References

Academic Expert Group for the 3rd Global Ministerial Conference on Road Safety. (2020). https://www.roadsafetysweden.com

Adams, J., Duncanson, M., Oben, G., et al. (2022). Indicators of child and youth health status in Aotearoa 2021. University of Otago.

Atkinson, J., Salmond, C., & Crampton, P. (2020). NZDep2018 index of deprivation: Final research report, December 2020. University of Otago.

Auckland Transport. (2021). Vision zero for Tāmaki Makaurau: A transport safety strategy and action plan to 2030. Author.

Berkman, L. F., & Macintyre, S. (1997). The measurement of social class in health studies: Old measures and new formulations. IARC Scientific Publications, 138, 51–64. https://publications.iarc.fr/_publications/media/download/3569/ef5e-ce16d22f088affabfbbacbfd496c923d141a.pdf

Berry, S., Carr, P. A., Kool, B., Mohal, J., Morton, S., & Grant, C. (2017). Housing tenure as a focus for reducing inequalities in the home safety environment: evidence from Growing Up in New Zealand. Australian and New Zealand Journal of Public Health, 41(5), 530–534.

Commerce Commission. (2022). Annual report 2021/22. Author.

Dhillon, J., et al. (2016). Finding pathways for bite prevention and decreasing dog populations: The process of animal control for indigenous communities in Canada. J. Indig. Wellbeing, 2, 82–92.

Duncan-Sutherland, N., et al. (2022a). Epidemiology of dog-related injuries in New Zealand. The New Zealand Med. J.(online), 135(1554), 111–128.

Duncan-Sutherland, N., et al. (2002b). Caregivers' perspectives on the value of dogs and their impact on children (Unpublished data).

Duncan-Sutherland, N., et al. (2022c). Systematic review of dog bite prevention strategies. Inj. Prev. 2022, 28, 288–297.

Duncan-Sutherland, N., et al. (2022d). An audit of dog-related injury notification practices in a New Zealand public hospital. The New Zealand Med. J.,135(1553), 99–106.

Duncan-Sutherland. N., et al. (2023). Study of dog control strategies. Inj. Prev., 29, 219–226.

Ghebreab, L., Kool, B., Lee, A., & Morton, S. (2021). Risk factors of unintentional injury among children in New Zealand: a systematic review. Australian and New Zealand Journal of Public Health, 45(4), 403–410.

Harvey, A., et al. (2009). Injury prevention and the attainment of child and adolescent health. Bulletin of the World Health Organization, 87(5), 390–394. doi: 10.2471/BLT.08.059808

Healthy Auckland Together. (August, 2023). Safe speeds scorecard report: Analysis of Auckland Transport's Katoa, Ka Ora proposals by local board. Available online at: https://www.healthyaucklandtogether.org.nz/reports/

Ingram, J. C., Deave, T., Towner, E., Errington, G., Kay, B., & Kendrick, D. (April, 2012). Identifying facilitators and barriers for home injury prevention interventions for pre-school children: A systematic review of the quantitative literature. Health Educ. Res., 27(2), 258–68. doi: 10.1093/her/cyr066

Jeffries, M., et al. (2023). Financial barriers to primary health care in Aotearoa. Family Practice. https://doi.org/10.1093/fampra/cmad096

Khoo, K. H., et. al. (2022). What fuels the fire: A narrative review of the role social determinants of health play in burn injuries. Eur. Burn J., 3(2), 377–390.

King, P. T. (2019). Māori with lived experience of disability: Part 1. Waitangi Tribunal.

Malcolm, L., et al. (2022). Getting people out of 1- and 2-star cars (Research Report 705). Waka Kotahi NZ Transport Agency.

Mandic, S., Hewitt, J., Dodge, N., & Sharma, N. (2023). Approaches to managing speed in New Zealand's capital. Journal of Road Safety, 34(1).

Ministry of Business, Innovation and Employment. (2017). F9 Building Code acceptable solution. Available online at: https://www.building.govt.nz/assets/Uploads/building-code-compliance/f-safety-of-users/f9-restricting-access-residential-pools/asvm/f9-restricting-access-to-residential-pools.pdf

Ministry of Business, Innovation, and Employment. (2023). Consultation document: Options to address safety risks of corded window coverings. Available online at: https://www.mbie.govt.nz/dmsdocument/25929-consultation-document-options-to-address-safety-risks-of-corded-window-coverings-pdf

Ministry of Business, Innovation, and Employment. (2023b). Acceptable solutions G12/AS1 Water Supplies. Available online at: https://www.building.govt.nz/assets/Uploads/building-code-compliance/g-services-and-facilities/g12-water-supplies/asvm/g12-water-supplies-3rd-edition-amendment-13.pdf

Ministry of Health. (2017). HISO 10001:2017 Ethnicity data protocols. Ministry of Health.

Ministry of Transport. (2019). Road safety strategy speed reference group: Outcomes report. Available online at: https://www.transport.govt.nz/assets/Uploads/Report/Speed-outcomes-report.pdf

Ministry of Transport (n.d.) SORTED STUDY: Findings of the study of road trauma evidence and data 2017/18–2018/19. Retrieved January 2024.

Mistry, R. M, et. al. (2010). Socioeconomic deprivation and burns. Burns, 36(3), 403–408. doi: 10.1016/j.burns.2009.05.021

Monash University Accident Research Centre. (2020). Profile of hospital-treated child injury in primary schools, Victoria, 2009/10 to 2018/19. Monash University Accident Research Centre.

Mullane, T., et al. (2022). Understanding the workforce that supports Māori and Pacific peoples with type 2 diabetes to achieve better health outcomes. BMC Health Services Research. https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-022-08057-4

Paine, S. J., Walker, R., Lee, A., Loring, B., & Signal, T. L. (2023). Associations between maternal stressful life events and child health outcomes in indigenous and non-indigenous groups in New Zealand. Kōtuitui: New Zealand Journal of Social Sciences Online, 1–14. https://doi.org/10.1080/1177083X.2023.2292262

New Zealand Institute for Economic Research. (2019). Burning couches: A cost-benefit analysis on regulating for fire retardants in foam furniture. Report to the Ministry of Business, Innovation, and Employment.

Office of the Chief Coroner of New Zealand. (2021). Recommendations recap: A summary of coronial recommendations and comments made between 1 January and 31 March 2021. Available online at: https://coronialservices.justice.govt.nz/assets/Issue-26-1-January-31-March-2021.pdf

Peden, M., Oyegbite, K., Ozanne-Smith, J., Hyder, A. A., Branche, C., Rahman, A. F., et al. (2008). World report on child injury prevention. World Health Organisation, UNICEF.

Radio New Zealand. (15 December 2023). Quarter of pools checked by Auckland Council unsafe. Available online https://www.rnz.co.nz/news/national/504850/quarter-of-all-pools-checked-by-auckland-council-unsafe

Recreation Aotearoa. (2023). Poolsafe annual report. Author. https://www.nzrecreation.org.nz/Site/aquatics/poolsafe.aspx

Safekids Aotearoa. (2012). Child cycling injury prevention: Factsheet. Author.

Safekids Aotearoa. (2013). Safekids Aotearoa position paper: Booster seats. Author.

Safekids Aotearoa. (2015). Child unintentional deaths and injuries in New Zealand, and prevention strategies. Author.

Safekids Aotearoa. (2020). Childhood burns in Aotearoa: An overview. Author.

Salmond, C., Crampton, P., Atkinson, J. (2007). NZDep2006 Index of Deprivation. Department of Public Health, University of Otago.

Sport New Zealand | IHI Aotearoa. (2022). Kia Hīanga: Internal play workplan 2022–2025. Sport New Zealand.

Stallman, RK, Moran, K, Quan, L, Langendorfer, S. (2017) "From Swimming Skill to Water Competence: Towards a More Inclusive Drowning Prevention Future," International Journal of Aquatic Research and Education: 10(2). Available at: https://scholarworks.bgsu.edu/ijare/vol10/iss2/3

Starship Child Health. (2015). Sumission to the Building (Pools) Amendment Bill 2015. Available at https://www.parliament.nz/resource/en-NZ/51SCLGE_EVI_00DBHOH_BILL64825_1_A454556/6027973dcb9efe5dc3b2f0d4784e0794844535a8

Te Karu, L. (2022). Optimal medication therapy in Indigenous populations: A case study of gout in Māori [Unpublished doctoral dissertation].

Te Rōpū Arotake Auau Mate o te Hunga Tamariki, Taiohi | Child and Youth Mortality Review Committee. 2021. 15th data report: 2015–19. Health Quality & Safety Commission.

Tipene-Leach, D., & Fidow, J. F. (2022). Sudden unexpected death in infancy prevention in New Zealand: The case for hauora – a wellbeing approach. Ministry of Health.

Turner, B., Job, S., & Mitra, S. (2021). Guide for road safety interventions: Evidence of what works and what does not work. World Bank.

Underwood, L., Kool, B., Pillai, A., Kingi, T. K., Morton, S., & Ameratunga, S. (2023). Manifold child, family and social variables are associated with injury among New Zealand preschool children. Injury prevention: Journal of the International Society for Child and Adolescent Injury Prevention, ip-2023-044869.

Waitangi Tribunal. (2023). Hauora: Report on Stage One of the Health Services and Outcomes Kaupapa Inquiry: New edition with final recommendations. Legislation Direct.

Waka Kotahi | NZ Transport Agency. (2022). Speed managent guide (Road to Zero edition). Author.

Whitehead, J., et al. (2023). Moving for good? Patterns of early childhood residential mobility, unmet healthcare needs, and child health in Aotearoa. University of Auckland, University of Waikato and Victoria University of Wellington for Ministry of Social Development.

Young, M., Love, T., Wilson, M., Alatini, M., & Shepherd, M. (2021). The societal cost of unintentional childhood injuries in Aotearoa. The New Zealand Medical Journal, 134(1540), 25–37.

Appendix 1: Methods

This section sets out the methods used for this data book. The section has been prepared by the New Zealand Child & Youth Epidemiology Service (University of Otago), who prepared the data used in this publication.

Mortality data

Mortality data are from the national Mortality Collection (MORT). They include deaths among children aged 0–14 years with a death registration date between 2009 and 2018 and unintentional injury (ICD-10 AM external cause of injury codes V01–X59, Y86) as the main underlying cause of death. SUDI external cause codes (W75, W78, and W79) were excluded. The 2019 mortality data was unfortunately delayed and not available at the time of developing this publication.

Hospitalisations

Non-fatal unintentional injury data are from the National Minimum Data Set (NMDS) and present non-fatal hospitalisations among children aged 0–14 with a discharge date between 2012 and 2021, a principal diagnosis of injury, and an unintentional external cause of injury code (V01–X59, Y86). The data include only the first hospitalisation for each injury event. Deaths in hospital and day-stay cases (i.e., those who do not stay in the hospital past midnight) were excluded. The use of unintentional injury codes meant that intentional self-harm, assault, complications of drugs/medical/surgical care, and injury events with undetermined intent were excluded.

Ethnicity

Prioritised ethnicity was used in the data analysis in this publication. This method assigned each individual to only one ethnic group, in the following order: Māori; Pacific; Asian; Middle Eastern, Latin American, and African (MELAA); and European/other. This meant that a child who, for example, identified both Māori and Asian ethnicity was assigned to the Māori prioritised ethnic group. [195]

195. The use of prioritised ethnicity is a limitation of this publication. Compared with total response ethnicity, prioritised ethnicity is known for undercounting of Pacific data. This could partly explain why, in some instances, Pacific data was so suppressed that we couldn't report it in this data book. This may not have been the case if total response ethnicity had been used.

Injury codes

Non-fatal hospitalisations for unintentional injury had a principal diagnosis of injury (ICD-10-AM S00-T98) and ICD 10 AM unintentional external cause of injury codes V01–X59, Y86. The ICD-10 codes for external causes of injury are shown below.

External Cause of Injury		ICD-10-AC Codes
Fall		W00 - W19
Motor Vehicle Traffic	Occupant	V30–V39 (.4–.9), V40–V49(.4–.9), V50–V59(.4–.9), V60–V69(.4–.9), V70–V79(.4–.9), V83–V86(.0–.3)
	Pedestrian	V02–V04(.1, .9), V09.2
	Pedal Cyclist	V12–V14(.3–.9), V19(.4–.6)
	Motorcyclist	V20–V28(.3–.9),V29(.4–.9)
	Other	V80(.3–.5), V81.1, V82.1
Pedestrian, other		V01,V02–V04(.0),V05,V06,V09(.0,.1,.3,.9)
Pedal cyclist, other		V10–V11,V12–V14(.0–.2),V15–V18,V19(.0, .8,.9)
Other land transport		V20–V28(.0–.2),V29(.0–.3),V30–V39(.0–.3),V40–V49(.0–.3),V50–V59(.0–.3),V60–V69(.0–.3), V70–V79(.0–.3),V80(.0,.6–.9),V81–V82(.0,.2–.9),V83–V86(.4–.9)V87.9,V88(.0–.9)V89(.0,.1,.3,.9)
Inanimate mechanical forces		W20–W49
Animate mechanical forces		W50–W64
Other natural/environmental		X21,X23,X25,X26,X28,X29,X30,X31,X32,X39,X51
Poisoning		X40–X49
Burns from fire/ hot object or substances		X01–X19
Suffocation		W74–W84
Drowning		W65–W74
Overexertion		X50
Other specified and unspecified		X58,X59,Y86

Confidence intervals

Some of the graphs and tables of rates of events in this report include 95% confidence intervals. Confidence intervals are a statistical tool used to indicate the range of variation that occurs in the number of randomly-occurring discrete events that occur per unit of measurement (such as per year). It is usual to use 95% confidence intervals, which indicate that there is a 95% probability that the number of random events that occur with a particular probability in a given time period will be within the range of the confidence limits. [196] The wider the confidence interval, the less precise the estimated rate is likely to be.

Where comparisons are made between two or more rates, non-overlapping confidence intervals indicate that the rates are significantly different from each other.

Socioeconomic deprivation

The New Zealand Index of Deprivation (NZDep) was first created using information from the 1991 census, and it has been updated following each subsequent census (1996, 2001, 2006, 2013, 2018). It is a small-area index of deprivation, and it is used as a proxy for socio-economic status. The main concept underpinning small-area indices of deprivation is that the socio-economic environment in which a person lives can confer risks or benefits that may be independent of their own social position within a community. They are aggregate measures, providing information about the wider socio-economic environment in which a person lives, rather than information about their individual socio-economic status. [197]

As an example, the most recent index, NZDep2018, combines nine variables from the 2018 census to reflect eight dimensions of material and social deprivation. Each variable represents a standardised proportion of the people living in an area who lack a defined material or social resource. These are combined to give a score representing the average degree of deprivation experienced by people in that area. Individual area scores are ranked and placed on an ordinal scale from 1 to 10, with decile 1 reflecting the least deprived 10% of small areas and decile 10 reflecting the most deprived 10% of small areas. [198] The quintile measures used in this report combine pairs of deciles (e.g., NZDep quintile 1 combines deciles 1 and 2).

196. Adams et al., 2022.
197. Berkman & Macintyre, 1997.
198. Atkinson et al., 2020.

The census variables included in each iteration of the NZDep index have changed slightly over time, to reflect indicators of social and material deprivation at that time. For example, you can see in the tables below the variables included in NZDep2018 [199] and those in NZDep2006, [200] reflecting the changes in society over the timeframe of those reports. Consequently, in utilising the NZDep within a data set, it is recommended that the most recent version of the index is applied to the data for any given year. In this current report, the NZDep2006 has been used for 2006–2012 data, the NZDep2013 for 2013–2017 data, and the NZDep2018 for all data from 2018.

The advantage of the NZDep is its ability to assign measures of socio-economic status to the older population, people who are not in employment, and children, to whom income and occupational measures often do not apply, as well as to provide proxy measures of socio-economic status for large datasets when other demographic information is lacking. However, small-area indices have limitations, as not all individuals in a particular area are accurately represented by their area's aggregate score. While this may be less of a problem for very affluent or very deprived neighbourhoods, in average areas, aggregate measures may be much less predictive of individual socio-economic status. Despite these limitations, the NZDep has been shown to be associated with rates of mortality and morbidity from a number of causes in Aotearoa.

199. Ibid.

200. Salmond et al., 2007

Variables used in the New Zealand Index of Deprivation 2018 (NZDep2018)

Dimension	**Variable in order of decreasing weight in the index**
Communication	People with no access to the Internet at home
Income	People aged 18–64 receiving a means tested benefit
Income	People living in equivalised* households with income below an income threshold
Employment	People aged 18–64 who are unemployed
Qualifications	People aged 18–64 without any qualifications
Owned home	People not living in own home
Support	People aged <65 living in a single parent family
Living space	People living in equivalised* households below a bedroom occupancy threshold
Living condition	People living in dwellings that are always damp and/or always have mould greater than A4 size

** The setting of the household equivalised income threshold was based on two principles: 1) The proportion of the population identified as being socio-economically deprived by the threshold should be broadly consistent with the other variables in the index, and 2) the threshold should be broadly consistent with other measures of income poverty.*

Variables used in the New Zealand Index of Deprivation 2006 (NZDep2006)3

Dimension of Deprivation	**Variable description (in order of decreasing weight)**
Income	People aged 18-64 receiving a means tested benefit
Income	People living in equivalised* households with income below an income threshold
Owned home	People not living in own home
Support	People aged <65 living in a single parent family
Employment	People aged 18-64 unemployed
Qualifications	People aged 18-64 without any qualifications
Living space	People living in equivalised* households below a bedroom occupancy threshold
Communication	People with no access to a telephone (Landline)
Transport	People with no access to a car

**Equivalisation: methods used to control for household composition*

Appendix 2: Additional data tables

Additional data tables related to tamariki deaths from injury

Table 26:Tamariki hospitalisations for injury from burns, by gender, 2017–2021

Year	Number	Rate per 100,000	95% CI
Age 0 - 4 years			
2009	51	16.95	12.62 - 22.29
2010	57	18.72	14.18 - 24.25
2011	51	16.55	12.32 - 21.76
2012	34	10.9	7.55 - 15.23
2013	40	12.88	9.20 - 17.54
2014	52	16.82	12.56 - 22.06
2015	40	13	9.28 - 17.70
2016	36	11.75	8.23 - 16.27
2017	38	12.46	8.81 - 17.10
2018	23	7.54	4.78 - 11.31
Age 5 - 9 years			
2009	17	5.76	3.35 - 9.21
2010	<6	s	s
2011	<6	s	s
2012	11	3.68	1.83 - 6.59
2013	7	2.33	0.94 - 4.81
2014	11	3.6	1.79 - 6.44
2015	13	4.18	2.22 - 7.14
2016	8	2.53	1.09 - 4.98
2017	12	3.72	1.92 - 6.50
2018	<6	s	s

Year	Number	Rate per 100,000	95% CI
Age 10 - 14 years			
2009	15	4.92	2.75 - 8.12
2010	16	5.29	3.02 - 8.59
2011	11	3.66	1.82 - 6.55
2012	15	5.02	2.81 - 8.28
2013	11	3.71	1.85 - 6.63
2014	8	2.67	1.15 - 5.25
2015	11	3.62	1.81 - 6.49
2016	11	3.59	1.79 - 6.42
2017	9	2.9	1.33 - 5.51
2018	13	4.15	2.21 - 7.09z

Table 28: Tamariki deaths from injury, by prioritised ethnicity (Māori and European/other), per year, 2009–2018 [201]

Year	Number	Rate per 100,000	95% CI
Māori			
2009	20	8.97	5.48 - 13. 86
2010	22	9.76	6.11 - 14.78
2011	15	6.58	3.68 - 10.85
2012	21	9.11	5.46 - 13.93
2013	19	8.15	4.91 - 12.73
2014	18	7.58	4.49 -11.98
2015	6	2.48	0.91 - 5.39
2016	11	4.46	2.22 - 7.98
2017	18	7.17	4.25 - 11.33
2018	14	5.48	2.99 - 9.19
European/other			
2009	25	1.29	3.61 - 8.24
2010	16	0.86	2.02 - 5.74
2011	16	0.77	2.00 - 5.68
2012	17	0.68	2.14 - 5.88
2013	16	0.67	1.95 - 5.56
2014	18	0.7	2.31 - 6.17
2015	21	0.84	2.86 - 7.07
2016	17	0.7	2.21 - 6.08
2017	14	0.59	1.73 - 5.33
2018	10	0.42	1.10 - 4.24

201. Pacific, Asian and MELAA data suppressed due to low numbers per year.

Additional data tables related to tamariki hospitalisations for injury

Table 29: Tamariki hospitalisation for injury, per year, 2012–2021

Year	Number	Rate per 100,000	95% CI
2012	7,373	813.93	795.46 - 832.73
2013	7,234	795.69	777.78 - 814.58
2014	7,288	795.25	777.21 - 813.84
2015	7,425	803.48	785.52 - 822.19
2016	7,384	792.68	774.81 - 811.08
2017	7,184	765.01	747.53 - 783.02
2018	6,561	693.20	676.53 - 710.18
2019	6,935	726.92	709.91 - 744.24
2020	6,288	653.73	637.87 - 670.30
2021	6,149	634.50	618.74 -650.56

Table 30: Tamariki hospitalisations for injury, by top three causes, 2012–2021

Year	Number	Falls	Inanimate Mechanical Forces	Land Transport (excluding motor vehicle traffic)
2012	813.9	398.7	163.2	69.2
2013	795.7	403.8	152.8	61.1
2014	795.3	394.5	151.3	57.7
2015	803.5	388.8	167.3	61.7
2016	792.7	398.1	137.0	62.4
2017	765.0	380.6	140.7	70.7
2018	693.2	343.1	124.7	55.0
2019	726.9	359.9	128.3	67.3
2020	653.7	313.4	109.8	69.2
2021	634.5	304.3	110.5	67.0

Table 31: Tamariki hospitalisation for injury, by major cause, 2017–2021

Year	Number	Rate per 100,000	95% CI
Falls			
2012	3,612	398.7	385.8 - 412.0
2013	3,670	403.8	390.9 - 417.1
2014	3,615	394.5	381.8 - 407.6
2015	3,592	388.8	376.2 - 401.7
2016	3,708	398.1	385.4 - 411.1
2017	3,574	380.6	368.3 - 393.3
2018	3,247	343.1	331.4 - 355.1
2019	3,434	359.9	385.8 - 412.0
2020	3,014	313.4	390.9 - 417.1
2021	2,949	304.3	381.8 - 407.6
Inanimate Mechanical Forces			
2012	1,478	163.16	154.95 - 171.7
2013	1,389	152.84	144.91 - 161.1
2014	1,386	151.26	143.4 - 159.44
2015	1,546	167.34	159.1 - 175.9
2016	1,276	137	129.58 - 144.73
2017	1,321	140.69	133.21 - 148.49
2018	1,180	124.67	117.66 - 131.99
2019	1124	128.3	121.21 - 135.69
2020	1,056	109.82	103.3 - 116.65
2021	1,071	110.51	103.99 - 117.34
Land Transport (excluding motor vehicle traffic)			
2012	627	69.2	63.9-74.9
2013	555	61.1	56.1-66.4
2014	529	57.7	52.9-62.9
2015	570	61.7	56.7-67
2016	581	62.4	57.4-67.7
2017	664	70.7	65.4-76.3
2018	521	55	50.4-60
2019	642	67.3	62.2-72.7
2020	665	69.2	64-74.6
2021	649	67	61.9-72.3

Table 32: Tamariki hospitalisations for injury, by age group and main cause, 2017–2021

	Main Cause	Number	Rate per 100,000	95% CI
Age <1 Year	Falls	808	272.2	253.74 - 291.62
	Inanimate Forces	224	75.5	65.90 - 86.01
	Pedal Cyclist, Other	0		
	Other Land Transport	<6	0.7	0.08 - 2.43
	Motor Vehicle Traffic	25	8.4	5.45 - 12.43
Age <1 Year	Falls	3,929	321.7	311.68 - 331.88
	Inanimate Forces	2,215	181.3	178.87 - 189.05
	Pedal Cyclist, Other	161	13.2	11.22 - 15.38
	Other Land Transport	87	7.1	5.70 - 8.79
	Motor Vehicle Traffic	239	19.6	17.16 -22.21
Age 0 -4 Year	Falls	4,737	312.0	303.16 - 320.99
	Inanimate Forces	2,439	160.6	154.32 - 167.14
	Pedal Cyclist, Other	161	10.6	9.03 - 12.37
	Other Land Transport	89	5.9	4.71 - 7.21
	Motor Vehicle Traffic	264	17.4	15.35 - 19.62
Age 5 -9 Year	Falls	6,725	403.3	393.73 - 413.07
	Inanimate Forces	1,825	109.4	104.48 - 114.59
	Pedal Cyclist, Other	483	29.0	26.44 - 31.67
	Other Land Transport	377	22.6	20.38 - 25.01
	Motor Vehicle Traffic	432	25.9	23.52 - 28.47
Age 10 - 14 Year	Falls	4,756	300.2	291.72 - 308.85
	Inanimate Forces	1,588	100.2	95.36 - 105.29
	Pedal Cyclist, Other	925	58.4	54.58 - 62.27
	Other Land Transport	906	57.2	53.52 - 61.03
	Motor Vehicle Traffic	657	41.5	38.36 - 44.77

Table 33: Tamariki hospitalisations for injury, by prioritised ethnicity, 2012–2021

Year	Number	Rate per 100,000	95% CI
Māori			
2012	2,130	924.21	885.37 – 964.31
2013	2,059	883.69	845.93 – 922.70
2014	2,127	895.44	857.79 – 934.32
2015	2,167	895.19	857.89 – 933.69
2016	2,112	856.42	820.28 – 893.74
2017	2,106	838.56	803.13 – 875.16
2018	1,989	777.93	744.11 – 812.88
2019	2158	829.31	794.69 – 865.06
2020	1945	734.65	702.36 – 768.04
2021	1,961	728.22	696.34 – 761.18
Pacific			
2012	986	1,132.85	1,063.23 – 1,205.83
2013	940	1,071.84	1,004.40 – 1,142.61
2014	916	1,034.14	968.25 – 1,103.34
2015	945	1056.43	990.14 – 1,125.99
2016	883	977.55	914.13 – 1,044.21
2017	818	896.89	836.47 – 960.52
2018	757	822.11	764.58 – 882.82
2019	739	795.00	738.71 – 854.45
2020	707	753.47	698.95 – 811.12
2021	662	698.99	646.75 – 754.33
Asian			
2012	397	416.69	376.70 – 459.76
2013	473	480.69	438.34 – 526.03
2014	468	437.32	398.59 – 478.79
2015	536	463.54	425.12 – 504.50
2016	558	449.10	412.61 – 487.96
2017	580	436.54	401.73 – 473.55
2018	561	396.52	364.38 – 430.74
2019	630	419.73	387.59 – 453.83
2020	594	374.26	344.77 – 405.61
2021	598	357.38	329.31 – 387.21

Table 33: Tamariki hospitalisations for injury, by prioritised ethnicity, 2012–2021

Year	Number	Rate per 100,000	95% CI
MELAA			
2012	74	664.78	521.98 – 834.59
2013	96	836.97	677.93 – 1,022.09
2014	102	833.06	679.25 – 1,011.29
2015	107	821.94	673.58 – 993.24
2016	88	638.05	511.72 – 786.11
2017	101	693.40	564.77 – 842.55
2018	95	619.30	501.03 –7 57.06
2019	109	676.43	555.41 – 815.98
2020	99	586.22	476.44 – 713.70
2021	108	611.48	501.60 – 738.27
European/Other			
2012	3,763	780.88	756.13– 806.24
2013	3644	762.12	737.57 – 787.27
2014	3,651	775.34	750.39 – 800.91
2015	3,648	786.82	761.49 – 812.77
2016	3,725	816.19	790.19 – 842.83
2017	3,565	793.74	767.90 – 820.23
2018	3,151	713.07	688.39 –7 38.41
2019	3,295	758.10	732.43 – 784.43
2020	2,938	687.43	662.79 –712.74
2021	2,812	669.30	644.79 – 694.51

Table 34: Tamariki hospitalisations for injury, by NZDep quintile, 2017–2021

	NZ Dep Quintile	No. of Hospitalisations.	Rate per 100,000	95% CI
Māori	Quintile 1	677	635.32	588.36–685.04
	Quintile 2	905	641.84	600.70–685.06
	Quintile 3	1421	774.98	735.20–816.35
	Quintile 4	2346	837.95	804.38–872.56
	Quintile 5	4793	812.28	789.44–835.60
	Missing NZDep data	18		
Pacific	Quintile 1	156	756.18	642.17–884.60
	Quintile 2	265	805.47	711.40–908.52
	Quintile 3	359	706.83	635.60–783.87
	Quintile 4	749	866.10	805.17–930.41
	Quintile 5	2123	775.04	742.42–808.73
	Missing NZDep data	31		
Asian	Quintile 1	570	399.92	367.75–434.14
	Quintile 2	639	405.07	374.27–437.73
	Quintile 3	623	374.76	345.91–405.38
	Quintile 4	622	389.99	59.94–421.88
	Quintile 5	473	380.56	347.03–416.45
	Missing NZDep data	36		
MELAA	Quintile 1	82	653.91	520.06–811.68
	Quintile 2	110	678.59	557.71–817.90
	Quintile 3	85	526.32	420.39–650.81
	Quintile 4	120	755.67	626.51–903.60
	Quintile 5	114	579.56	478.06–696.24
	Missing NZDep data	1		
European.Other	Quintile 1	4163	678.40	657.95–699.33
	Quintile 2	3588	694.90	672.35–718.02
	Quintile 3	3361	749.29	724.17–775.06
	Quintile 4	2738	747.78	720.03–776.33
	Quintile 5	1793	784.89	748.97–822.08
	Missing NZDep data	118		
Missing Ethnicity Data	Quintile 1	9		
	Quintile 2	7		
	Quintile 3	5		
	Quintile 4	12		
	Quintile 5	5		
	Total	38		

Table 35: Tamariki hospitalisations for injury, by geographic region, 2017–2021

DHB Region	Number	Rate per 100,000	95% CI
Northland	1383	709.30	672.41–747.70
Waitematā	3715	613.49	593.92–633.54
Auckland	2785	692.79	667.29–719.00
Counties Manukau	4409	680.15	660.22–700.53
Waikato	3565	805.29	779.07–832.16
Bay of Plenty	1835	719.49	686.95–753.19
Lakes	854	701.38	655.12–750.04
Hauora Tairāwhiti	575	996.02	916.26–1,080.86
Taranaki	1055	833.00	783.49–884.83
Hawke's Bay	1354	753.06	713.48–794.27
MidCentral	1113	622.48	586.45–660.16
Whanganui	532	793.56	727.55–863.95
Hutt Valley	934	615.20	576.38–655.96
Capital & Coast	1868	683.32	652.68–715.03
Wairarapa	421	956.38	867.20–1,052.25
Nelson Marlborough	852	624.59	583.35–667.97
South Canterbury	309	577.57	514.96–645.69
Canterbury	3375	662.19	640.04–684.92
West Coast	173	626.36	536.49–726.97
Southern	1814	620.89	592.65–650.14
Aotearoa	33117	694.26	686.80–701.78

Table 36: Rates of hospitalisation for injury for tamariki, by ethnicity and geographic region, 2017–2021 [202]

DHB Region	Māori	Pacific	Asian	European/Other
Northland	757.2	639.0	289.5	686.5
Waitematā	713.2	76.5	395.0	699.9
Auckland	908.6	947.1	484.4	672.0
Counties Manukau	800.9	817.2	339.8	760.7
Waikato	857.1	742.3	384.5	861.0
Bay of Plenty	829.9	530.0	378.3	687.9
Lakes	703.1	510.8	386.8	784.0
Hauora Tairāwhiti	923.3	773.8	546.9	1238.8
Taranaki	844.8	1111.1	379.4	857.8
Hawke's Bay	846.1	802.7	380.7	705.0
MidCentral	615.6	634.0	263.2	687.4
Whanganui	900.1	630.9	310.3	765.0
Hutt	760.4	693.9	390.3	585.3
Capital & Coast	760.9	804.8	414.3	715.5
Wairarapa	958.4	709.7	604.4	1001.9
Nelson Marlborough	638.6	620.8	317.1	653.1
South Canterbury	630.9	764.7	512.0	563.5
Canterbury	713.1	791.1	368.1	705.4
West Coast	637.6	0.0	508.5	641.3
Southern	619.2	567.4	352.5	654.6
Aotearoa	780.9	792.4	394.8	725.2

202. Data in this table should be interpreted with caution due to wide confidence intervals.

Table 37: Hospitalisations for injury for tamariki Māori, by geographic region, 2017–2021

DHB Region	Number	Rate per 100,000	95% CI	
Northland	825	757.2	706.43	810.71
Waitematā	707	713.2	661.59	767.77
Auckland	464	908.6	827.76	995.11
Counties Manukau	1250	800.9	757.13	846.59
Waikato	1424	857.1	813.11	902.76
Bay of Plenty	867	829.9	775.57	887.04
Lakes	464	703.1	640.60	770.12
Hauora Tairāwhiti	373	923.3	831.93	1021.89
Taranaki	357	844.8	759.40	937.11
Hawke's Bay	659	846.1	782.6	913.20
MidCentral	388	615.6	555.84	679.99
Whanganui	263	900.1	794.56	1015.69
Hutt	317	760.4	678.96	848.86
Capital & Coast	392	760.9	687.40	840.05
Wairarapa	136	958.4	804.11	1133.72
Nelson Marlborough	179	638.6	548.47	739.32
South Canterbury	60	630.9	481.43	812.13
Canterbury	628	713.1	658.38	771.09
West Coast	38	637.6	451.13	875.16
Southern	355	619.2	556.47	687.11
Areas Outside DHB	14			
Aotearoa	10160	780.9	765.78	796.22

Table 38: Hospitalisation for injury for Pacific children by geographic region, 2017–2021

DHB Region	Number	Rate per 100,000	95% CI	
Northland	37	639.0	449.88	880.85
Waitematā	421	676.5	613.43	744.34
Auckland	641	947.1	75.19	1023.35
Counties Manukau	1515	817.2	776.56	859.41
Waikato	138	742.3	623.64	877.04
Bay of Plenty	38	530.0	375.00	727.47
Lakes	19	510.8	307.36	797.65
Hauora Tairāwhiti	13	773.8	411.62	1323.33
Taranaki	28	1111.1	738.16	1605.93
Hawke's Bay	83	802.7	639.33	995.09
MidCentral	57	634.0	480.18	821.49
Whanganui	20	630.9	385.21	974.45
Hutt	107	693.9	568.66	838.52
Capital & Coast	226	804.8	703.32	916.90
Wairarapa	11	709.7	353.78	1269.90
Nelson Marlborough	28	620.8	412.45	897.33
South Canterbury	13	764.7	406.77	1307.76
Canterbury	195	791.1	683.93	910.25
West Coast	0			
Southern	64	567.4	436.92	724.54
Areas Outside DHB	29			
Aotearoa	3683	792.4	767.03	818.43

Table 39: Hospitalisations for injury for Asian children by geographic region, 2017–2021

DHB Region	Number	Rate per 100,000	95% CI	
Northland	22	289.5	181.35	438.29
Waitematā	646	395.0	365.13	426.68
Auckland	617	484.4	446.94	524.19
Counties Manukau	555	339.8	312.14	369.31
Waikato	187	384.5	331.39	443.78
Bay of Plenty	71	378.3	295.41	477.14
Lakes	34	386.8	267.83	540.54
Hauora Tairāwhiti	7	546.9	219.09	1126.83
Taranaki	28	379.4	252.05	548.37
Hawke's Bay	34	380.7	263.63	532.06
MidCentral	40	263.2	187.98	358.36
Whanganui	9	310.3	141.61	589.17
Hutt	87	390.3	312.61	481.45
Capital & Coast	186	414.3	356.93	478.36
Wairarapa	11	604.4	301.30	1081.51
Nelson Marlborough	28	317.1	210.66	458.32
South Canterbury	17	512.0	298.11	819.89
Canterbury	267	368.1	325.29	415.03
West Coast	6	508.5	185.67	1106.77
Southern	76	352.5	277.72	441.22
Areas Outside DHB	35			
Aotearoa	2963	394.8	380.72	409.29

Table 40: Hospitalisation for injury for European/other children by geographic region, 2017–2021

DHB Region	Number	Rate per 100,000	95% CI	
Northland	489	686.5	627.00	750.14
Waitematā	1860	699.9	668.46	732.45
Auckland	960	672.0	630.14	715.88
Counties Manukau	1021	760.7	714.74	808.82
Waikato	1747	861.0	821.11	902.36
Bay of Plenty	844	687.9	642.28	735.93
Lakes	334	784.0	702.20	872.80
Hauora Tairāwhiti	179	1238.8	1063.91	1434.13
Taranaki	632	857.8	792.18	927.33
Hawke's Bay	570	705.0	648.31	765.34
MidCentral	619	687.4	634.30	743.75
Whanganui	238	765.0	670.91	868.65
Hutt	405	585.3	529.64	645.13
Capital & Coast	1004	715.5	671.93	761.17
Wairarapa	261	1001.9	884.04	1131.14
Nelson Marlborough	611	653.1	602.36	707.03
South Canterbury	218	563.5	491.13	643.43
Canterbury	2233	705.4	676.46	735.30
West Coast	128	641.3	535.00	762.49
Southern	1291	654.6	619.40	691.34
Areas Outside DHB	117			
Aotearoa	15761	725.2	713.96	736.66

Additional data tables related to land transport injury for tamariki

Table 41: Tamariki fatalities and hospitalisations for injuries from' motor vehicle traffic' incidents, 2017–2021

Fatalities					Hospitalisations				
Year	**Number**	**Rate per 100,000**	**95% CI**		**Year**	**Number**	**Rate per 100,000**	**95% CI**	
2009	22	2.45	0.91	1.26					
2010	15	1.67	0.73	1.08					
2011	10	1.11	0.58	0.92					
2012	14	1.55	0.84	2.59	2012	224	24.7	21.60	28.19
2013	7	0.77	0.31	1.59	2013	250	27.5	24.20	31.14
2014	13	1.42	0.75	2.43	2014	256	27.9	24.62	31.58
2015	10	1.08	0.52	1.99	2015	250	27.1	23.81	30.63
2016	15	1.61	0.90	2.66	2016	259	27.8	24.52	31.41
2017	13	1.38	0.74	2.37	2017	249	26.5	23.33	30.03
2018	15	1.58	0.89	2.61	2018	263	27.8	24.53	31.36
					2019	281	29.5	26.11	33.11
					2018	288	30.0	26.59	33.62
					2018	264	27.2	24.05	30.73

Table 42: Tamariki hospitalisations for 'motor vehicle traffic' injury, by prioritised ethnicity, 2017–2021

	Number	**Rate per 100,000**	**95% CI**	
Māori	585	45.0	41.39	48.76
Pacific	130	28.0	23.37	33.21
Asian	125	16.7	13.86	19.85
MELAA	20	24.8	15.16	38.34
European/Other	487	22.4	20.46	24.49
Not Stated	6			
Total	**1353**	**28.4**	**26.87**	**29.92**

Table 43: Tamariki hospitalisations for 'motor vehicle traffic' injury, by NZDep quintile and crash type, 2017–2021 [203]

Occupant				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	58	6.5	4.91	8.37
Quintile 2	79	9.1	7.24	11.39
Quintile 3	130	15.0	12.55	17.8
Quintile 4	183	20.2	17.34	23.30
Quintile 5	276	22.3	19.77	25.12
Total	**742**	**15.6**	**14.46**	**16.72**
Pedestrian				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	33	3.7	2.53	5.17
Quintile 2	47	5.4	4.00	7.23
Quintile 3	40	4.6	3.30	6.30
Quintile 4	79	8.7	6.89	10.85
Quintile 5	135	10.9	9.15	12.92
Total	**338**	**7.1**	**6.35**	**7.88**
Pedal Cyclist				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	15	1.7	0.94	2.76
Quintile 2	19	2.2	1.32	3.43
Quintile 3	17	2.0	1.14	3.15
Quintile 4	20	2.2	1.35	3.40
Quintile 5	29	2.3	1.57	3.37
Total	**100**	**2.1**	**1.71**	**2.55**
Motor Cyclist				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	30	3.3	2.26	4.78
Quintile 2	30	3.5	2.34	4.96
Quintile 3	27	3.1	2.06	4.54
Quintile 4	25	2.8	1.78	4.07
Quintile 5	52	4.2	3.14	5.52
Total	**165**	**3.5**	**2.95**	**4.03**

203. Totals include data with NZDep quintile data not stated. Missing data for occupant injury = 16; missing data for each of the other motor vehicle crash types under 6 per category.

Table 44: Tamariki hospitalisations for 'non-motor vehicle/non-traffic' injury, by age group and crash type, 2017–2021

	Other Pedal Cyclist			
	Number	**Rate per 100,000**	**95% CIs**	
0 - 4	161	10.6	9.03	12.37
5 - 9	483	29.0	26.44	31.67
10 - 14	925	58.4	54.68	62.27
Total	**1569**	**32.9**	**31.28**	**34.56**
	Other Pedestrian			
	Number	**Rate per 100,000**	**95% CIs**	
0 - 4	94	6.2	5.00	7.58
5 - 9	70	4.2	3.27	5.30
10 - 14	36	2.3	1.59	3.15
Total	**200**	**4.2**	**3.63**	**4.82**
	Other Land Transport			
	Number	**Rate per 100,000**	**95% CIs**	
0 - 4	89	5.9	4.71	7.21
5 - 9	377	22.6	20.38	25.01
10 - 14	906	57.2	53.52	61.03
Total	**1372**	**28.8**	**27.26**	**30.33**
	All Crash Types			
	Number	**Rate per 100,000**	**95% CIs**	
0 - 4	344	22.7	20.32	25.18
5 - 9	930	55.7	52.25	59.48
10 - 14	1867	117.8	112.56	123.31
Total	**3141**	**65.8**	**63.56**	**68.19**

Table 45: Tamariki hospitalisations for 'non-motor vehicle/non-traffic' injury, by prioritised ethnicity, 2017–2021

	Other Pedal Cyclist			
	Number	**Rate per 100,000**	**95% CIs**	
Māori	399	30.7	27.73	33.83
Pacific	92	19.8	15.96	24.28
Asian	109	14.5	11.93	17.52
MELAA	21	59.5	36.83	90.99
European/Other	948	45.3	41.56	47.26
Total	**1569**	**32.9**	**31.28**	**34.56**
	Other Pedestrian			
	Number	**Rate per 100,000**	**95% CIs**	
Māori	94	7.2	5.84	8.84
Pacific	19	4.1	16.34	6.38
Asian	10	1.3	10.12	2.45
MELAA	<6			
European/Other	77	3.6	3.55	4.50
Total	**200**	**4.2**	**3.63**	**4.82**
	Other Land Transport			
	Number	**Rate per 100,000**	**95% CIs**	
Māori	343	26.4	23.65	29.31
Pacific	16	3.4	1.97	5.59
Asian	16	2.1	1.22	3.46
MELAA	7	19.8	7.95	40.88
European/Other	98	46.5	43.38	49.19
Total	**1372**	**28.8**	**27.26**	**30.33**
	Total			
	Number	**Rate per 100,000**	**95% CIs**	
Māori	836	64.3	59.97	68.76
Pacific	127	27.3	22.78	32.51
Asian	135	18.0	15.08	21.29
MELAA	28	79.4	52.73	114.71
European/Other	2013	94.2	90.09	98.36
Not Stated	<6	-	-	-
Total	**3141**	**65.8**	**63.56**	**68.19**

Table 46: Tamariki hospitalisations for 'non-motor vehicle/non-traffic' injury, by NZDep quintile, 2017–2021

Other Pedal Cyclist				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	368	41.1	36.98	45.49
Quintile 2	324	37.5	33.52	41.81
Quintile 3	275	31.8	28.14	35.78
Quintile 4	266	29.3	25.89	33.05
Quintile 5	327	26.4	23.66	29.47
Other Pedestrian				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	37	4.1	2.91	5.69
Quintile 2	21	2.4	1.50	3.71
Quintile 3	29	3.4	2.24	4.81
Quintile 4	41	4.5	3.24	6.13
Quintile 5	68	5.5	4.27	6.97
Other Land Transport				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	313	34.9	31.17	39.02
Quintile 2	295	34.1	30.35	38.26
Quintile 3	277	32.0	28.36	36.02
Quintile 4	228	25.1	21.96	28.60
Quintile 5	256	20.7	18.24	23.40
Total				
	Number	**Rate per 100,000**	**95% CI**	
Quintile 1	718	80.1	74.38	86.21
Quintile 2	640	74.1	68.43	80.03
Quintile 3	581	67.2	61.81	72.85
Quintile 4	535	58.9	54.05	64.15
Quintile 5	651	52.6	48.68	56.85
Not Stated	16	-	-	-
Total	**3141**	**65.8**	**63.56**	**68.19**

Table 47: Tamariki hospitalisations for 'non-motor vehicle/non-traffic' injury, by gender, 2017–2021

All Crash Types				
	Number	**Rate per 100,000**	**95% CI**	
Female	936	40.3	37.80	43.01
Male	2205	90.0	86.29	93.84
Total	3141	65.8	63.56	68.19
Other Pedal Cyclist				
	Number	**Rate per 100,000**	**95% CI**	
Female	348	15.0	13.46	16.66
Male	1221	49.8	47.08	52.72
Total	1569	32.9	31.28	34.56
Other Pedestrian				
	Number	**Rate per 100,000**	**95% CI**	
Female	75	3.2	2.54	4.05
Male	125	5.1	4.25	6.08
Total	200	4.2	3.63	34.4.82
Other Land Transport				
	Number	**Rate per 100,000**	**95% CI**	
Female	513	22.1	20.24	24.11
Male	859	35.1	32.76	37.49
Total	1372	28.8	27.26	30.33

Table 48: Tamariki hospitalisations for injury from falls, by leading cause and age group, 2017–2021

	0 - 4 Years				
	Number	**%**	**Rate per 100,000**	**95% CI**	
Fall on same level from slipping, tripping or stumbling	464	9.80	30.56	27.84	33.47
Fall involving ice skates, skis, roller skates, or skateboards	166	3.50	10.93	9.33	12.73
Fall involving playground equipment	1014	21.41	66.78	62.73	71.02
All fall types	**4737**	**100.00**	**311.98**	**303.16**	**320.99**

	5 - 9 Years				
	Number	**%**	**Rate per 100,000**	**95% CI**	
Fall on same level from slipping, tripping or stumbling	639	9.50	38.32	35.41	41.41
Fall involving ice skates, skis, roller skates, or skateboards	524	7.79	31.43	28.79	34.23
Fall involving playground equipment	3202	47.61	192.0	185.44	198.80
All fall types	**6725**	**100**	**403.31**	**393.73**	**413.07**

	10 - 14 Years				
	Number	**%**	**Rate per 100,000**	**95% CI**	
Fall on same level from slipping, tripping or stumbling	755	15.87	47.66	44.32	51.18
Fall involving ice skates, skis, roller skates, or skateboards	890	18.71	56.18	52.55	59.99
Fall involving playground equipment	903	18.99	57.00	53.34	60.84
All fall types	**4756**	**100**	**300.20**	**291.72**	**308.85**

Table 49: Hospitalisation (numbers and rates) for injury from falls in tamariki, by prioritised ethnicity, 2017–2021

	0 - 4 Years				
	Number	**%**	**Rate per 100,000**	**95% CI**	
European/Other	2029	42.9	321.1	307.3	335.4
Māori	1577	33.3	374.9	356.6	393.9
Pacific	537	11.3	366.4	336.1	398.8
Asian	521	11.0	179.9	164.8	196.1
MELAA	68	1.4	228.4	177.4	289.6
Total	**4732**	**100.0**	**311.7**	**302.8**	**320.7**
Not Stated/ Unknown	5	-	-	-	-

	5 - 9 Years				
	Number	**%**	**Rate per 100,000**	**95% CI**	
European/Other	3286	48.9	431.8	417.1	446.8
Māori	1894	28.2	414.4	395.9	433.5
Pacific	687	10.2	415.2	384.7	447.5
Asian	769	11.4	300.7	279.8	322.7
MELAA	84	1.3	298.7	238.3	369.8
Total	**6720**	**100.0**	**403.0**	**393.4**	**412.8**
Not Stated/ Unknown	5	-	-	-	-

	10 - 14 Years				
	Number	**%**	**Rate per 100,000**	**95% CI**	
European/Other	2469	52.0	316.4	304.0	329.1
Māori	1288	27.1	304.2	287.8	321.3
Pacific	573	12.1	375.1	345.0	407.1
Asian	355	7.5	173.0	155.5	192.0
MELAA	64	1.3	282.2	217.3	360.4
Total	**4749**	**100.0**	**299.7**	**291.3**	**308.4**
Not Stated/ Unknown	7	-	-	-	-

Additional data tables related to drowning-related injury for tamariki

Table 50: Tamariki hospitalisations for drowning-related injury, per year, 2012–2021

Year	Number	Rate per 100,000	95% CI
2012	30	3.31	2.23-4.73
2013	21	2.31	1.43-3.53
2014	33	3.60	2.48-5.06
2015	22	2.38	1.49-3.61
2016	29	3.11	2.08-4.47
2017	27	2.88	1.89-4.18
2018	40	4.23	3.02-5.76
2019	29	3.04	2.04-4.37
2020	37	3.85	2.71-5.30
2021	27	2.79	1.84-4.05

Additional data tables related to tamariki injury from inanimate mechanical forces

Table 51: Tamariki hospitalisations for injury from inanimate mechanical forces, per year, 2012–2021

Year	Number	Rate per 100,000	95% CI	
2012	1478	163.16	154.95	171.70
2013	1389	152.84	144.91	161.10
2014	1386	151.26	143.40	159.44
2015	1546	167.34	159.10	175.90
2016	1276	137.00	129.58	144.73
2017	1321	140.69	133.21	148.49
2018	1180	124.67	117.66	131.99
2019	1224	128.30	121.21	135.69
2020	1056	109.82	103.30	116.65
2021	1071	110.51	103.99	117.34

Table 52: Tamariki hospitalisations for injury from inanimate mechanical forces, by prioritised ethnicity and age group, 2017–2021

	0 - 4 Years				
	Number	%	Rate per 100,000	95% CI	
Māori	781	32.1	185.68	172.88	199.17
Pacific	317	13.0	216.31	193.15	241.48
Asian	270	11.1	93.24	82.45	105.06
MELAA	55	2.3	184.75	139.17	240.48
European/Other	1013	41.6	160.33	150.61	170.52
Total	**2436**	**100.0**	**160.44**	**154.13**	**166.94**
Not Stated/ Unknown	3	-	-	-	-

	5 - 9 Years				
	Number	%	Rate per 100,000	95% CI	
Māori	528	28.9	115.52	105.87	125.81
Pacific	242	13.3	146.26	128.41	165.90
Asian	144	7.9	56.31	47.49	66.30
MELAA	28	1.5	99.57	66.15	143.92
European/Other	883	48.4	116.02	108.50	123.94
Total	**1825**	**100.0**	**109.45**	**104.49**	**114.59**
Not Stated/ Unknown	-	-	-	-	-

	10 - 14 Years				
	Number	%	Rate per 100,000	95% CI	
Māori	466	29.4	110.06	100.30	120.53
Pacific	208	13.1	136.15	118.28	155.97
Asian	111	7.0	54.0	44.50	65.14
MELAA	30	1.9	132.28	89.23	188.84
European/Other	771	48.6	98.80	91.95	106.03
Total	**1586**	**100.0**	**100.10**	**95.24**	**105.15**
Not Stated/ Unknown	2	-	-	-	-

Additional data tables related to animate mechanical forces

Table 53: Tamariki hospitalisations for injury from animate mechanical forces, per year, 2012–2021

	Hospitalisation from animate mechanical forces			
	Number	**Rate per 100,000**	**95% CI**	
2012	414	45.70	41.41	50.32
2013	436	47.98	43.58	52.70
2014	475	51.84	47.28	56.72
2015	411	44.49	40.29	49.00
2016	465	49.93	45.49	54.68
2017	411	43.77	39.64	48.22
2018	417	44.06	39.93	48.50
2019	403	42.24	38.22	46.57
2020	328	34.11	30.52	38.01
2021	358	36.94	33.21	40.97

Table 54: Tamariki hospitalisations for injury from animate mechanical forces, by age group and top three causes, 2017–2021 [204]

	Age Group (Years)			
	0 - 4 Years			
	Number	**Rate per 100,000**	**95% CI**	
Accidental hit, strike, kick, twist, bite, scratch or trample by another person	154	10.14	8.60	11.88
Contact with dog	278	18.31	16.22	20.59
Bitten or stung by nonvenomous insect and other nonvenomous arthropods	84	5.53	4.41	6.85
All animate mechanical injury	554	36.49	33.51	39.66

	Age Group (Years)			
	5 - 9 Years			
	Number	**Rate per 100,000**	**95% CI**	
Accidental hit, strike, kick, twist, bite, scratch or trample by another person	258	15.47	13.64	17.48
Contact with dog	267	16.01	14.15	18.0
Bitten or stung by nonvenomous insect and other nonvenomous arthropods	54	3.24	2.43	4.23
All animate mechanical injury	625	37.48	34.60	40.54

	Age Group (Years)			
	5 - 9 Years			
	Number	**Rate per 100,000**	**95% CI**	
Accidental hit, strike, kick, twist, bite, scratch or trample by another person	510	32.19	29.46	35.11
Contact with dog	151	9.53	8.07	11.1
Bitten or stung by nonvenomous insect and other nonvenomous arthropods	20	1.26	0.77	1.95
All animate mechanical injury	738	46.5	43.28	50.07

204. As only the top three causes are presented, the numbers will not add up to the total numbers (represented in the 'All animate mechanical injury' row).

Table 55: Tamariki hospitalisations for injury from poisoning, per year, 2017–2021

	Number	Rate per 100,000	95% CI	
2012	278	30.69	27.19	34.52
2013	243	26.74	23.48	30.32
2014	264	28.81	25.44	32.50
2015	272	29.44	26.05	33.16
2016	276	29.63	26.24	33.34
2017	247	26.31	23.13	29.80
2018	217	22.93	19.98	26.19
2019	205	21.49	18.65	24.64
2020	220	22.88	19.96	26.11
2021	223	23.01	20.09	26.24

Table 56: Tamariki hospitalisations for injury from poisoning, by cause, 2017–2021

Cause	Number	%
Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics	191	17.2
Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified	220	19.8
Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	105	9.4
Accidental poisoning by and exposure to other drugs acting on the autonomic nervous system	57	5.1
Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances	317	28.5
Accidental poisoning by and exposure to alcohol	10	0.9
Accidental poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapours	38	3.4
Accidental poisoning by and exposure to other gases and vapours	9	0.8
Accidental poisoning by and exposure to pesticides	20	1.8
Accidental poisoning by and exposure to other and unspecified chemicals and noxious substances	145	13.0
Total:	**1112**	**100.0**

Table 57: Tamariki hospitalisations for injury from poisoning, by age group and top three causes, 2017–2021

	Age Group (Years)			
	0 - 4 Years			
	Number	Rate per 100,000	95% CI	
Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances	258	16.99	14.98	19.20
Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified	175	11.53	9.88	13.37
Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics	169	11.13	9.52	12.94
All unintentional poisoning	911	60.00	56.17	64.03

	Age Group (Years)			
	5 - 9 Years			
	Number	Rate per 100,000	95% CI	
Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances	31	1.86	1.26	2.64
Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified	21	1.26	0.78	1.93
Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics	10	0.60	0.29	1.10
All unintentional poisoning	100	6.00	4.88	7.29

	Age Group (Years)			
	5 - 9 Years			
	Number	Rate per 100,000	95% CI	
Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances	28	1.77	1.17	2.55
Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified	24	1.51	0.97	2.25
Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics	12	0.76	0.39	1.32
All unintentional poisoning	101	6.38	5.19	7.75

Additional tables related to tamariki injury from burns

Table 58: Tamariki hospitalisations for injury from burns, per year, 2017–2021

	Number	Rate per 100,000	95% CI	
2012	287	31.68	28.12	35.57
2013	250	27.51	24.20	31.14
2014	232	51.84	22.17	28.80
2015	269	29.12	25.74	32.81
2016	275	29.53	26.14	33.23
2017	231	24.60	21.53	27.99
2018	225	23.77	20.77	27.09
2019	232	24.32	21.29	27.66
2020	255	26.52	23.36	29.98
2021	219	22.60	19.70	25.80

Table 59: Tamariki hospitalisations for injury from burns, by age group and top four causes, 2017–2021

	Age Group (Years)			
	0 - 4 Years			
	Number	Rate per 100,000	95% CI	
Contact with hot drinks, food, fats, and cooking oils	366	24.10	21.70	26.71
Contact with other hot fluids	213	14.03	12.21	16.04
Contact with hot household appliances	110	7.24	5.95	8.73
Fire/flame related	51	3.36	2.50	4.42

	Age Group (Years)			
	5 - 9 Years			
	Number	Rate per 100,000	95% CI	
Contact with hot drinks, food, fats, and cooking oils	40	2.40	1.71	3.27
Contact with other hot fluids	43	2.58	1.87	3.47
Contact with hot household appliances	9	0.54	0.25	1.02
Fire/flame related	36	2.16	1.51	2.99

	Age Group (Years)			
	10 - 14 Years			
	Number	Rate per 100,000	95% CI	
Contact with hot drinks, food, fats, and cooking oils	20	1.26	0.77	1.95
Contact with other hot fluids	18	1.14	0.67	1.80
Contact with hot household appliances	<6	0.13	0.01	0.46
Fire/flame related	30	1.89	1.28	2.70

Appendix 3: Glossary

Te Reo Māori Glossary

- **Ahuru mowai** - safe haven
- **Ao tūroa** - day of light
- **Aroha** - Love/reciprocity
- **Atua Māori** - environmental guardians
- **He Kawa Ahuru** - Clearing process (creating safe space)
- **He Kawa Whakairihia** - Purification process (return to safe place)
- **Hōmiromiro** - alert
- **Hononga** - connection
- **Kahikatea** - whitepine
- **Kaho paetara** - panel on the side of the wall
- **Kaupapa** - matter, subject, initiative
- **Kaupapa (Inquiry)** - Waitangi Tribunal Thematic Inquiry
- **Kaupapa Māori** - Māori methodology and engagement
- **Kete** - basket
- **Kōrero tuku iho** - place-based knowledge/ intergenerational knowledge
- **Kura kaupapa Māori** - Total Māori immersion school
- **Mātauranga Māori** - Māori knowledge, wisdom, understanding, skill
- **Moana** - sea
- **Mōkai** - pets
- **Mokopuna** - grandchildren/descendants
- **Mokoroa** - grub
- **Papatūānuku** - Earth Mother
- **Pēpi** - baby, infant
- **Pōhiri** - cultural welcome
- **Pure** - Clearing and setting of intentions
- **Ranginui** - Sky Father
- **Rongo** - Guardian of peace
- **Taimaha hārukiruki** - distressing
- **Tamaiti** - child
- **Tamariki** - children; for the purposes of this report, all children 0-14 years old
- **Tamariki Māori** - Māori children
- **Tangata** - people
- **Tāngata Whaikaha Māori** - Māori with lived experience of disability. We recognise as equally valid the other terms that Māori with lived experience of disability use, such as Whānau Haua
- **Tapu** - sacredness
- **Te ao Māori** - Māoridom
- **Toa** - Warrior exponent
- **Toitū** - Endure
- **Tuia** - Weave
- **Wairua** - Spirit/spiritual
- **Wero** - Challenge
- **Whakapapa** - Genealogy
- **Whakataukī** - Proverbial saying
- **Whānau** - extended family, family group
- **Whenua** - land

Glossary

- **Animate Mechanical Forces injury** - Injury to a person through being struck, bitten, or otherwise injured by a human or animal, such as a dog, or insect
- **Assault** - Injury purposely inflicted by other persons
- **Cut/Pierce** - Injuries caused by cutting and piercing instruments or objects
- **CYMRC** - Child and Youth Mortality Review Committee
- **DHB** - District Health Board, entity responsible for hospital-level health services for the period that this data relates to (replaced in 2022 by Health New Zealand | Te Whatu Ora)
- **Drowning-related injury** - Injury from submersion in water/liquid e.g., while swimming, in a bathtub or bucket, or following a water transport crash
- **Equity** - In Aotearoa, people have differences in health that are not only avoidable but unfair and unjust. Equity recognises that people with different levels of advantage require different approaches and resources to get equitable health outcomes
- **Fall** - Injury resulting from a fall, e.g., from stairs, tripping, slipping, or from playground equipment
- **Fire/Flame** - Injury caused by fire and flames e.g., conflagration in a private dwelling, conflagration in other building or structure, ignition of clothing, ignition of highly flammable material
- **Hospitalisation** - When a tamaiti stays overnight at a hospital. It excludes day stay cases (those who do not stay in the hospital past midnight)
- **Hospitalisation rates** - Rate of hospitalisation per 100,000 of the age-specific population
- **Hot object/Substance** - Injuries caused by a hot substance or object, caustic or corrosive material and steam
- **Inanimate Mechanical Forces** - Injury to a person struck by, cut, or otherwise injured by an object. This includes being caught, crushed, jammed, or pinched between objects. It can include sports injuries, jammed fingers, and injuries from sharp objects such as knives, scissors, or glass
- **Injury** - Unintentional injury, caused by an unintended event (for the purposes of this report)
- **MELAA** - Middle Eastern, Latin American or African ethnicity
- **Motor Vehicle Traffic Crash** - Injury sustained in a land transport incident involving a motor vehicle on a street or highway including footpaths and cycleways (on-road). The injured tamariki may be a vehicle occupant, pedestrian, pedal cyclist or motorcyclist
- **Motorcyclist** - Rider or passenger on a motorcycle involved in a crash on a public road
- **Natural/Environmental** - Injuries from natural and environmental factors, e.g., excessive heat, excessive cold, hunger, neglect, venomous animals and plants, other injury caused by animals, lightning, cataclysmic storms, floods, earth surface movements, or other and unspecified environmental cause
- **Non-motor vehicle/non-traffic** - The combined injuries from the 'other pedal cyclist', 'other pedestrian' and 'other land transport' categories
- **NZDep** - The New Zealand Index of Deprivation (NZDep) is used as a proxy for socio-economic status in this data book. NZDep measures the level of deprivation of people in small areas, using a set of variables such as income, employment, and living space. The NZDep quintiles range from the least relatively deprived areas in Aotearoa (NZDep quintile 1) to the most relatively deprived areas (NZDep quintile 5).
- **Occupant** - Driver or passenger of a motorised transport vehicle, including car, van, truck, bus etc. involved in a crash on a public road
- **Other Land Transport** - Injury sustained in other land transport incidents, including off-road motor vehicle incidents, animal riders, all-terrain vehicles (ATVs) or 'other land transport' incidents.
- **Other Pedal Cyclist** - Injury sustained by a pedal cyclist in an incident that did not involve a motor vehicle (e.g., non-collision pedal cycle incident, collision with stationary object) or in an off-road incident
- **Other Pedestrian** - Injury sustained by a pedestrian in an off-road incident (e.g., motor vehicle in driveway) or an incident that did not involve a motor vehicle (e.g., collision with pedal cyclist)
- **Other specified** - All other specified causes of unintentional injury e.g., Caught, crushed, jammed or pinched in or between objects; Explosion and rupture of boiler; Foreign body entering Into or through eye or natural orifice; Exposure to other and unspecified inanimate mechanical forces; Exposure to electric transmission lines; Contact with explosive material, undetermined intent; Falling, lying or running before or into moving object, undetermined intent etc.
- **Other Transport** - Injury from a transport crash excluding a motor vehicle on a public road, e.g., water transport, air and space transport.
- **Overexertion** - Injury from overexertion and strenuous movement e.g., lifting, pulling, pushing, excessive physical exercise

- **Pedal Cyclist** - Rider or passenger on a pedal cycle involved in a crash on a public road
- **Pedestrian** - Any person involved in a crash on a public road who was not at the time of the accident riding in or on a motor vehicle, railway train, tram, animal-drawn or other vehicle, or on a pedal cycle or animal
- **Poisoning** - Unintentional poisoning by drugs, medicinal substances, biological, other solid and liquid substances, gases or vapours
- **Prioritised ethnicity** - a method of categorising ethnicity information where individuals are classified into one ethnic group, in a prioritised order as follows: Māori, Pacific, Asian, MELAA, Other, European
- **Rate** - Rate of hospitalisations or deaths per 100,000 of the age-specific population
- **Self-Inflicted** - Injury resulting from intentional self-harm
- **Struck by or against** - Injury from being struck by a falling object, or striking against, or being struck by objects or persons
- **SUDI** - Sudden unexpected death in infancy
- **Suffocation** – Injury caused by unintentional threats to breathing e.g. unintentional suffocation and strangulation in bed, inhalation of gastric contents or inhalation and ingestion of food causing obstruction of respiratory tract, other accidental hanging and strangulation
- **Undetermined Intent** - Where the intent of the injury has not been determined
- **Unintentional injuries** - Injuries caused by unintended events e.g. injuries from falls, motor vehicle crashes, drowning, burns, poisonings etc.
- **Unspecified** - Where the cause of unintentional injury has not been specified in the coding

He Kawa Whakairihia

Releasing of energy and apprehension

He Kawa whakairihia is a process that uses different metaphors relating to the inside of a carved meeting house to cleanse the negative energy and create a safe place for those present.

The first line “E rongo whakairihia ake ki runga” refers to the clearing of one’s mind and spirit from any heavy burden that may be weighing on the individual and family. In days of old once finished a vigorous task, a Māori chief would suspend their kete (baskets of knowledge) on the kaho paetara (panel on the side of the wall) signifying the removing of tapu (sacredness) and returning to te ao tūroa (day of light).

This kōrero tuku iho reminds us that it is important to clear oneself and return to your Ahuru mowai (safe place).

Whakairihia a roto, whakahouhia a waho	Renew my spirit, heart and mind that I may be enlightened
E Rongo e	Rongo (Guardian of Peace)
Ko tēnei ka whakairihia ake ki te kaho paetara o te whare	I suspend my basket of knowledge up above
Kia mahea ngā taumahatanga	So that I may be clear of any restraint
Kia mahea nga manukanuka	And that my mind and heart is at ease
Kia wātea a runga	Clear of burden
Kia wātea a raro	Clear of anxiety
Kia wātea a roto	Clear of obstacles
Kia wātea a waho	Clear of pain
E Rongo whakairihia ake ki runga	Renewed with clarity and purpose
Kia tina! (Tina)	We concur United we stand in purpose ready to proceed
Haumi e **Hui e**	Together
Taiki e!	Affirmative! It will be done