

Water Safety New Zealand
Drowning Prevention Report

2017



2017 Overview

Drowning is the respiratory impairment of lungs due to submersion/immersion in liquid.* It can be fatal (mortality), or non-fatal (morbidity). In this report non-fatal drownings are those resulting in a stay in hospital of 24 hours or longer and are classified as hospitalisations.

Drowning is the third highest cause of accidental death in New Zealand - after motor vehicle accidents and falls.

This report provides a summary of the preventable drownings (fatalities and hospitalisations) in 2017. It breaks down the numbers by age, gender, ethnicities, regions, activities and environments.

In 2017 there were 92 recreational (intending to be in the water) and non-recreational (no intention of being in the water) preventable drowning fatalities. The following analysis of fatalities is based on these 92 incidents in 2017 which represent an increase of 10, or 12 percent, compared to 2016.

13 additional fatalities have been classified as 'other or non-preventable drownings' (arising as a result of road or air accidents, homicide, suicide or of unknown origin). Details about these fatalities are not included in this report other than in the Table at the rear of the report.

Non-fatal drownings resulting in a stay in hospital of 24 hours or longer were 148 in 2018. This is a 29 percent decrease on 2016 and 20 percent decrease on the five year average (2012 – 2016). Throughout this report these are referred to as 'hospitalisations'.

More detailed information is available on request or available at www.watersafety.org.nz.

Data sourced from Water Safety New Zealand's DrownBase™

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*International Life Saving Federation, 2002

** ACC



Photograph: Peter Ambrose

Tēnā Koutou,

Recreation in, on and around the water is a natural and popular pastime for millions of people in New Zealand. As an island nation, our beaches, rivers and lakes are some of the most magnificent in the world. A moderate climate, accessible waterways and public and residential pools provide ample opportunities for Kiwis, immigrants and tourists alike to recreate and participate in water sports and activities and go boating and fishing year round. This is part of the New Zealand lifestyle.

With any water comes risk and sadly every year far too many people lose their lives or are injured in, on or around the water. The tragedy is that most drownings and injuries are preventable.

While male drownings continue to dominate, eight more females fatally drowned in 2017 compared to 2016 and seven more than the five year average (2012 – 2016). Almost a third of fatalities in the 15 – 24 year age group were female, the highest female toll in that age group in 35 years.

2017 was a tragic year for toddlers and babies with seven infants fatally drowning compared to three the previous year. 71 percent of those fatalities were in home pools. And at the other end of the age spectrum fatalities almost doubled with 16 over 65 year olds losing their life. This is equivalent to the number of fatalities in the 15 – 24 year age group and is the highest of all age cohorts.

Immersion incidents, where the victims had no intention of being in the water, continues to be the largest cause of drowning followed by those who simply went for a swim which ended in tragedy.

Research* shows that while drowning is recognised as a problem by 84 percent of New Zealanders, (fifth behind child abuse, domestic violence, road safety and bullying) the reality is drowning is the leading cause of recreational death, the second highest cause of death for 1 – 24 year olds** and the third highest cause of accidental death in New Zealand.

The water safety sector is united in its commitment to the drowning prevention targets as detailed in the 2020 Water Safety Sector Strategy. They are ambitious targets however. The water safety sector, made up predominantly of volunteers is struggling to keep on top of this tragedy, which is the New Zealand drowning toll. The time is now for all New Zealanders to play their part.

A handwritten signature in blue ink, appearing to read 'Jonty Mills', with a horizontal line underneath.

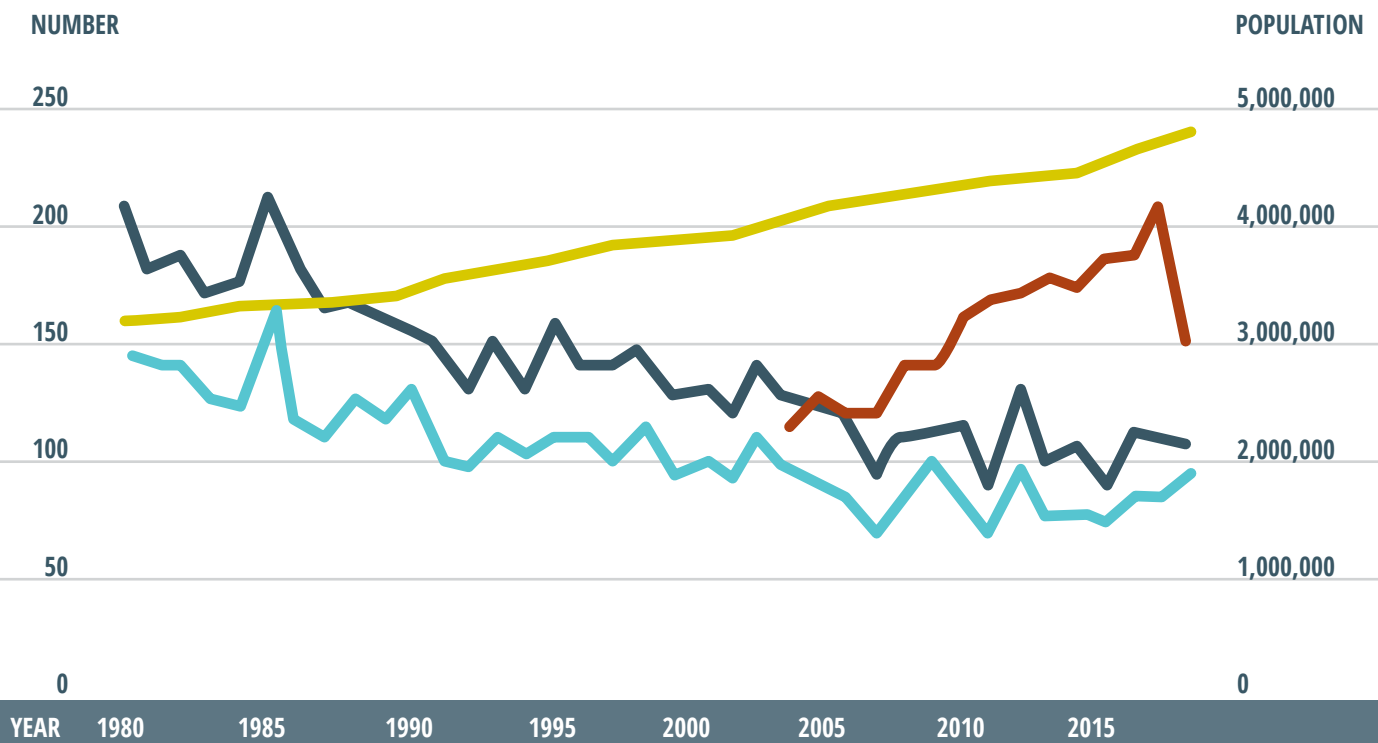
Jonty Mills CEO Water Safety New Zealand

* WSNZ Attitudes and Behaviour survey 2018

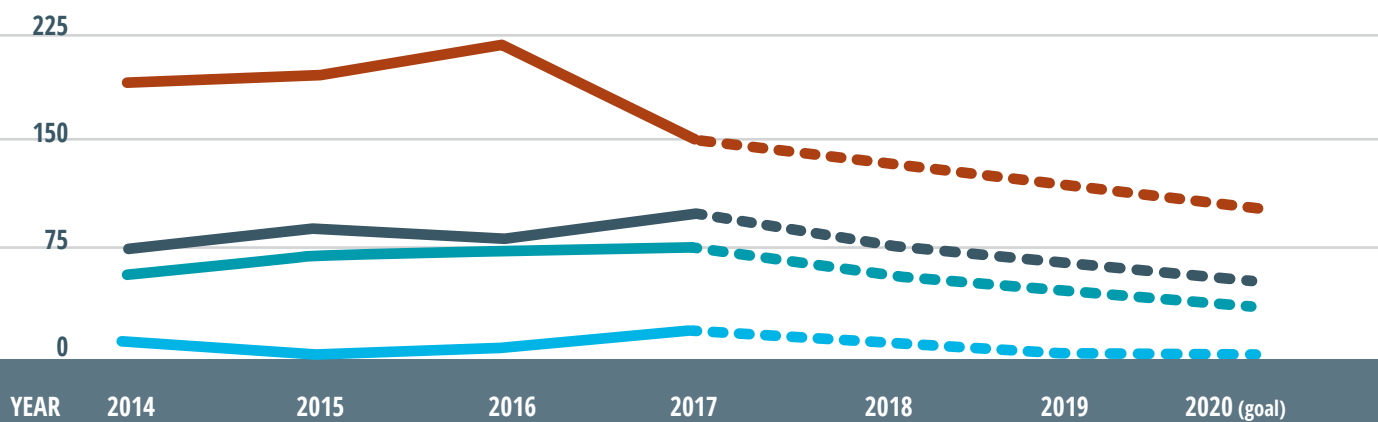
** Child and Youth Mortality report committee 13th data report 2012-16.

1980 - 2017 View

Drowning Fatalities 1980-2017 and Hospitalisations 2003-2017



Progress towards New Zealand Water Safety Strategy 2020 Goals



Key Findings

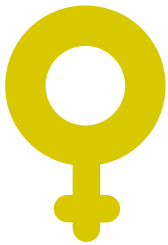


92 preventable fatal drownings in 2017, up ten from 2016.

Highest number of fatalities among those Swimming.



7 Under Fives fatalities in 2017. Increased from 3 in 2016 and highest toll since 2011. 5 were in home pools.



20 female fatalities. The highest rate since 2008.

38 female hospitalisations. The majority were due to Swimming (37%) and Immersion Incidents (37%).



16

Largest number of fatalities among the 15-24 years and 65+ year age groups. 16 in each age group.



Swimming fatalities were highest among 15-24 year olds.



71% of Powered Boating fatalities were NZ European.



1. Regions

Fatalities and Hospitalisations by Region 2017

	HOSPITALISATIONS	FATALITIES
Auckland	37	24
Bay of Plenty	17	12
Canterbury	15	9
Gisborne	2	2
Hawkes Bay	9	0
Manawatu-Wanganui	9	1
Marlborough	1	3
Northland	1	8
Otago	5	5
Southland	1	4
Taranaki	6	2
Tasman	2	2
Waikato	15	7
Wellington	17	7
West Coast	4	6
Unknown	7	

TOTAL 148 92



5 year average 2012 - 2016



TOTAL

HOSPITALISATIONS

186

FATALITIES

79

FATALITIES

Hawke's Bay was the only region with no drowning fatalities in 2017.

Waikato (-59%) and **Northland** (-53%) had significant decreases in the drowning toll from 2016 and were both lower than their five year average.

Waikato rate was the lowest since 2006. **Northland** rate was the lowest since 2012. Waikato river drownings were down 70% on 2016 and 40% on the five year average. Over half of Waikato drownings were 65+ years.

Auckland's rate was almost double the five year average and more than twice that of 2016. It was the highest since 2011.

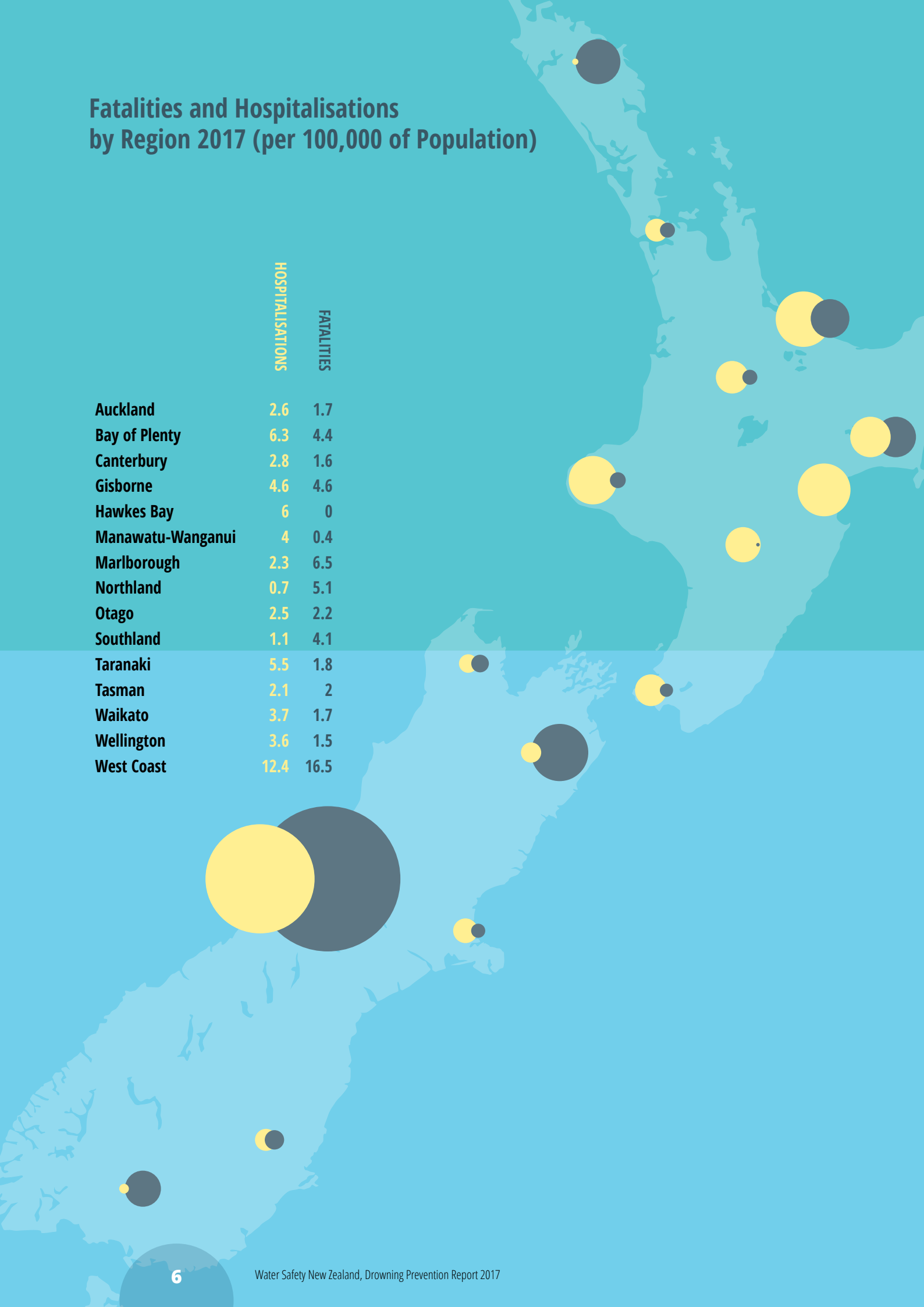
The **Canterbury** toll increased 80% on the five year average. 89% were immersion incidents.

HOSPITALISATIONS

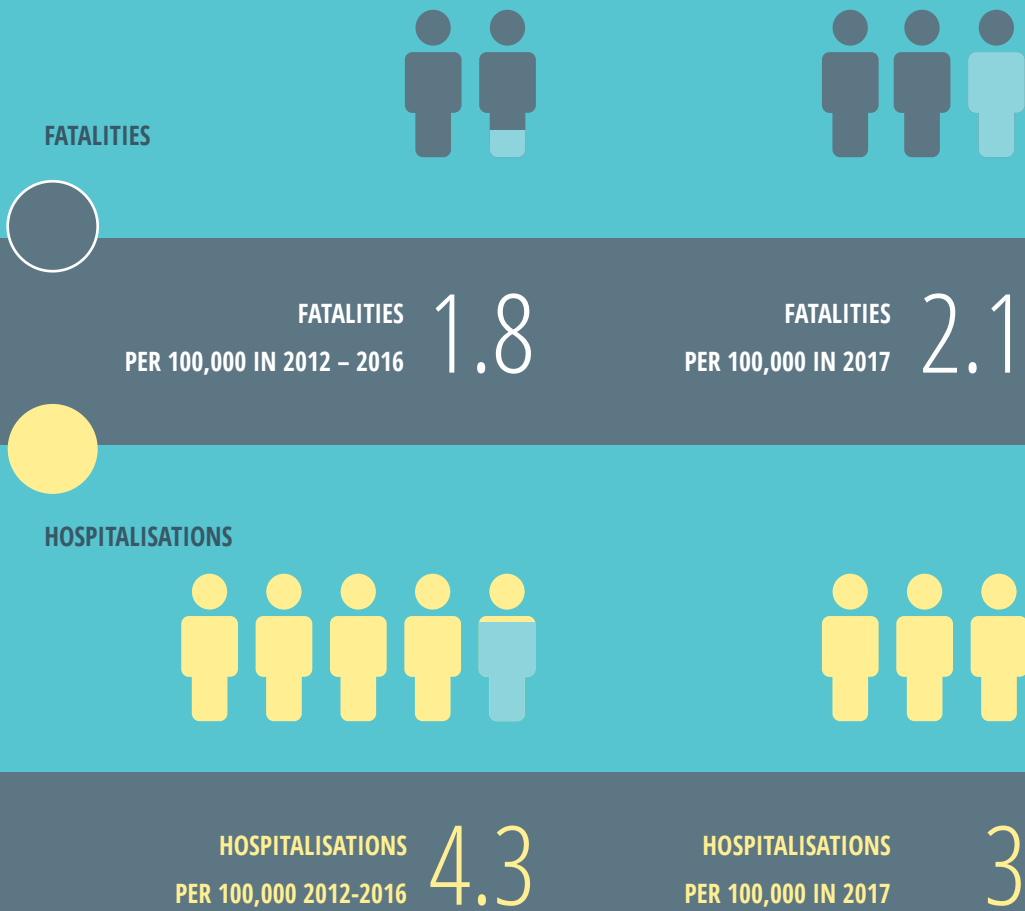
Hospitalisations were down considerably on 2016 to 148 in 2017. It was the lowest rate since 2008.

Fatalities and Hospitalisations by Region 2017 (per 100,000 of Population)

	HOSPITALISATIONS	FATALITIES
Auckland	2.6	1.7
Bay of Plenty	6.3	4.4
Canterbury	2.8	1.6
Gisborne	4.6	4.6
Hawkes Bay	6	0
Manawatu-Wanganui	4	0.4
Marlborough	2.3	6.5
Northland	0.7	5.1
Otago	2.5	2.2
Southland	1.1	4.1
Taranaki	5.5	1.8
Tasman	2.1	2
Waikato	3.7	1.7
Wellington	3.6	1.5
West Coast	12.4	16.5



National Averages



FATALITIES

West Coast had the highest drowning rate in the country per 100,000 of population followed by **Marlborough** and **Northland**.

In 2016, **Northland** had the highest rate at 10.9 and this has more than halved to 5.1 fatalities per 100,000 of population in 2017.

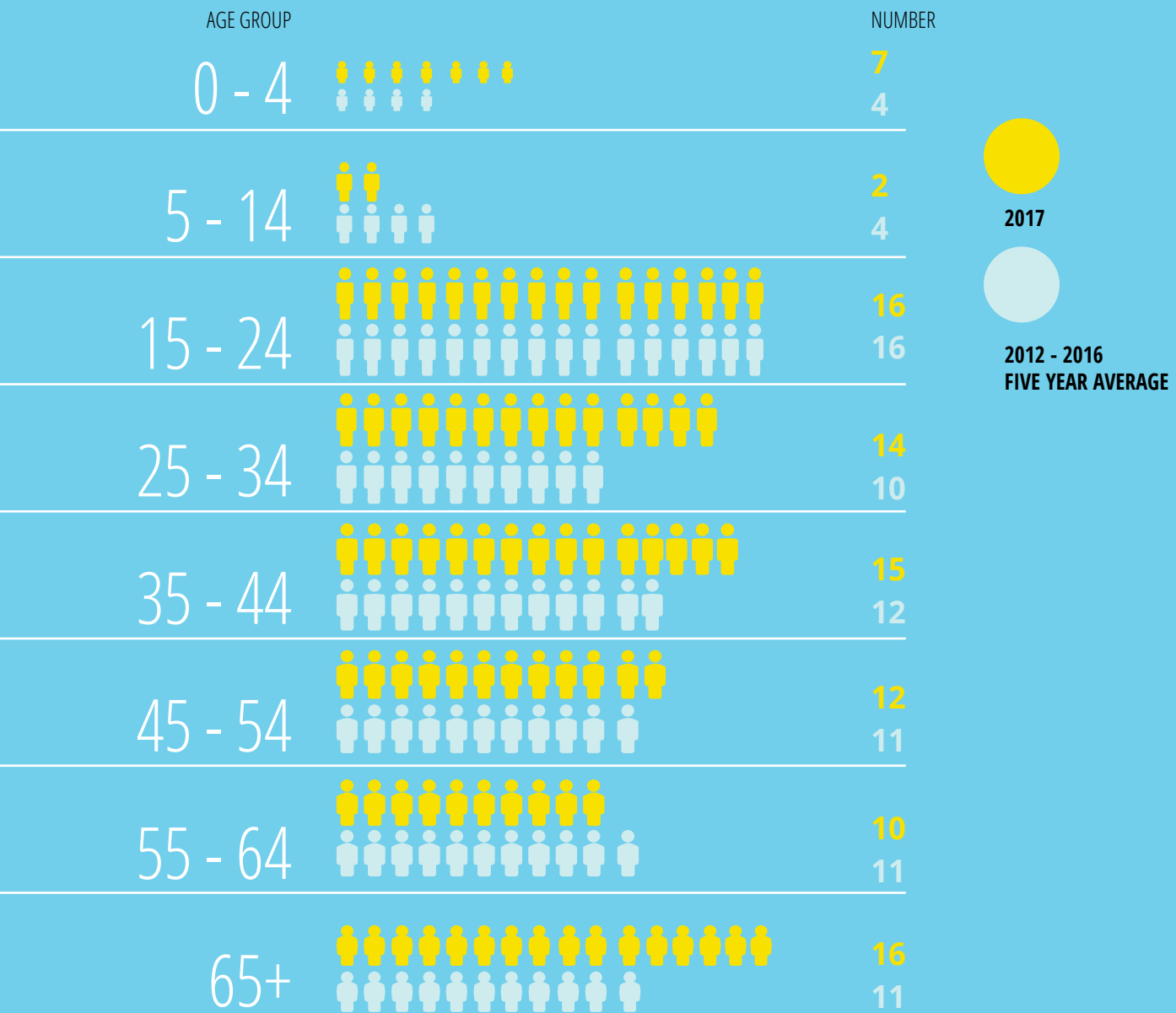
HOSPITALISATIONS

Northland hospitalisation rate was the lowest in the country. **West Coast** was the highest.

While **Hawke's Bay** had no fatalities, the third highest rate of hospitalisations were recorded in this region.

2. Age

Fatalities by Age - 2017 vs Five Year Average



7

Under Fives
Fatalities increased from 3 in 2016 to 7 in 2017. Highest toll since 2011. 5 in home pools.

16

Largest age groups - 15-24 and 65+ year olds.

93%

of the 25-34 year olds were male.

5

Almost 1/3 of 15-24 year olds were female. Highest female toll in that age group since 1983.

Fatalities and Hospitalisations by Age



2017
FATALITIES

2017
HOSPITALISATIONS

AGE GROUP

NUMBER

0 - 4



7
26

5 - 14



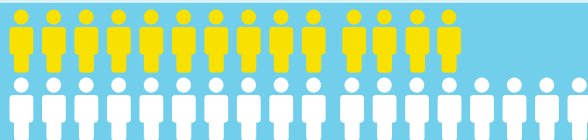
2
19

15 - 24



16
34

25 - 34



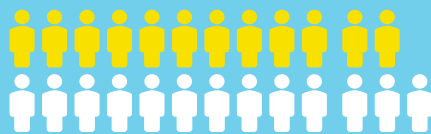
14
18

35 - 44



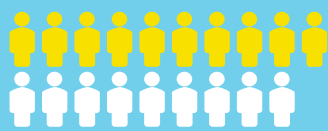
15
7

45 - 54



12
13

55 - 64



10
9

65+



16
22





Fatalities by Age over time

NUMBER

20

15

10

5

0

AGE

0 - 4

5 - 14

15 - 24

25 - 34

35 - 44

45 - 54

55 - 64

65+



2012-2016
FIVE YEAR AVERAGE



2016



2017

Hospitalisations by Age over time

NUMBER

45
40
35
30
25
20
15
10
5
0

AGE 0 - 4 5 - 14 15 - 24 25 - 34 35 - 44 45 - 54 55 - 64 65+

2012-2016 FIVE YEAR AVERAGE

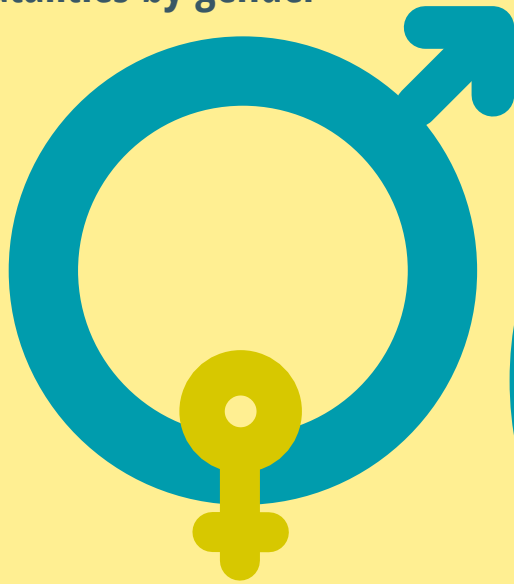
2016

2017

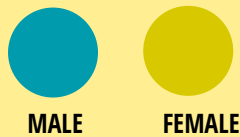
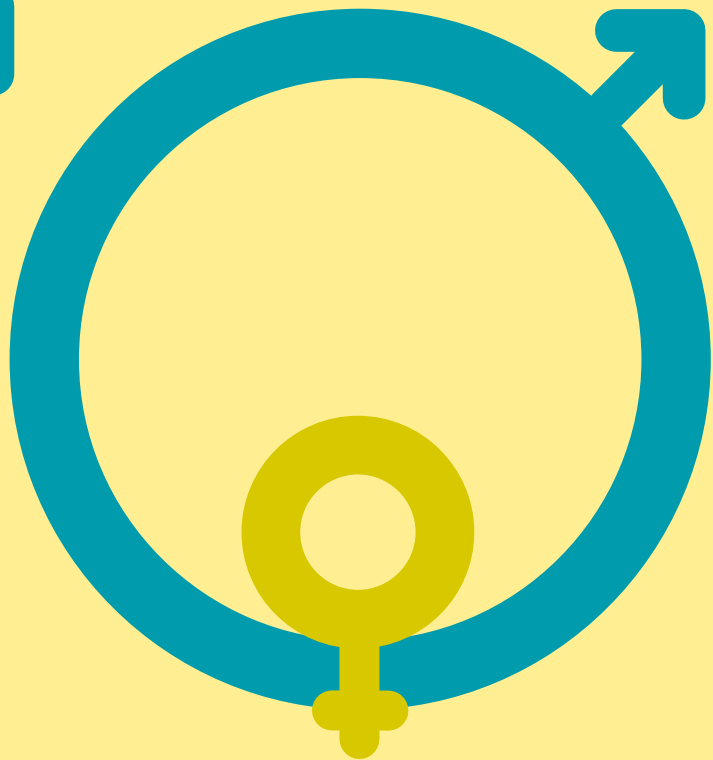


3. Gender

Fatalities by gender



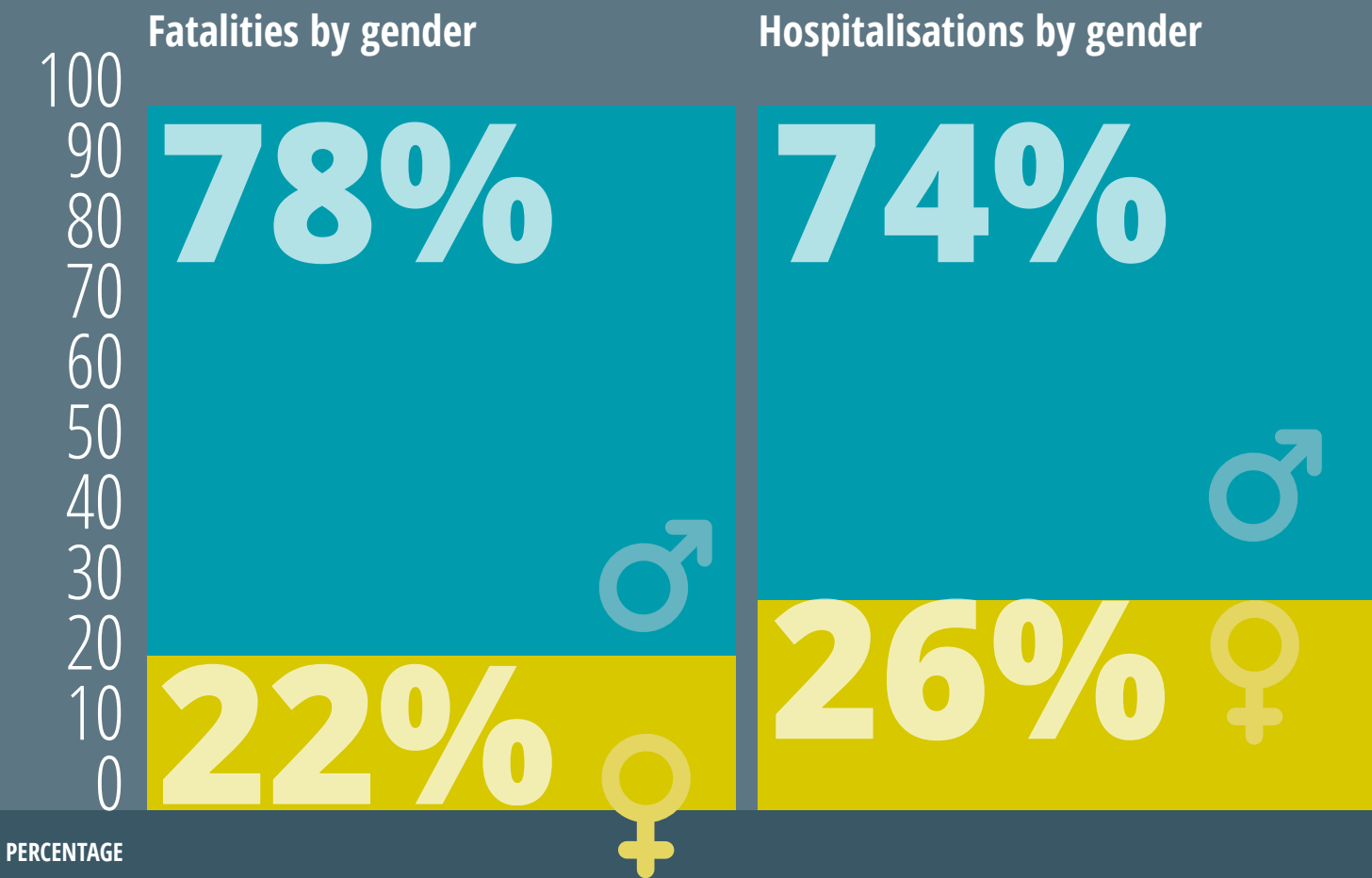
Hospitalisations by gender



TOTAL FATALITIES 72 20

HOSPITALISATIONS 110 38





FATALITIES

Highest female rate since 2008.

Male toll 3.7 x more than female toll.

75% of female fatalities were Immersion Incidents while 29% of male fatalities were.

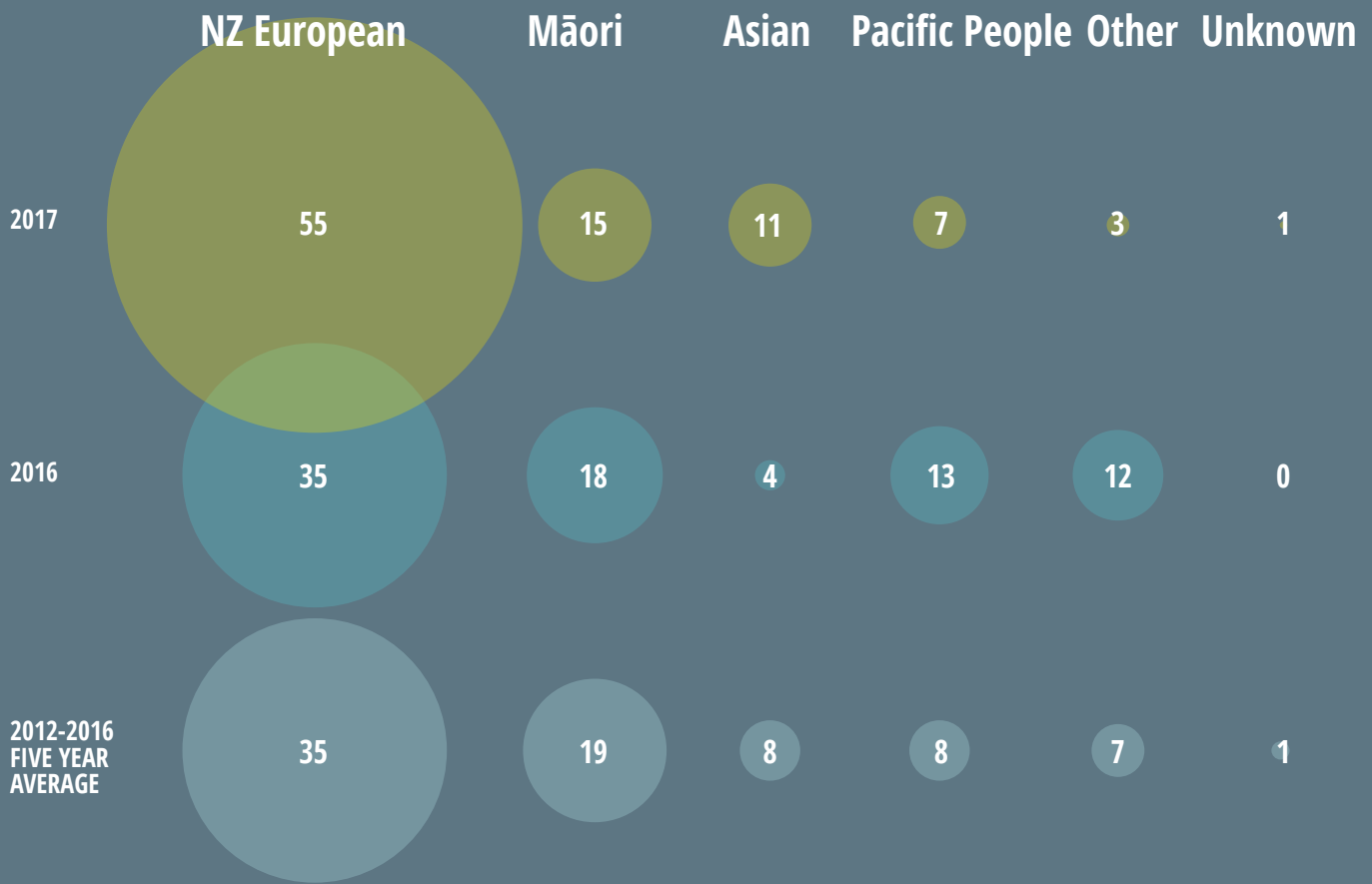
HOSPITALISATIONS

The 2017 ratio was 2.9 males to every 1 female – higher rate than 2016 (1.7) and five year average (2.4).

The majority of female hospitalisations were due to Swimming (37%) and Immersion Incidents (37%). Top male hospitalisations were due to Immersion Incidents (29%), Swimming (28%) and Boating (20%).

4. Ethnicity

Fatalities



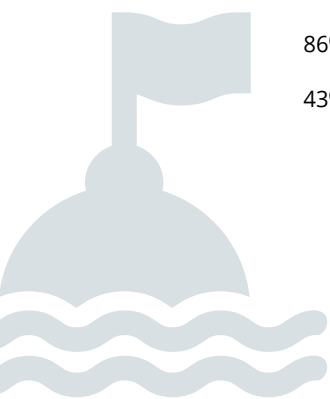
FATALITIES

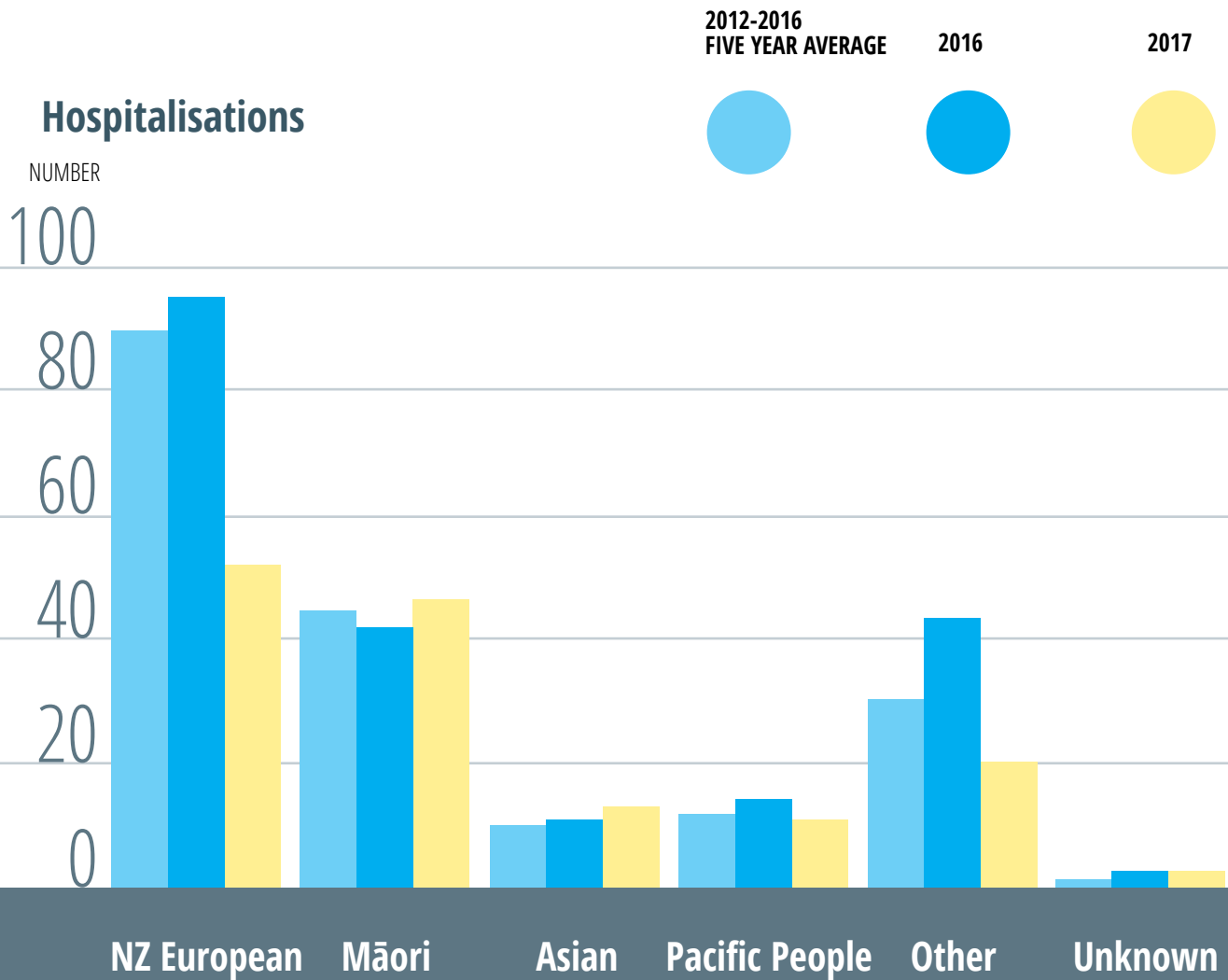
2017 drowning fatality ratio by ethnicities were close to the total population ratios (NZ European 60%, Maori 16%, Asian 12%, Pacific Peoples 8%).

Māori fatalities decreased three from 18 in 2016 to 15 in 2017 with a reduction in fatalities at Beaches and Rivers. Offshore still remained high and half of the Underwater fatalities were Māori.

86% of Pacific Peoples fatalities were aged 15-34 years old.

43% Landbased Fishing fatalities were Asian and 33% were Swimming fatalities.





HOSPITALISATIONS

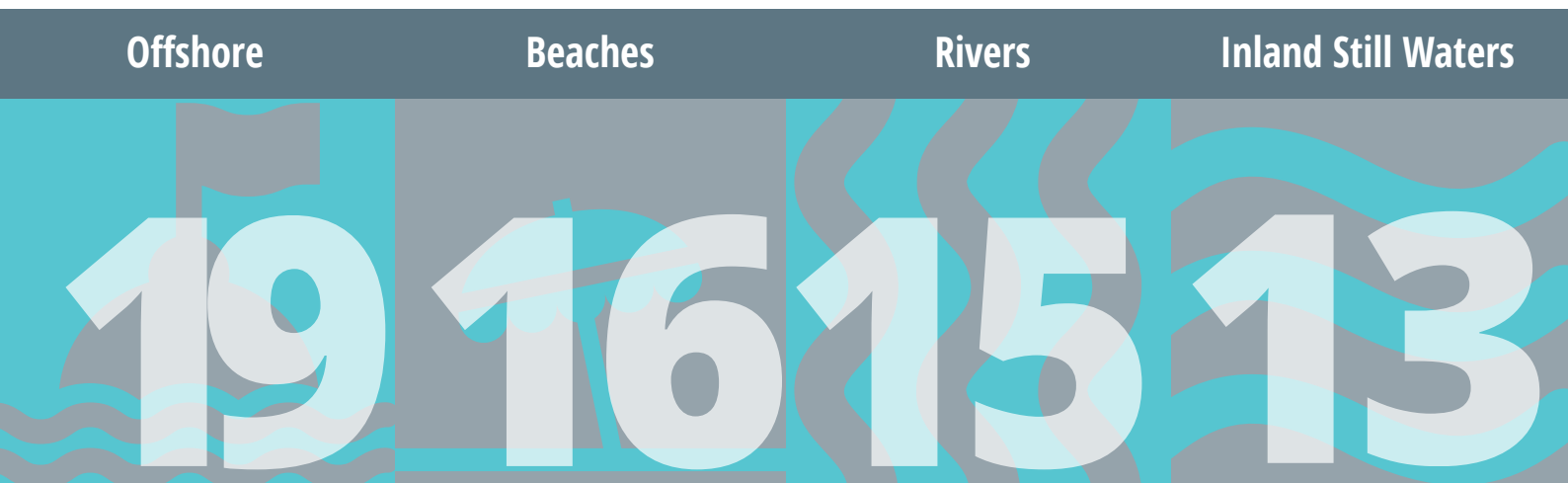
Despite a large drop in total hospitalisations in 2017, Māori were highly represented in hospitalisation statistics at 30% of the hospitalisation total (compared to 15% of population). Majority of Māori hospitalisations (82%) were aged under 25 years (the Māori population is 51% under the age of 25) with 44% due to an Immersion Incident and 29% to Swimming.

Swimming was the predominant cause of hospitalisation for Asians (67%) and Pacific Peoples (70%).

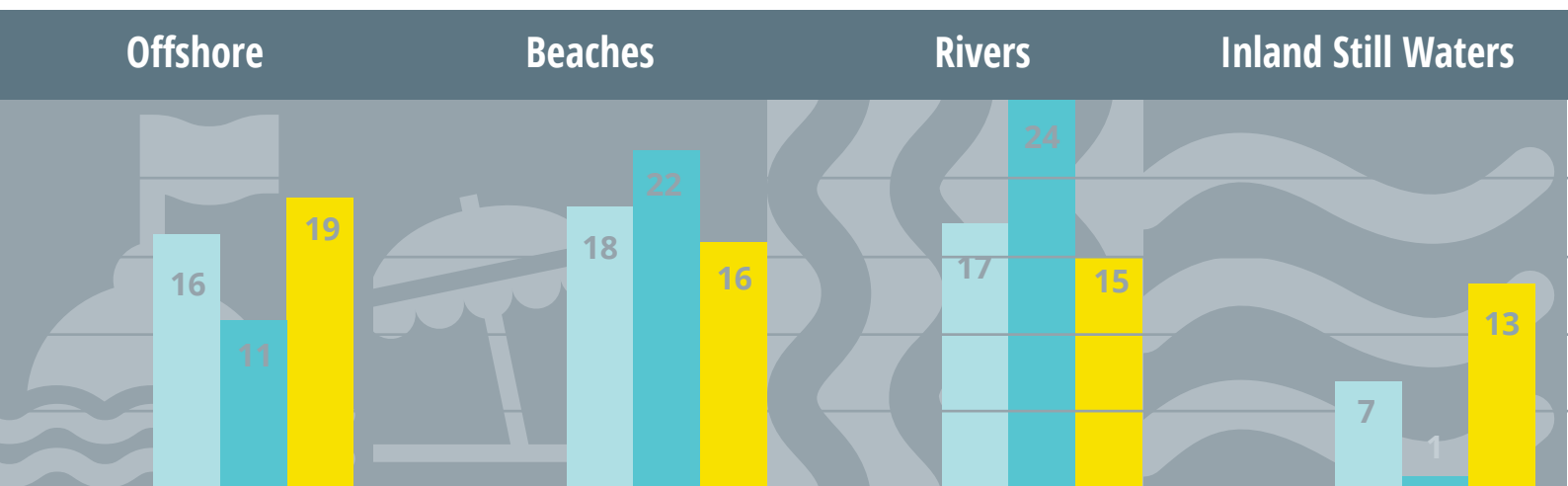


5. Environment

Fatalities by Environment



Fatalities by Environment over time



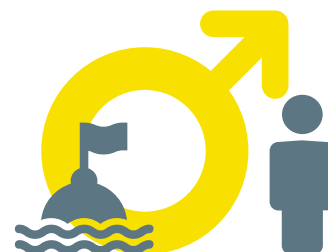
FATALITIES



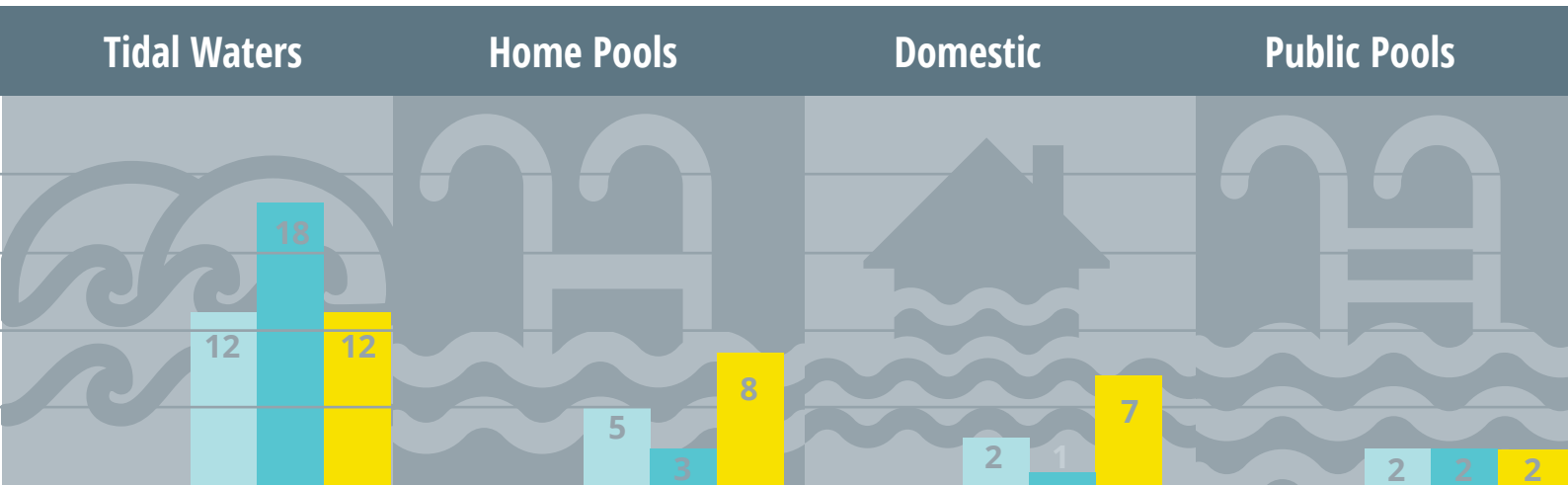
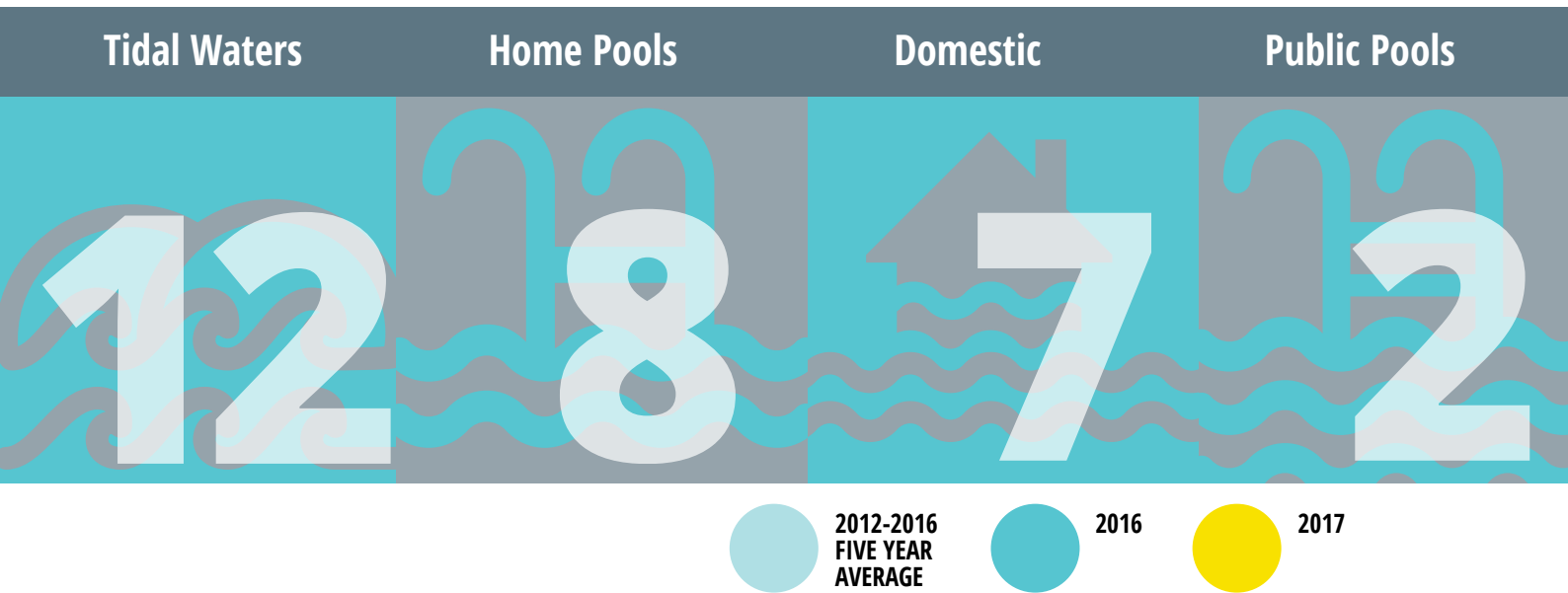
Beaches fatalities decreased from 22 in 2016 to 16 in 2017 (27%).



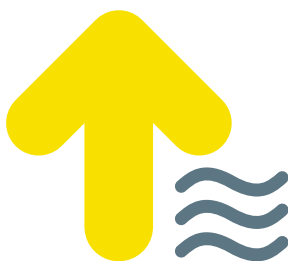
Rivers fatalities decreased from 24 in 2016 to 15 in 2017. However there were five female fatalities in Rivers which was greater than the five year average of two.



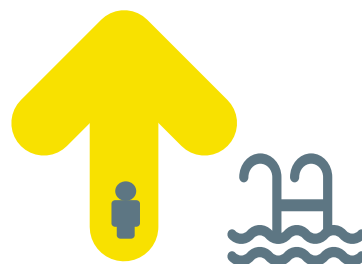
The highest environment fatality category was Offshore with all fatalities male. 53% of those offshore fatalities were aged 35 – 54 years old.



65% of NZ European fatalities were Offshore, made up of Boating and Underwater incidents, and 30% of Māori fatalities were Offshore, all Underwater incidents.

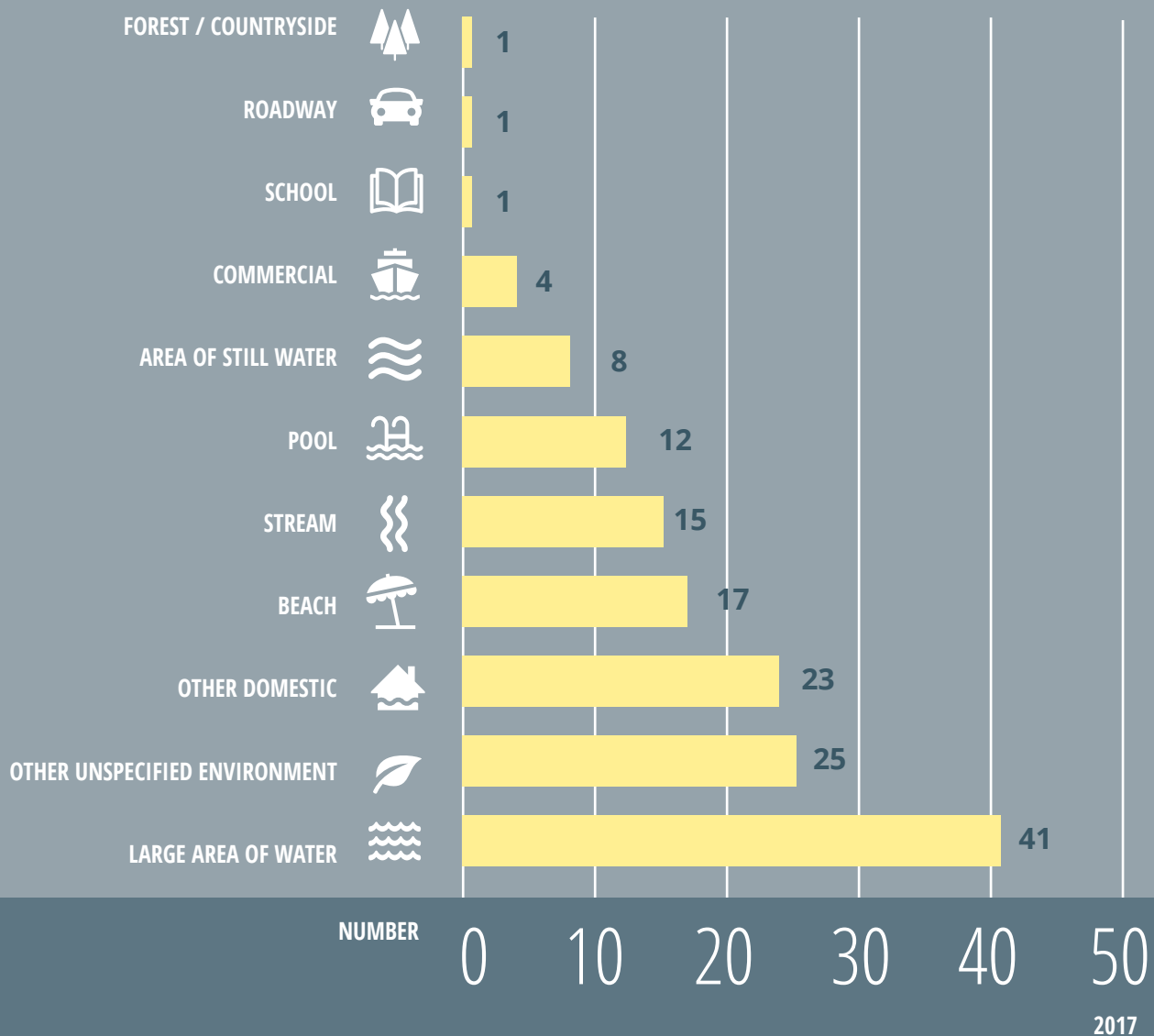


13 Inland Still Waters fatalities in 2017, up from one in 2016 and up 86% on the five year average due primarily to a doubling in Lake fatalities.



Home Pools fatalities were up 300% on the five year average, primarily due to five Under Five year olds drownings in home pools (usually an average of one per year).

Hospitalisations by Environment



67% of Pool hospitalisations were aged 14 or under.



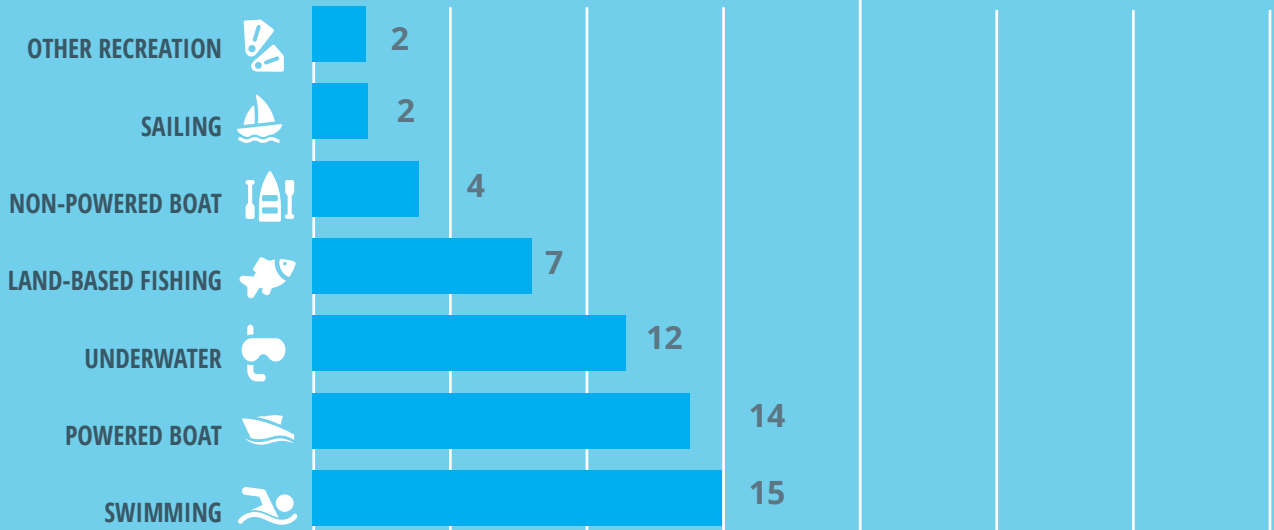
59% of incidents at Beaches were due to Swimming. Over half (53%) of Beach hospitalisations were aged 15-24 years. Beach hospitalisations were split almost 50:50 between Male and Female.



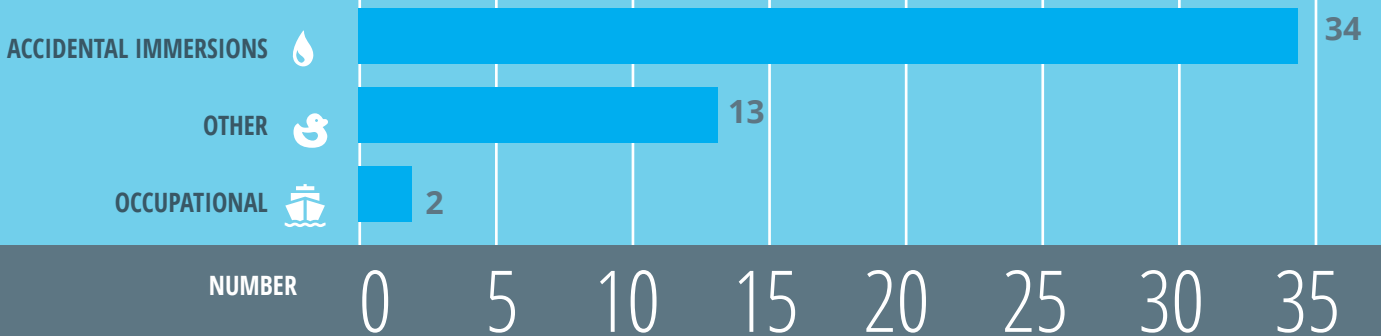
70% of Other Domestic hospitalisations were Immersion Incidents and 65% of incidents were aged 0 – 4 years old.

6. Activity

Fatalities by Recreational Activity



Non Recreational Activities



2017



FATALITIES

Recreational Activities fatality total was similar to 2016 however an increase in Immersion Incidents increased the total fatalities toll.



While Swimming had the highest fatalities rate by activity, this rate was down 35% on 2016 and down 17% on the five year average. Swimming fatalities were highest with the 15-24 year old group which was twice the five year average.



71% of Powered Boating fatalities were NZ European which were more than double the five year average of 33%. Half of Powered Boat fatalities were in Tidal Waters.



Underwater fatalities doubled from six in 2016 to 12 in 2017 and were more than double the five year average. Two thirds of divers were either alone or out of sight of diving partners when incidents occurred.



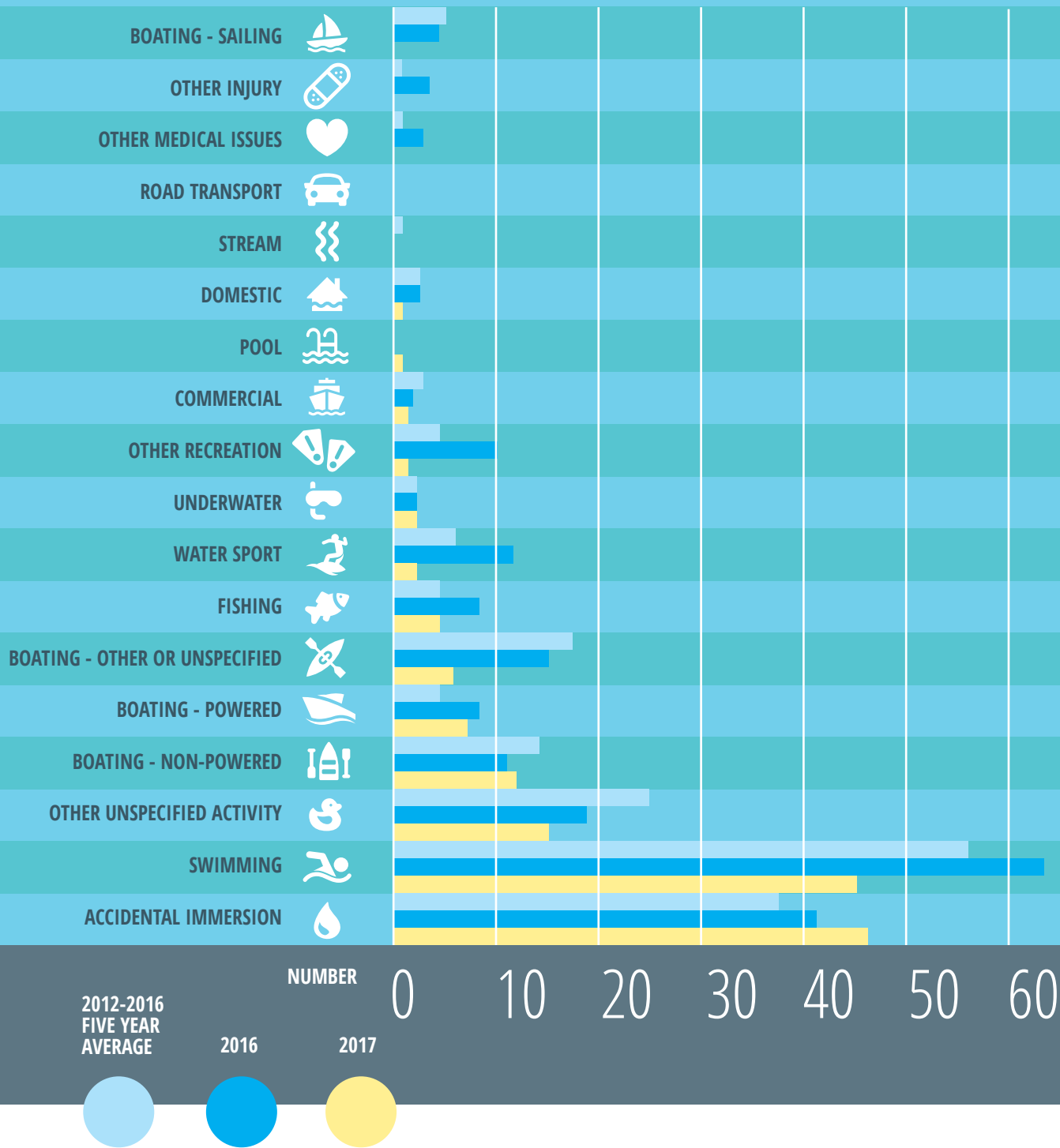
HOSPITALISATIONS

Despite the lower overall total, hospitalisations due to Accidental Immersions increased 12% on 2016 to 46 and 24% to 37 on the five year average. Māori Accidental Immersions made up the highest group at 43% of total.



Other Boating hospitalisations were down, but Non-Powered Boat hospitalisations were up one from 2016 to 12 in 2017. 42% of Non-Powered Boat hospitalisations occurred in the 25-34 year old age group.

Hospitalisations by Activity and over time



Swimming hospitalisations were down 20% on five year average to 45, from 56. 73% of Swimming hospitalisations were aged under 25 and 36% were aged 15-24 years. Māori (29%), Asian (18%) and Pacific Peoples (16%) were overrepresented in Swimming hospitalisations.













Total Fatalities

Preventable and Non Preventable









GENDER	2017		2012-2016		
	Number	%	Total*	Average	%
Female ♀	23	22	99	20	19
Male ♂	82	78	418	84	81
Total	105	100%	517	103	100%
AGE GROUP					
00 - 04	7	7	22	4	4
05 - 14	2	2	23	5	4
15 - 24	17	16	102	20	20
25 - 34	18	17	64	13	12
35 - 44	18	17	73	15	14
45 - 54	12	11	76	15	15
55 - 64	11	10	69	14	13
65+	20	19	88	18	17
Total	105	100%	517	103	100%
ETHNICITY					
Asian	12	11	51	10	10
Māori	17	16	109	22	21
NZ European	63	60	253	51	49
Other	4	4	53	11	10
Pacific Peoples	8	8	45	9	9
Unknown	1	1	6	1	1
Total	105	100%	517	103	100%

* Totals may not equal due to rounding



● Relate to non-recreational drowning fatalities

ACTIVITY	2017		2012-2016		
	Number	%	Total	Average	%
Land-based Fishing 	7	7	28	6	5
Non-powered Boat 	4	4	18	4	3
Powered Boat 	14	13	60	12	12
Sailing 	2	2	8	2	2
Swimming 	15	14	88	18	17
Underwater 	12	11	25	5	5
Other Recreation 	2	2	22	4	4
Immersion Incidents 	34	32	134	27	26
Occupational 	2	2	12	2	2
Other 	13	12	122	24	24
Total	105	100%	517	103	100%














ENVIRONMENT

Beaches 	18	17	104	21	20
Domestic 	7	7	30	6	6
Home Pools 	8	8	13	3	3
Inland Still Waters 	17	16	56	11	11
Offshore 	19	18	88	18	17
Public Pools 	2	2	9	2	2
Rivers 	18	17	134	27	26
Tidal Waters 	16	15	83	17	16
Total	105	100	517	103	100%

Total Hospitalisations




















GENDER	2017		2012-2016		
	Number	%	Total*	Average	%
Female 	38	26	273	55	29
Male 	110	74	659	132	71
Total	148	100%	932	186	100%

AGE GROUP	Number	%	Total*	Average	%
00 - 04	26	18	162	32	17
05 - 14	19	13	96	19	10
15 - 24	34	23	166	33	18
25 - 34	18	12	116	23	12
35 - 44	7	5	94	19	10
45 - 54	13	9	115	23	12
55 - 64	9	6	87	17	9
65+	22	15	96	19	10
Total	148	100%	932	186	100%

ENVIRONMENT	Number	%	Total*	Average	%
Area of Still Water 	8	5	30	6	3
Beach 	17	11	132	26	14
Commercial 	4	3	25	5	3
Farm 	0	0	14	3	2
Forest / Countryside 	1	1	17	3	2
Large Area of Water 	41	28	357	71	38
Other Domestic 	23	16	106	21	11
Other Unspecified Environment 	25	17	75	15	8
Pool 	12	8	66	13	7
Roadway 	1	1	2	0	0
School 	1	1	5	1	1
Sports & athletics area 	0	0	0	0	0
Stream 	15	10	103	21	11
Total	148	100%	932	186	100%

* Totals may not equal due to rounding

ETHNICITY	2017		2012-2016		
	Number	%	Total	Average	%
Asian	12	8	43	9	5
Māori	45	30	209	42	22
NZ European	58	39	449	90	48
Other	20	14	159	32	17
Pacific Peoples	10	7	62	12	7
Unknown	3	2	10	2	1
Total	148	100%	932	186	100%

Accidental Immersion		46	31	187	37	20
Boating - Non-powered		12	8	68	14	7
Boating - Other or Unspecified		6	4	85	17	9
Boating - Powered		7	5	26	5	3
Boating - Sailing		0	0	23	5	2
Commercial		2	1	18	4	2
Domestic		1	1	8	2	1
Fishing		5	3	24	5	3
Other Injury		0	0	5	1	1
Other Medical Issues		0	0	6	1	1
Other Recreation		2	1	25	5	3
Other Unspecified Activity		15	10	125	25	13
Road Transport		0	0	0	0	0
Pool		1	1	0	0	0
Stream		0	0	3	1	0
Swimming		45	30	280	56	30
Transport		0	0	0	0	0
Underwater		3	2	13	3	1
Water Sport		3	2	36	7	4
Total		148	100%	932	186	100%

OUR PURPOSE

To lead a step change in New Zealand
so people don't drown.

OUR VISION

By 2025 more people in New Zealand
respect the water and have the skills,
knowledge and awareness to
enjoy it safely.

WITH SPECIAL THANKS TO OUR GOVERNMENT PARTNERS



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