and were down on the 2010 total (by 25%).

Age

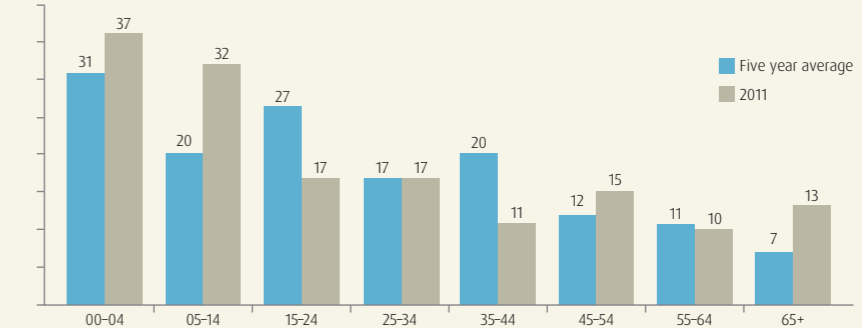


Figure 6. Hospitalisations by Age Group - Five Year average and 2011

Hospitalisations in the 00-04 (by 23%), 05-14 (by 52%) and 65+ (by 86%) age groups had increases on the 2010 totals.

Under 5 hospitalisations were 24% of the total hospitalisation toll in 2011 - the highest single age group. Children under the age of 15 make up 45% of hospitalisations.

The 00-04, 05-14, 45-54 and 65+ age groups increased on the five year average.

Hospitalisations in the 15-24 and 35-44 age groups had decreases on the five year average, while the 25-34 and 55-64 age groups remained on par.

There were increases in hospitalisations on the five year average amongst *Asian*, *Maori* and *Other* ethnicities in 2011.

Other ethnicities had an increase on the 2010 total by 92%. However, for 2011, *Asian* hospitalisations remained the same as 2010 and *Maori* hospitalisations decreased by 9%.

NZ European hospitalisations showed decreases on both the five year average (by 17%) and the 2010 total (by 18%).



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Quick facts

Mortality Toll Breakdown	2011		5 Year Average (2006-2010)	
Activity				
Recreational Drownings				
Swimming	16	(12%)	14	(13%)
Non Powered Boating	13	(10%)	6	(6%)
Powered Boat	11	(8%)	8	(8%)
Other Recreation	10	(8%)	7	(7%)
Land Based Fishing	7	(5%)	8	(8%)
Underwater activities	6	(5%)	8	(8%)
Sailing	1	(1%)	1	(1%)
Non Recreational Drownings				
Immersion Incidents	27	(11%)	29	(28%)
Occupational Related	1	(1%)	0	(0%)
Other Activity Drownings				
(Road Vehicle, Suicide, Homicide)	39	(30%)	23	(22%)
Environment				
Rivers	31	(24%)	21	(20%)
Beaches	27	(21%)	32	(30%)
Tidal Waters	22	(17%)	14	(13%)
Inland Still Waters	20	(15%)	11	(10%)
Domestic	13	(10%)	14	(13%)
Offshore	9	(7%)	6	(6%)
Home Pools	7	(5%)	4	(4%)
Public Pools	2	(2%)	1	(1%)
Ethnicity				
Asian	19	(15%)	6	(6%)
Maori	25	(19%)	23	(22%)
NZ European	67	(51%)	57	(54%)
Pacific Peoples	9	(7%)	8	(8%)
Other Nationalities	7	(5%)	7	(7%)
Unknown	4	(3%)	4	(4%)
Gender				
Female	27	(21%)	25	(24%)
Male	104	(79%)	81	(77%)
Age Groups				
00-04	14	(10%)	8	(8%)
05-14	1	(1%)	3	(3%)
15-24	16	(12%)	17	(16%)
25-34	20	(15%)	13	(12%)
35-44	20	(15%)	16	(15%)
45-54	21	(16%)	19	(18%)
55-64	21	(16%)	12	(11%)
65+	18	(14%)	17	(16%)

Some percentages may not add to 100% due to rounding.

For DrownBase™ Fact Sheets and further information visit: www.watersafety.org.nz