

MOST FREQUENT CAUSES OF HOSPITAL ADMISSION AND MORTALITY IN CHILDREN

Introduction

Before considering the more detailed analyses in the sections which follow, it is worthwhile briefly reviewing the most frequent causes of hospital admission and mortality in South Island children during the past five years, with a view to gaining an overall context, within which to consider the relative importance of the various health issues experienced by the region's children in recent years.

Data Sources and Methods

Indicator

1. *Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (excluding neonates)*

Numerator: National Minimum Dataset: Hospital admissions for children aged 0–14 years (excluding neonates) by primary diagnosis (acute and arranged admissions) or primary procedure (waiting list admissions).

Denominator: Statistics NZ Estimated Resident Population (with linear extrapolation being used to calculate denominators between Census years).

2. *Most Frequent Causes of Mortality in Children Aged 1–14 Years*

Numerator: National Mortality Collection: Mortality for children aged 1–14 years by main underlying cause of death (**Appendix 5**).

Denominator: Statistics NZ Estimated Resident Population (with linear extrapolation being used to calculate denominators between Census years).

Primary Diagnoses/ Cause of Death: Acute URTI (J00–J04, J050, J051, J06); Bronchiolitis (J21); Asthma (J45, J46); Bacterial/Viral/Other Pneumonia (J12–J18, J100, J110); Gastroenteritis (A00–A09, R11, K529); Skin Infections (L00–L04, L050, L08, H000, H010, J340, L980); Meningococcal Disease (A39); Bacterial Meningitis (G00–G01); Dental Conditions (K00–K08); Neoplasm/Chemotherapy/Radiotherapy (C00–D48, Z510, Z511); Mental Health (F00–F99); Abdominal/Pelvic Pain (R10); Viral Infection NOS (B349); Renal Failure (N17–N19); Immune Disorders (D80–D89); Metabolic Disorders (E70–E89); Haemolytic Anaemias (D55–D59); Fever of Unknown Origin (R508, R509); Removal of Internal Fixation Device (Z470); Dialysis (Z49); Appendicitis (K35–K37); Injury/Poisoning (S00–T79 Excluding ED Cases); Urinary Tract Infection (N10, N11, N12, N300, N301, N302, N303, N308, N309, N390); Constipation (K590).

Injuries (Mortality): Pedestrian (V01–V09), Cyclist (V10–V19), Motorbike (V20–29), Vehicle Occupant (V40–79), Other Land Transport (V30–39, V80–89); Other Transport (V90–V99); Falls (W00–W19), Mechanical Forces: Inanimate (W20–W49), Mechanical Forces: Animate (W50–64), Drowning/Submersion (W65–74), Accidental Threat to Breathing (W75–W84), Electricity/Fire/Burns (W85–X19), Accidental Poisoning (X40–X49), Intentional Self-Harm (X60–84), Assault (X85–Y09), Undetermined Intent (Y10–Y34).

Procedures (Procedure or Block Code): Grommets (4163200, 4163201); Tonsillectomy +/- Adenoidectomy (4178900, 4178901); Adenoidectomy without Tonsillectomy (4180100); Procedures on Extraocular Muscles (block 215–220); Myringoplasty (block 313); Procedures on Nose (block 370–381); Dental Procedures (block 450–490); Inguinal Hernia Repair (block 990); Gastrointestinal Procedures (block 850–1011); Haemodialysis (block 1059); Orchidopexy (block 1186); Circumcision (3065300); Hypospadias Repair (block 1198); Procedures on the Cervix (block 1274–1278); Musculoskeletal Procedures (block 1360–1579); Procedures on Skin/Subcutaneous Tissue (block 1600–1660); Magnetic Resonance Imaging (MRI)(block 2015);

Notes on Interpretation

Note 1: Because hospital admissions during the neonatal period are likely to be heavily influenced by perinatal factors and/or result from preterm infants transitioning through different levels of neonatal care (e.g. from neonatal intensive care, to Level 1–3 special care baby units), neonatal admissions have been excluded from this analysis. Similarly, infant mortality is also likely to be heavily influenced by perinatal factors, and thus this section is restricted to an analysis of mortality in children aged 1–14 years (see the Infant Mortality section for a review of the most frequent causes of mortality in those aged <1year).

Note 2: In order to maintain consistency with the injury section, all injury admissions with an Emergency Medicine Specialty Code (M05–M08) on discharge have been excluded (see **Appendix 3** for rationale).

Note 3: An acute admission is an unplanned admission occurring on the day of presentation, while a semi-acute admission (referred to in the NMDS as an arranged admission) is a non-acute admission with an admission date <7 days after the date the decision was made that the admission was necessary. A waiting list admission is a planned admission, with an admission date 7+ days after the date the decision was made that the admission was necessary.



Table 28. Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (Neonates Excluded) by Admission Type, New Zealand 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
New Zealand 0–14 Years				
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	51,697	10,339.4	11.6	15.9
Gastroenteritis	26,088	5,217.6	5.84	8.0
Bronchiolitis	25,731	5,146.2	5.76	7.9
Acute URTI	24,282	4,856.4	5.44	7.5
Asthma	23,742	4,748.4	5.32	7.3
Viral Infection NOS	17,264	3,452.8	3.87	5.3
Bacterial/Viral/Other Pneumonia	16,415	3,283.0	3.68	5.0
Skin Infections	14,637	2,927.4	3.28	4.5
Abdominal/Pelvic Pain	8,765	1,753.0	1.96	2.7
Urinary Tract Infection	6,377	1,275.4	1.43	2.0
Appendicitis	4,796	959.2	1.07	1.5
Constipation	3,484	696.8	0.78	1.1
Fever of Unknown Origin	3,372	674.4	0.76	1.0
Other Diagnoses	98,734	19,746.8	22.1	30.3
Total Acute Admissions	325,384	65,076.8	72.9	100.0
Arranged Admissions by Primary Diagnosis				
Neoplasm / Chemotherapy / Radiotherapy	10,966	2,193.2	2.46	19.0
Injury / Poisoning	4,610	922.0	1.03	8.0
Dental Conditions	3,760	752.0	0.84	6.5
Dialysis	1,730	346.0	0.39	3.0
Other Diagnoses	36,602	7,320.4	8.20	63.5
Total Arranged Admissions	57,668	11,533.6	12.9	100.0
Waiting List Admissions by Primary Procedure				
Dental Procedures	27,843	5,568.6	6.24	20.7
Grommets	25,608	5,121.6	5.74	19.0
Tonsillectomy +/- Adenoidectomy	13,134	2,626.8	2.94	9.7
Musculoskeletal Procedures	11,372	2,274.4	2.55	8.4
No Procedure Listed	6,750	1,350.0	1.51	5.0
Gastrointestinal Procedures	5,563	1,112.6	1.25	4.1
Procedures on Skin/Subcutaneous Tissue	4,391	878.2	0.98	3.3
Inguinal Hernia Repair	3,595	719.0	0.81	2.7
Adenoidectomy without Tonsillectomy	2,468	493.6	0.55	1.8
Orchidopexy	2,047	409.4	0.46	1.5
Procedures on Extraocular Muscles	2,035	407.0	0.46	1.5
Myringoplasty	1,848	369.6	0.41	1.4
Other Procedures	28,148	5,629.6	6.31	20.9
Total Waiting List Admissions	134,802	26,960.4	30.2	100.0
New Zealand Total	517,854	103,570.8	116.0	100.0

Source: Numerator: National Minimum Dataset (Neonates excluded); Denominator: Statistics NZ Estimated Resident Population. Note: Injury admissions with an emergency department code on discharge excluded.

New Zealand Distribution

New Zealand Hospital Admissions

In New Zealand during 2006–2010, injury/poisoning, gastroenteritis and bronchiolitis were the most frequent reasons for an acute hospital admission in children aged 0–14 years. Neoplasms/chemotherapy/radiotherapy, injury/poisoning and dental conditions were the most frequent reasons for arranged admissions, while dental procedures, grommets and tonsillectomy +/- adenoidectomy were the most frequent reasons for a waiting list admission (Table 28).

New Zealand Mortality

In New Zealand during 2004–2008, neoplasms were the most frequent cause of mortality in children aged 1–14 years, followed by congenital anomalies and vehicle occupant transport injuries (Table 29).

Table 29. Most Frequent Causes of Mortality in Children Aged 1–14 Years by Main Underlying Cause of Death, New Zealand 2004–2008

Cause of Death	Number: Total 2004–2008	Number: Annual Average	Rate per 100,000	Percent (%)
Mortality in Children Aged 1–14 Years				
New Zealand				
Neoplasms	121	24.2	2.93	15.4
Congenital Anomalies	92	18.4	2.23	11.7
Transport: Vehicle Occupant	77	15.4	1.86	9.8
Transport: Pedestrian	46	9.2	1.11	5.9
Transport: Cyclist	12	2.4	0.29	1.5
Transport: Motorbike	9	1.8	0.22	1.1
Transport: Other	12	2.4	0.29	1.5
Drowning / Submersion	39	7.8	0.94	5.0
Assault	23	4.6	0.56	2.9
Intentional Self-Harm	20	4.0	0.48	2.5
Electricity / Fire / Burns	20	4.0	0.48	2.5
SUDI	17	3.4	0.41	2.2
Epilepsy / Status Epilepticus	17	3.4	0.41	2.2
Falls	11	2.2	0.27	1.4
Mechanical Forces: Inanimate	11	2.2	0.27	1.4
Bacterial/Non-Viral Pneumonia	9	1.8	0.22	1.1
Asthma	8	1.6	0.19	1.0
Undetermined Intent	7	1.4	0.17	0.9
Accidental Poisoning	7	1.4	0.17	0.9
Meningococcal Disease	7	1.4	0.17	0.9
Viral Pneumonia	6	1.2	0.15	0.8
Bacterial Meningitis	5	1.0	0.12	0.6
Other Causes	209	41.8	5.06	26.6
New Zealand	785	157.0	19.0	100.0

Source: Numerator: National Mortality Collection; Denominator: Statistics NZ Estimated Resident Population



Table 30. Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (Neonates Excluded) by Admission Type, Nelson Marlborough 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
Nelson Marlborough 0–14 Years				
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	1,227	245.4	9.51	17.8
Acute URTI	677	135.4	5.24	9.8
Gastroenteritis	503	100.6	3.90	7.3
Asthma	463	92.6	3.59	6.7
Bronchiolitis	356	71.2	2.76	5.2
Viral Infection NOS	353	70.6	2.73	5.1
Bacterial/Viral/Other Pneumonia	261	52.2	2.02	3.8
Abdominal/Pelvic Pain	214	42.8	1.66	3.1
Appendicitis	166	33.2	1.29	2.4
Skin Infections	154	30.8	1.19	2.2
Urinary Tract Infection	112	22.4	0.87	1.6
Constipation	105	21.0	0.81	1.5
Neoplasm / Chemotherapy / Radiotherapy	90	18.0	0.70	1.3
Other Diagnoses	2,202	440.4	17.1	32.0
Total Acute Admissions	6,883	1,376.6	53.3	100.0
Arranged Admissions by Primary Diagnosis				
Neoplasm / Chemotherapy / Radiotherapy	350	70.0	2.71	22.1
Injury / Poisoning	233	46.6	1.80	14.7
Dental Conditions	106	21.2	0.82	6.7
Removal of Internal Fixation Device	50	10.0	0.39	3.2
Other Diagnoses	844	168.8	6.54	53.3
Total Arranged Admissions	1,583	316.6	12.3	100.0
Waiting List Admissions by Primary Procedure				
Grommets	715	143.0	5.54	15.8
Dental Procedures	635	127.0	4.92	14.0
Tonsillectomy +/- Adenoidectomy	286	57.2	2.22	6.3
Musculoskeletal Procedures	271	54.2	2.10	6.0
No Procedure Listed	268	53.6	2.08	5.9
Gastrointestinal Procedures	162	32.4	1.25	3.6
Inguinal Hernia Repair	149	29.8	1.15	3.3
Procedures on Skin/Subcutaneous Tissue	138	27.6	1.07	3.1
Magnetic Resonance Imaging (MRI)	107	21.4	0.83	2.4
Procedures on Extraocular Muscles	95	19.0	0.74	2.1
Orchidopexy	64	12.8	0.50	1.4
Circumcision	44	8.8	0.34	1.0
Other Procedures	1,586	317.2	12.3	35.1
Total Waiting List Admissions	4,520	904.0	35.0	100.0
Nelson Marlborough Total	12,986	2,597.2	100.6	100.0

Source: Numerator: National Minimum Dataset (Neonates excluded); Denominator: Statistics NZ Estimated Resident Population. Note: Injury admissions with an emergency department code on discharge excluded.

Table 31. Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (Neonates Excluded) by Admission Type, South Canterbury 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
South Canterbury 0–14 Years				
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	621	124.2	12.0	22.6
Gastroenteritis	266	53.2	5.14	9.7
Acute URTI	195	39.0	3.77	7.1
Asthma	163	32.6	3.15	5.9
Viral Infection NOS	128	25.6	2.47	4.7
Bronchiolitis	114	22.8	2.20	4.2
Appendicitis	103	20.6	1.99	3.8
Abdominal/Pelvic Pain	88	17.6	1.70	3.2
Bacterial/Viral/Other Pneumonia	76	15.2	1.47	2.8
Skin Infections	36	7.2	0.70	1.3
Urinary Tract Infection	32	6.4	0.62	1.2
Constipation	27	5.4	0.52	1.0
Neoplasm / Chemotherapy / Radiotherapy	25	5.0	0.48	0.9
Other Diagnoses	868	173.6	16.8	31.7
Total Acute Admissions	2,742	548.4	53.0	100.0
Arranged Admissions by Primary Diagnosis				
Neoplasm / Chemotherapy / Radiotherapy	101	20.2	1.95	24.8
Dental Conditions	26	5.2	0.50	6.4
Metabolic Disorders	19	3.8	0.37	4.7
Injury / Poisoning	17	3.4	0.33	4.2
Other Diagnoses	245	49.0	4.73	60.0
Total Arranged Admissions	408	81.6	7.88	100.0
Waiting List Admissions by Primary Procedure				
Grommets	439	87.8	8.48	21.7
Dental Procedures	379	75.8	7.32	18.7
Tonsillectomy +/- Adenoidectomy	273	54.6	5.27	13.5
Musculoskeletal Procedures	138	27.6	2.67	6.8
Gastrointestinal Procedures	90	18.0	1.74	4.4
Procedures on Skin/Subcutaneous Tissue	61	12.2	1.18	3.0
Magnetic Resonance Imaging (MRI)	55	11.0	1.06	2.7
Inguinal Hernia Repair	41	8.2	0.79	2.0
Procedures on Extraocular Muscles	40	8.0	0.77	2.0
No Procedure Listed	39	7.8	0.75	1.9
Procedures on Nose	37	7.4	0.71	1.8
Orchidopexy	36	7.2	0.70	1.8
Other Procedures	399	79.8	7.71	19.7
Total Waiting List Admissions	2,027	405.4	39.2	100.0
South Canterbury Total	5,177	1,035.4	100.0	100.0

Source: Numerator: National Minimum Dataset (Neonates excluded); Denominator: Statistics NZ Estimated Resident Population. Note: Injury admissions with an emergency department code on discharge excluded.



Table 32. Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (Neonates Excluded) by Admission Type, Canterbury 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
Canterbury 0–14 Years				
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	5,904	1180.8	12.3	17.6
Acute URTI	3,342	668.4	6.97	10.0
Gastroenteritis	2,563	512.6	5.34	7.6
Asthma	2,179	435.8	4.54	6.5
Viral Infection NOS	1,852	370.4	3.86	5.5
Bronchiolitis	1,638	327.6	3.41	4.9
Bacterial/Viral/Other Pneumonia	955	191.0	1.99	2.8
Abdominal/Pelvic Pain	905	181.0	1.89	2.7
Skin Infections	703	140.6	1.47	2.1
Urinary Tract Infection	606	121.2	1.26	1.8
Appendicitis	547	109.4	1.14	1.6
Constipation	511	102.2	1.07	1.5
Neoplasm / Chemotherapy / Radiotherapy	347	69.4	0.72	1.0
Other Diagnoses	11,473	2294.6	23.9	34.2
Total Acute Admissions	33,525	6,705.0	69.9	100.0
Arranged Admissions by Primary Diagnosis				
Neoplasm / Chemotherapy / Radiotherapy	1,707	341.4	3.56	26.0
Dental Conditions	911	182.2	1.90	13.9
Metabolic Disorders	200	40.0	0.42	3.0
Injury / Poisoning	196	39.2	0.41	3.0
Other Diagnoses	3,562	712.4	7.42	54.2
Total Arranged Admissions	6,576	1,315.2	13.7	100.0
Waiting List Admissions by Primary Procedure				
Grommets	2,507	501.4	5.22	20.2
Dental Procedures	2,272	454.4	4.74	18.3
Tonsillectomy +/- Adenoidectomy	1,323	264.6	2.76	10.7
Musculoskeletal Procedures	865	173.0	1.80	7.0
Gastrointestinal Procedures	682	136.4	1.42	5.5
Procedures on Skin/Subcutaneous Tissue	540	108.0	1.13	4.4
Inguinal Hernia Repair	390	78.0	0.81	3.1
No Procedure Listed	264	52.8	0.55	2.1
Adenoidectomy without Tonsillectomy	260	52.0	0.54	2.1
Procedures on Extraocular Muscles	246	49.2	0.51	2.0
Orchidopexy	224	44.8	0.47	1.8
Circumcision	193	38.6	0.40	1.6
Other Procedures	2,625	525.0	5.47	21.2
Total Waiting List Admissions	12,391	2,478.2	25.8	100.0
Canterbury Total	52,492	10,498.4	109.4	100.0

Source: Numerator: National Minimum Dataset (Neonates excluded); Denominator: Statistics NZ Estimated Resident Population. Note: Injury admissions with an emergency department code on discharge excluded.

Table 33. Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (Neonates Excluded) by Admission Type, the West Coast 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
West Coast 0–14 Years				
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	391	78.2	12.4	23.0
Gastroenteritis	154	30.8	4.88	9.0
Acute URTI	144	28.8	4.57	8.5
Asthma	141	28.2	4.47	8.3
Bronchiolitis	87	17.4	2.76	5.1
Viral Infection NOS	83	16.6	2.63	4.9
Bacterial/Viral/Other Pneumonia	74	14.8	2.35	4.3
Appendicitis	45	9.0	1.43	2.6
Abdominal/Pelvic Pain	41	8.2	1.30	2.4
Constipation	29	5.8	0.92	1.7
Skin Infections	25	5.0	0.79	1.5
Fever of Unknown Origin	19	3.8	0.60	1.1
Neoplasm / Chemotherapy / Radiotherapy	16	3.2	0.51	0.9
Other Diagnoses	453	90.6	14.4	26.6
Total Acute Admissions	1,702	340.4	54.0	100.0
Arranged Admissions by Primary Diagnosis				
Neoplasm / Chemotherapy / Radiotherapy	68	13.6	2.16	24.5
Injury / Poisoning	23	4.6	0.73	8.3
Dental Conditions	15	3.0	0.48	5.4
Mental Health	8	1.6	0.25	2.9
Other Diagnoses	163	32.6	5.17	58.8
Total Arranged Admissions	277	55.4	8.78	100.0
Waiting List Admissions by Primary Procedure				
Dental Procedures	242	48.4	7.67	23.7
Grommets	129	25.8	4.09	12.6
Musculoskeletal Procedures	100	20.0	3.17	9.8
Tonsillectomy +/- Adenoidectomy	99	19.8	3.14	9.7
Procedures on Skin/Subcutaneous Tissue	44	8.8	1.40	4.3
Inguinal Hernia Repair	42	8.4	1.33	4.1
No Procedure Listed	38	7.6	1.20	3.7
Circumcision	31	6.2	0.98	3.0
Magnetic Resonance Imaging (MRI)	30	6.0	0.95	2.9
Adenoidectomy without Tonsillectomy	26	5.2	0.82	2.5
Gastrointestinal Procedures	25	5.0	0.79	2.4
Orchidopexy	17	3.4	0.54	1.7
Other Procedures	199	39.8	6.31	19.5
Total Waiting List Admissions	1,022	204.4	32.4	100.0
West Coast Total	3,001	600.2	95.1	100.0

Source: Numerator: National Minimum Dataset (Neonates excluded); Denominator: Statistics NZ Estimated Resident Population. Note: Injury admissions with an emergency department code on discharge excluded.



Table 34. Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (Neonates Excluded) by Admission Type, Otago 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
Otago 0–14 Years				
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	1,634	326.8	10.2	18.8
Acute URTI	861	172.2	5.37	9.9
Gastroenteritis	723	144.6	4.51	8.3
Asthma	594	118.8	3.70	6.8
Bronchiolitis	415	83.0	2.59	4.8
Bacterial/Viral/Other Pneumonia	279	55.8	1.74	3.2
Viral Infection NOS	261	52.2	1.63	3.0
Skin Infections	217	43.4	1.35	2.5
Abdominal/Pelvic Pain	216	43.2	1.35	2.5
Constipation	204	40.8	1.27	2.3
Appendicitis	166	33.2	1.04	1.9
Urinary Tract Infection	136	27.2	0.85	1.6
Neoplasm / Chemotherapy / Radiotherapy	96	19.2	0.60	1.1
Mental Health	95	19.0	0.59	1.1
Other Diagnoses	2,814	562.8	17.5	32.3
Total Acute Admissions	8,711	1,742.2	54.3	100.0
Arranged Admissions by Primary Diagnosis				
Dental Conditions	180	36.0	1.12	20.0
Neoplasm / Chemotherapy / Radiotherapy	134	26.8	0.84	14.9
Injury / Poisoning	43	8.6	0.27	4.8
Constipation	29	5.8	0.18	3.2
Other Diagnoses	513	102.6	3.20	57.1
Total Arranged Admissions	899	179.8	5.61	100.0
Waiting List Admissions by Primary Procedure				
Grommets	1,304	260.8	8.13	27.4
Tonsillectomy +/- Adenoidectomy	657	131.4	4.10	13.8
Musculoskeletal Procedures	458	91.6	2.86	9.6
Dental Procedures	367	73.4	2.29	7.7
Procedures on Skin/Subcutaneous Tissue	176	35.2	1.10	3.7
Gastrointestinal Procedures	144	28.8	0.90	3.0
Inguinal Hernia Repair	142	28.4	0.89	3.0
No Procedure Listed	128	25.6	0.80	2.7
Adenoidectomy without Tonsillectomy	112	22.4	0.70	2.4
Orchidopexy	91	18.2	0.57	1.9
Magnetic Resonance Imaging (MRI)	89	17.8	0.56	1.9
Procedures on Extraocular Muscles	82	16.4	0.51	1.7
Other Procedures	1,002	200.4	6.25	21.1
Total Waiting List Admissions	4,752	950.4	29.6	100.0
Otago Total	14,362	2,872.4	89.6	100.0

Source: Numerator: National Minimum Dataset (Neonates excluded); Denominator: Statistics NZ Estimated Resident Population. Note: Injury admissions with an emergency department code on discharge excluded.

Table 35. Most Frequent Reasons for Hospital Admission in Children Aged 0–14 Years (Neonates Excluded) by Admission Type, Southland 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
Southland 0–14 Years				
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	1,281	256.2	11.8	15.9
Gastroenteritis	705	141.0	6.48	8.7
Acute URTI	694	138.8	6.38	8.6
Bronchiolitis	616	123.2	5.66	7.6
Asthma	493	98.6	4.53	6.1
Viral Infection NOS	465	93.0	4.27	5.8
Bacterial/Viral/Other Pneumonia	243	48.6	2.23	3.0
Abdominal/Pelvic Pain	194	38.8	1.78	2.4
Skin Infections	179	35.8	1.65	2.2
Constipation	149	29.8	1.37	1.8
Urinary Tract Infection	119	23.8	1.09	1.5
Appendicitis	97	19.4	0.89	1.2
Fever of Unknown Origin	55	11.0	0.51	0.7
Other Diagnoses	2,778	555.6	25.5	34.4
Total Acute Admissions	8,068	1,613.6	74.2	100.0
Arranged Admissions by Primary Diagnosis				
Neoplasm / Chemotherapy / Radiotherapy	131	26.2	1.20	15.1
Dental Conditions	102	20.4	0.94	11.8
Injury / Poisoning	89	17.8	0.82	10.3
Metabolic Disorders	18	3.6	0.17	2.1
Other Diagnoses	528	105.6	4.85	60.8
Total Arranged Admissions	868	173.6	7.98	100.0
Waiting List Admissions by Primary Procedure				
Dental Procedures	1,337	267.4	12.3	28.2
Grommets	1,056	211.2	9.71	22.2
Musculoskeletal Procedures	334	66.8	3.07	7.0
Tonsillectomy +/- Adenoidectomy	309	61.8	2.84	6.5
No Procedure Listed	289	57.8	2.66	6.1
Gastrointestinal Procedures	191	38.2	1.76	4.0
Inguinal Hernia Repair	104	20.8	0.96	2.2
Procedures on Skin/Subcutaneous Tissue	103	20.6	0.95	2.2
Procedures on Extraocular Muscles	87	17.4	0.80	1.8
Magnetic Resonance Imaging (MRI)	80	16.0	0.74	1.7
Adenoidectomy without Tonsillectomy	74	14.8	0.68	1.6
Orchidopexy	67	13.4	0.62	1.4
Other Procedures	717	143.4	6.59	15.1
Total Waiting List Admissions	4,748	949.6	43.6	100.0
Southland Total	13,684	2,736.8	125.8	100.0

Source: Numerator: National Minimum Dataset (Neonates excluded); Denominator: Statistics NZ Estimated Resident Population. Note: Injury admissions with an emergency department code on discharge excluded.



South Island Distribution

South Island DHBs Hospital Admissions

In the South Island DHBs during 2006–2010, injury/poisoning, acute upper respiratory tract infections and gastroenteritis were the most frequent reasons for an acute hospital admission in children aged 0–14 years. Neoplasms/chemotherapy/radiotherapy, injury/poisoning, dental conditions and metabolic disorders were the most frequent reasons for arranged admissions, while dental procedures, grommets, tonsillectomy +/- adenoidectomy and musculoskeletal procedures were the most frequent reasons for a waiting list admission (**Table 30** to **Table 35**).

Table 36. Most Frequent Causes of Mortality in Children Aged 1–14 Years by Main Underlying Cause of Death, South Island DHBs 2004–2008

Cause of Death	Number: Total 2004–2008	Number: Annual Average	Rate per 100,000	Percent (%)
Mortality in Children Aged 1–14 Years				
Nelson Marlborough				
Congenital Anomalies	6	1.2	4.89	25.0
Transport: Pedestrian	3	0.6	2.44	12.5
Other Causes	15	3.0	12.2	62.5
Nelson Marlborough Total	24	4.8	19.5	100.0
South Canterbury				
All Causes	8	1.6	16.0	100.0
South Canterbury Total	8	1.6	16.0	100.0
Canterbury				
Neoplasms	15	3.0	3.43	22.7
Congenital Anomalies	10	2.0	2.29	15.2
Transport: Vehicle Occupant	5	1.0	1.14	7.6
Drowning / Submersion	4	0.8	0.91	6.1
Other Causes	32	6.4	7.32	48.5
Canterbury Total	66	13.2	15.1	100.0
West Coast				
All Causes	6	1.2	19.7	100.0
West Coast Total	6	1.2	19.7	100.0
Otago				
Transport: Vehicle Occupant	6	1.2	3.94	24.0
Neoplasms	5	1.0	3.29	20.0
Congenital Anomalies	4	0.8	2.63	16.0
Other Causes	10	2.0	6.57	40.0
Otago Total	25	5.0	16.4	100.0
Southland				
Transport: All Causes	6	1.2	5.80	28.6
Neoplasms	3	0.6	2.90	14.3
Other Causes	12	2.4	11.6	57.1
Southland Total	21	4.2	20.3	100.0

Source: Numerator: National Mortality Collection; Denominator: Statistics NZ Estimated Resident Population



South Island DHBs Mortality

In the South Island DHBs during 2004–2008, neoplasms, congenital anomalies, transport injuries (vehicle occupant and pedestrian) and drowning/submersion were among the most frequent causes of mortality in children aged 1–14 years (**Table 36**).

Summary

In the South Island DHBs during 2006–2010, injury/poisoning, acute upper respiratory tract infections and gastroenteritis were the most frequent reasons for an acute hospital admission in children. Neoplasms/chemotherapy/radiotherapy, injury/poisoning, dental conditions and metabolic disorders were the most frequent reasons for arranged admissions, while dental procedures, grommets, tonsillectomy +/- adenoidectomy and musculoskeletal procedures were the most frequent reasons for a waiting list admission. During 2004–2008, neoplasms, congenital anomalies, transport injuries (vehicle occupant and pedestrian) and drowning/submersion were among the most frequent causes of mortality in children aged 1–14 years.

