

MOST FREQUENT CAUSES OF HOSPITAL ADMISSION AND MORTALITY IN YOUNG PEOPLE

Introduction

Before considering any of the more detailed analyses in the other sections of this report, it is worthwhile briefly reviewing the most frequent causes of hospital admission and mortality amongst South Island young people during the past five years. It is hoped that the brief summary tables presented below will provide an overall context, within which to consider the relative importance of the various health issues experienced by the region's young people in recent years.

Data Sources and Methods

Indicator

1. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years

Numerator: National Minimum Dataset: Hospital admissions for young people aged 15–24 years 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 Young People Aged 15–24 Years

Numerator: National Mortality Collection: Mortality for young people aged 15–24 years by main underlying cause of death.

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); Therapeutic/Other/Unspecified Abortion (O04-O08); Spontaneous Abortion/Other Early Pregnancy Loss (O00-O03); Pregnancy/Delivery/Postnatal (O09-O99); STI/Pelvic Inflammatory Disease (N70-N77, A50-A64, I980, M031, M730, M731, N290, N341).

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); Chemotherapy / Radiation Oncology (block 1780-1799); CT Scan 1952-1966; Magnetic Resonance Imaging (MRI)(block 2015).

Notes on Interpretation

Note 1: Because of regional differences in the booking of hospital admissions for pregnancy and childbirth (DHBs vary in their use of acute/arranged/waiting list codes), in this analysis a separate reproductive category has been used, which includes all admissions with a primary diagnosis in the ICD-10-AM O00–O99 range. For the purposes of rate calculations, only females aged 15–24 years have been included in the denominator (as compared to the other admission categories, where both genders have been included).

Note 2: Coverage of therapeutic abortions in the NMDS is partial (as many terminations are undertaken in private facilities which do not report to the NMDS). As a result, the figures presented here may significantly underestimate the number of terminations undertaken during the period.

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

Note 4: 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, where the admission date is 7+ days after the date the decision was made that the admission was necessary.

New Zealand Distribution

New Zealand Mortality

In New Zealand during 2004–2008, intentional self-harm, vehicle occupant transport injuries and neoplasms were the leading causes of mortality in young people aged 15–24 years (**Table 142**).

Table 142. Most Frequent Causes of Mortality in Young People Aged 15–24 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 (%)
New Zealand				
Mortality in Young People Aged 15–24 Years				
Intentional Self-Harm	550	110.0	18.2	27.3
Transport: Vehicle Occupant	538	107.6	17.8	26.7
Transport: Pedestrian	52	10.4	1.72	2.6
Transport: Motorbike	54	10.8	1.79	2.7
Transport: Cyclist	10	2.0	0.33	0.5
Transport: Other	40	8.0	1.32	2.0
Neoplasms	169	33.8	5.59	8.4
Congenital Anomalies	60	12.0	1.98	3.0
Assault	51	10.2	1.69	2.5
Accidental Poisoning	49	9.8	1.62	2.4
Drowning / Submersion	48	9.6	1.59	2.4
Falls	43	8.6	1.42	2.1
Epilepsy / Status Epilepticus	36	7.2	1.19	1.8
Undetermined Intent	31	6.2	1.03	1.5
Mechanical Forces: Inanimate	15	3.0	0.50	0.7
Asthma	15	3.0	0.50	0.7
Electricity / Fire / Burns	12	2.4	0.40	0.6
Other Causes	244	48.8	8.07	12.1
New Zealand Total	2,017	403.4	66.7	100.0

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

New Zealand Hospital Admissions

In New Zealand during 2006–2010, issues associated with pregnancy, delivery and the postnatal period were the leading reasons for hospital admission in young people. In terms of other admission types, injury/poisoning and abdominal/pelvic pain were the leading reasons for acute admissions, injury/poisoning and neoplasms/chemotherapy/radiotherapy the leading reasons for arranged admissions, and musculoskeletal and gastrointestinal procedures the leading reasons for waiting list admissions in those aged 15–24 years (**Table 143**).



Table 143. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years by Admission Type, New Zealand 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006– 2010	Number: Annual Average	Rate per 1,000	Percent (%)
New Zealand 15–24 Years				
Reproductive Admissions by Primary Diagnosis				
Pregnancy / Delivery / Postnatal	116,502	23,300	74.3	77.4
*Therapeutic/Other/Unspecified Abortion	24,923	4,985	15.9	16.6
Spontaneous Abortion / Other Early Pregnancy Loss	9,009	1,802	5.74	6.0
Total Reproductive Admissions	150,434	30,087	95.9	100.0
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	44,723	8,945	14.1	22.7
Abdominal/Pelvic Pain	16,363	3,273	5.17	8.3
Mental Health	15,701	3,140	4.96	8.0
Skin Infections	10,254	2,051	3.24	5.2
Appendicitis	7,214	1,443	2.28	3.7
Gastroenteritis	7,057	1,411	2.23	3.6
Urinary Tract Infection	5,855	1,171	1.85	3.0
Total Acute URTI	4,379	876	1.38	2.2
Asthma	4,266	853	1.35	2.2
STI / Pelvic Inflammatory Disease	3,706	741	1.17	1.9
Other Diagnoses	77,337	15,467	24.4	39.3
Total Acute Admissions	196,855	39,371	62.2	100.0
Arranged Admissions by Primary Diagnosis				
Injury / Poisoning	6,025	1,205	1.90	10.9
Neoplasm / Chemotherapy / Radiotherapy	3,681	736	1.16	6.7
Dialysis	2,572	514	0.81	4.7
Mental Health	1,672	334	0.53	3.0
Other Diagnoses	41,255	8,251	13.0	74.7
Total Arranged Admissions	55,205	11,041	17.4	100.0
Waiting List Admissions by Primary Procedure				
Musculoskeletal Procedures	8,456	1,691	2.67	17.7
Gastrointestinal Procedures	6,856	1,371	2.17	14.3
Procedures on Skin/Subcutaneous Tissue	4,188	838	1.32	8.7
Tonsillectomy +/- Adenoidectomy	4,185	837	1.32	8.7
Dental Procedures	3,785	757	1.20	7.9
No Procedure Listed	2,478	496	0.78	5.2
Procedures on the Cervix	1,435	287	0.45	3.0
Procedures on Nose	1,269	254	0.40	2.7
Inguinal Hernia Repair	652	130	0.21	1.4
Myringoplasty	618	124	0.20	1.3
Other Procedures	13,944	2,789	4.40	29.1
Total Waiting List Admissions	47,866	9,573	15.1	100.0
New Zealand Total	450,360	90,072		100.0

Source: Numerator: National Minimum Dataset; Denominator: Statistics NZ Estimated Resident Population. Note: Reproductive Rates are per 1,000 *females* thus overall rate not provided due to use of gender-specific denominator for reproductive admissions; Injury ED cases excluded; NMDS coverage of therapeutic abortions is incomplete, and thus may underestimate regional totals.



South Island Distribution

South Island DHBs Mortality

In the South Island during 2004–2008, intentional self-harm and vehicle occupant transport injuries were the leading causes of mortality in young people 15–24 years (**Table 144**).

Table 144. Most Frequent Causes of Mortality in Young People Aged 15–24 Years by Main Underlying Cause of Death, Nelson Marlborough, South Canterbury and Canterbury 2004–2008

Cause of Death	Number: Total 2004–2008	Number: Annual Average	Rate per 100,000	Percent (%)
Mortality in Young People Aged 15–24 Years				
Nelson Marlborough				
Intentional Self-Harm	13	2.6	17.0	25.5
Transport: Vehicle Occupant	14	2.8	18.3	27.5
Transport: Pedestrian	3	0.6	3.92	5.9
Neoplasms	4	0.8	5.22	7.8
Accidental Poisoning	3	0.6	3.92	5.9
Other Causes	14	2.8	18.3	27.5
Nelson Marlborough Total	51	10.2	66.6	100.0
South Canterbury				
Intentional Self-Harm	10	2.0	32.7	35.7
Transport: Vehicle Occupant	6	1.2	19.6	21.4
Transport: All Other Causes	3	0.6	9.82	10.7
Other Causes	9	1.8	29.5	32.1
South Canterbury Total	28	5.6	91.7	100.0
Canterbury				
Intentional Self-Harm	64	12.8	18.3	30.9
Transport: Vehicle Occupant	41	8.2	11.7	19.8
Transport: Pedestrian	5	1.0	1.43	2.4
Transport: Motorbike	6	1.2	1.72	2.9
Transport: Other	5	1.0	1.43	2.4
Neoplasms	21	4.2	6.01	10.1
Congenital Anomalies	9	1.8	2.58	4.3
Assault	7	1.4	2.00	3.4
Accidental Poisoning	7	1.4	2.00	3.4
Drowning / Submersion	4	0.8	1.14	1.9
Falls	3	0.6	0.86	1.4
Epilepsy / Status Epilepticus	3	0.6	0.86	1.4
Undetermined Intent	3	0.6	0.86	1.4
Electricity / Fire / Burns	3	0.6	0.86	1.4
Other Causes	26	5.2	7.44	12.6
Canterbury Total	207	41.4	59.2	100.0

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



Table 145. Most Frequent Causes of Mortality in Young People Aged 15–24 Years by Main Underlying Cause of Death, West Coast, Otago and Southland 2004–2008

Cause of Death	Number: Total 2004–2008	Number: Annual Average	Rate per 100,000	Percent (%)
Mortality in Young People Aged 15–24 Years				
West Coast				
Transport: Vehicle Occupant	7	1.4	39.5	35.0
Other Causes	13	2.6	73.3	65.0
West Coast Total	20	4.0	112.8	100.0
Otago				
Intentional Self-Harm	24	4.8	14.5	31.2
Transport: Vehicle Occupant	18	3.6	10.9	23.4
Transport: Motorbike	3	0.6	1.82	3.9
Transport: Other	3	0.6	1.82	3.9
Neoplasms	5	1.0	3.03	6.5
Congenital Anomalies	3	0.6	1.82	3.9
Assault	3	0.6	1.82	3.9
Other Causes	18	3.6	10.9	23.4
Otago Total	77	15.4	46.7	100.0
Southland				
Intentional Self-Harm	24	4.8	33.7	35.3
Transport: Vehicle Occupant	21	4.2	29.5	30.9
Transport: Motorbike	3	0.6	4.21	4.4
Transport: All Other Causes	4	0.8	5.61	5.9
Drowning / Submersion	3	0.6	4.21	4.4
Other Causes	13	2.6	18.2	19.1
Southland Total	68	13.6	95.4	100.0

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

South Island DHBs Hospital Admissions

In the South Island during 2006–2010, issues associated with pregnancy, delivery and the postnatal period were the leading reasons for hospital admissions in young people in all DHBs. In terms of other admission types, injury/poisoning, mental health issues and abdominal/pelvic pain were the leading reasons for acute admissions. Injury/poisoning, neoplasm/chemotherapy/radiotherapy, mental health issues, dialysis and dental conditions were frequent reasons for arranged admissions, while gastrointestinal, musculoskeletal, and skin procedures, tonsillectomy +/- adenoidectomy and dental procedures were frequent reasons for waiting list admissions (**Table 146**).



Table 146. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years by Admission Type, Nelson Marlborough 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006–2010	Number: Annual Average	Rate per 1,000	Percent (%)
Nelson Marlborough 15–24 Years				
Reproductive Admissions by Primary Diagnosis				
Pregnancy / Delivery / Postnatal	2,416	483.2	65.2	60.5
*Therapeutic/Other/Unspecified Abortion	1,340	268.0	36.2	33.6
Spontaneous Abortion / Other Early Pregnancy Loss	237	47.4	6.40	5.9
Total Reproductive Admissions	3,993	798.6	107.8	100.0
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	1,341	268.2	17.0	28.3
Mental Health	501	100.2	6.36	10.6
Abdominal/Pelvic Pain	426	85.2	5.41	9.0
Skin Infections	220	44.0	2.79	4.6
Appendicitis	216	43.2	2.74	4.6
Gastroenteritis	151	30.2	1.92	3.2
Urinary Tract Infection	102	20.4	1.30	2.1
Total Acute URTI	100	20.0	1.27	2.1
Neoplasm / Chemotherapy / Radiotherapy	55	11.0	0.70	1.2
Viral Infection NOS	52	10.4	0.66	1.1
Other Diagnoses	1,582	316.4	20.1	33.3
Total Acute Admissions	4,746	949.2	60.3	100.0
Arranged Admissions by Primary Diagnosis				
Injury / Poisoning	411	82.2	5.22	28.9
Neoplasm / Chemotherapy / Radiotherapy	146	29.2	1.85	10.3
Mental Health	74	14.8	0.94	5.2
Immune Disorders	35	7.0	0.44	2.5
Other Diagnoses	758	151.6	9.62	53.2
Total Arranged Admissions	1,424	284.8	18.1	100.0
Waiting List Admissions by Primary Procedure				
Gastrointestinal Procedures	256	51.2	3.25	12.5
Musculoskeletal Procedures	250	50.0	3.17	12.2
Procedures on Skin/Subcutaneous Tissue	231	46.2	2.93	11.3
Tonsillectomy +/- Adenoidectomy	163	32.6	2.07	8.0
Procedures on the Cervix	160	32.0	2.03	7.8
Dental Procedures	124	24.8	1.57	6.0
No Procedure Listed	123	24.6	1.56	6.0
Inguinal Hernia Repair	36	7.2	0.46	1.8
Procedures on Nose	33	6.6	0.42	1.6
Circumcision	15	3.0	0.19	0.7
Other Procedures	659	131.8	8.37	32.1
Total Waiting List Admissions	2,050	410.0	26.0	100.0
Nelson Marlborough Total	12,213	2,442.6		100.0

Source: Numerator: National Minimum Dataset; Denominator: Statistics NZ Estimated Resident Population. Note: Reproductive Rates are per 1,000 *females* thus overall rate not provided due to use of gender-specific denominator for reproductive admissions; Injury ED cases excluded; NMDS coverage of therapeutic abortions is incomplete, and thus may underestimate regional totals.

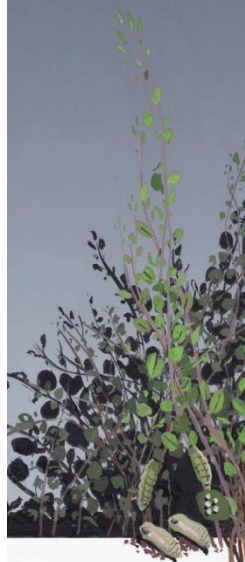


Table 147. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years by Admission Type, South Canterbury 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006–2010	Number: Annual Average	Rate per 1,000	Percent (%)
South Canterbury 15–24 Years				
Reproductive Admissions by Primary Diagnosis				
Pregnancy / Delivery / Postnatal	1,489	297.8	98.1	86.1
*Therapeutic/Other/Unspecified Abortion	102	20.4	6.72	5.9
Spontaneous Abortion / Other Early Pregnancy Loss	138	27.6	9.09	8.0
Total Reproductive Admissions	1,729	345.8	113.9	100.0
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	701	140.2	22.3	27.2
Mental Health	295	59.0	9.39	11.5
Abdominal/Pelvic Pain	164	32.8	5.22	6.4
Appendicitis	99	19.8	3.15	3.8
Gastroenteritis	80	16.0	2.55	3.1
Urinary Tract Infection	57	11.4	1.81	2.2
Skin Infections	53	10.6	1.69	2.1
STI / Pelvic Inflammatory Disease	48	9.6	1.53	1.9
Total Acute URTI	34	6.8	1.08	1.3
Asthma	34	6.8	1.08	1.3
Other Diagnoses	1,008	201.6	32.1	39.2
Total Acute Admissions	2,573	514.6	81.9	100.0
Arranged Admissions by Primary Diagnosis				
Neoplasm / Chemotherapy / Radiotherapy	70	14.0	2.23	14.9
Mental Health	36	7.2	1.15	7.7
Injury / Poisoning	28	5.6	0.89	6.0
Immune Disorders	26	5.2	0.83	5.5
Other Diagnoses	310	62.0	9.86	66.0
Total Arranged Admissions	470	94.0	15.0	100.0
Waiting List Admissions by Primary Procedure				
Musculoskeletal Procedures	246	49.2	7.83	25.1
Tonsillectomy +/- Adenoidectomy	116	23.2	3.69	11.8
Dental Procedures	87	17.4	2.77	8.9
Gastrointestinal Procedures	86	17.2	2.74	8.8
Procedures on the Cervix	75	15.0	2.39	7.7
Procedures on Skin/Subcutaneous Tissue	52	10.4	1.65	5.3
Procedures on Nose	29	5.8	0.92	3.0
No Procedure Listed	27	5.4	0.86	2.8
Inguinal Hernia Repair	9	1.8	0.29	0.9
Grommets	9	1.8	0.29	0.9
Procedures on Extraocular Muscles	6	1.2	0.19	0.6
Other Procedures	237	47.4	7.54	24.2
Total Waiting List Admissions	979	195.8	31.1	100.0
South Canterbury Total	5,751	1,150.2		100.0

Source: Numerator: National Minimum Dataset; Denominator: Statistics NZ Estimated Resident Population. Note: Reproductive Rates are per 1,000 *females* thus overall rate not provided due to use of gender-specific denominator for reproductive admissions; Injury ED cases excluded; NMDS coverage of therapeutic abortions is incomplete, and thus may underestimate regional totals.

Table 148. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years by Admission Type, Canterbury 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006–2010	Number: Annual Average	Rate per 1,000	Percent (%)
Canterbury 15–24 Years				
Reproductive Admissions by Primary Diagnosis				
Pregnancy / Delivery / Postnatal	10,904	2,180.8	62.0	79.8
*Therapeutic/Other/Unspecified Abortion	1,676	335.2	9.53	12.3
Spontaneous Abortion / Other Early Pregnancy Loss	1,087	217.4	6.18	8.0
Total Reproductive Admissions	13,667	2,733.4	77.7	100.0
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	4,817	963.4	13.2	26.3
Mental Health	1,755	351.0	4.81	9.6
Abdominal/Pelvic Pain	1,563	312.6	4.28	8.5
Appendicitis	861	172.2	2.36	4.7
Skin Infections	789	157.8	2.16	4.3
Gastroenteritis	518	103.6	1.42	2.8
Urinary Tract Infection	400	80.0	1.10	2.2
Asthma	369	73.8	1.01	2.0
Total Acute URTI	307	61.4	0.84	1.7
STI / Pelvic Inflammatory Disease	242	48.4	0.66	1.3
Other Diagnoses	6,674	1,334.8	18.3	36.5
Total Acute Admissions	18,295	3,659.0	50.2	100.0
Arranged Admissions by Primary Diagnosis				
Dialysis	630	126.0	1.73	7.4
Neoplasm / Chemotherapy / Radiotherapy	579	115.8	1.59	6.8
Mental Health	443	88.6	1.21	5.2
Injury / Poisoning	303	60.6	0.83	3.6
Other Diagnoses	6,552	1,310.4	18.0	77.0
Total Arranged Admissions	8,507	1,701.4	23.3	100.0
Waiting List Admissions by Primary Procedure				
Musculoskeletal Procedures	1,752	350.4	4.80	27.5
Gastrointestinal Procedures	724	144.8	1.98	11.4
Tonsillectomy +/- Adenoidectomy	502	100.4	1.38	7.9
Procedures on Skin/Subcutaneous Tissue	422	84.4	1.16	6.6
Dental Procedures	303	60.6	0.83	4.8
Procedures on Nose	221	44.2	0.61	3.5
No Procedure Listed	216	43.2	0.59	3.4
Procedures on the Cervix	215	43.0	0.59	3.4
Inguinal Hernia Repair	78	15.6	0.21	1.2
Myringoplasty	43	8.6	0.12	0.7
Other Procedures	1,891	378.2	5.18	29.7
Total Waiting List Admissions	6,367	1,273.4	17.5	100.0
Canterbury Total	46,836	9,367.2		100.0

Source: Numerator: National Minimum Dataset; Denominator: Statistics NZ Estimated Resident Population. Note: Reproductive Rates are per 1,000 *females* thus overall rate not provided due to use of gender-specific denominator for reproductive admissions; Injury ED cases excluded; NMDS coverage of therapeutic abortions is incomplete, and thus may underestimate regional totals.

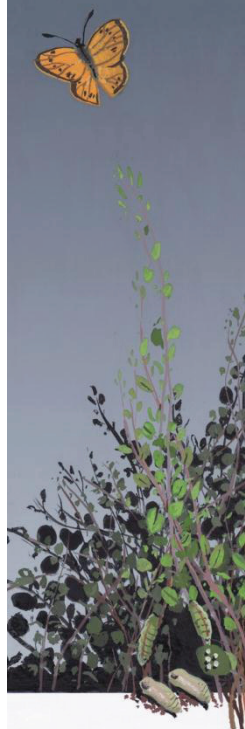


Table 149. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years by Admission Type, West Coast 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006–2010	Number: Annual Average	Rate per 1,000	Percent (%)
West Coast 15–24 Years				
Reproductive Admissions by Primary Diagnosis				
Pregnancy / Delivery / Postnatal	831	166.2	96.7	83.5
*Therapeutic/Other/Unspecified Abortion	94	18.8	10.9	9.4
Spontaneous Abortion / Other Early Pregnancy Loss	70	14.0	8.15	7.0
Total Reproductive Admissions	995	199.0	115.8	100.0
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	477	95.4	26.1	38.8
Mental Health	91	18.2	4.98	7.4
Appendicitis	62	12.4	3.39	5.0
Abdominal/Pelvic Pain	60	12.0	3.28	4.9
Skin Infections	35	7.0	1.91	2.8
Urinary Tract Infection	27	5.4	1.48	2.2
Gastroenteritis	25	5.0	1.37	2.0
Asthma	17	3.4	0.93	1.4
Total Acute URTI	17	3.4	0.93	1.4
STI / Pelvic Inflammatory Disease	15	3.0	0.82	1.2
Other Diagnoses	404	80.8	22.1	32.8
Total Acute Admissions	1,230	246.0	67.3	100.0
Arranged Admissions by Primary Diagnosis				
Injury / Poisoning	39	7.8	2.13	13.8
Mental Health	24	4.8	1.31	8.5
Neoplasm / Chemotherapy / Radiotherapy	21	4.2	1.15	7.4
Dental Conditions	5	1.0	0.27	1.8
Other Diagnoses	193	38.6	10.6	68.4
Total Arranged Admissions	282	56.4	15.4	100.0
Waiting List Admissions by Primary Procedure				
Musculoskeletal Procedures	173	34.6	9.46	31.5
Gastrointestinal Procedures	83	16.6	4.54	15.1
Procedures on Skin/Subcutaneous Tissue	47	9.4	2.57	8.5
No Procedure Listed	38	7.6	2.08	6.9
Procedures on the Cervix	34	6.8	1.86	6.2
Tonsillectomy +/- Adenoidectomy	33	6.6	1.80	6.0
Inguinal Hernia Repair	14	2.8	0.77	2.5
Procedures on Nose	10	2.0	0.55	1.8
Dental Procedures	5	1.0	0.27	0.9
Myringoplasty	4	0.8	0.22	0.7
Other Procedures	109	21.8	5.96	19.8
Total Waiting List Admissions	550	110.0	30.1	100.0
West Coast Total	3,057	611.4		100.0

Source: Numerator: National Minimum Dataset; Denominator: Statistics NZ Estimated Resident Population. Note: Reproductive Rates are per 1,000 *females* thus overall rate not provided due to use of gender-specific denominator for reproductive admissions; Injury ED cases excluded; NMDS coverage of therapeutic abortions is incomplete, and thus may underestimate regional totals.

Table 150. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years by Admission Type, Otago 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006–2010	Number: Annual Average	Rate per 1,000	Percent (%)
Otago 15–24 Years				
Reproductive Admissions by Primary Diagnosis				
Pregnancy / Delivery / Postnatal	2,863	572.6	33.1	58.8
*Therapeutic/Other/Unspecified Abortion	1,788	357.6	20.7	36.8
Spontaneous Abortion / Other Early Pregnancy Loss	214	42.8	2.48	4.4
Total Reproductive Admissions	4,865	973.0	56.3	100.0
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	2,103	420.6	12.4	23.6
Mental Health	964	192.8	5.67	10.8
Abdominal/Pelvic Pain	585	117.0	3.44	6.6
Gastroenteritis	366	73.2	2.15	4.1
Skin Infections	345	69.0	2.03	3.9
Appendicitis	325	65.0	1.91	3.7
Total Acute URTI	277	55.4	1.63	3.1
Urinary Tract Infection	181	36.2	1.07	2.0
Viral Infection NOS	170	34.0	1.00	1.9
STI / Pelvic Inflammatory Disease	115	23.0	0.68	1.3
Other Diagnoses	3,465	693.0	20.4	38.9
Total Acute Admissions	8,896	1,779.2	52.4	100.0
Arranged Admissions by Primary Diagnosis				
Dental Conditions	111	22.2	0.65	9.9
Injury / Poisoning	85	17.0	0.50	7.6
Neoplasm / Chemotherapy / Radiotherapy	84	16.8	0.49	7.5
Mental Health	66	13.2	0.39	5.9
Other Diagnoses	774	154.8	4.56	69.1
Total Arranged Admissions	1,120	224.0	6.59	100.0
Waiting List Admissions by Primary Procedure				
Musculoskeletal Procedures	514	102.8	3.03	22.3
Tonsillectomy +/- Adenoidectomy	250	50.0	1.47	10.9
Procedures on Skin/Subcutaneous Tissue	215	43.0	1.27	9.3
Gastrointestinal Procedures	188	37.6	1.11	8.2
No Procedure Listed	105	21.0	0.62	4.6
Dental Procedures	105	21.0	0.62	4.6
Procedures on Nose	69	13.8	0.41	3.0
Procedures on the Cervix	51	10.2	0.30	2.2
Inguinal Hernia Repair	29	5.8	0.17	1.3
Myringoplasty	18	3.6	0.11	0.8
Other Procedures	758	151.6	4.46	32.9
Total Waiting List Admissions	2,302	460.4	13.6	100.0
Otago Total	17,183	3,436.6		100.0

Source: Numerator: National Minimum Dataset; Denominator: Statistics NZ Estimated Resident Population.
 Note: Reproductive Rates are per 1,000 *females* thus overall rate not provided due to use of gender-specific denominator for reproductive admissions; Injury ED cases excluded; NMDS coverage of therapeutic abortions is incomplete, and thus may underestimate regional totals.



Table 151. Most Frequent Reasons for Hospital Admission in Young People Aged 15–24 Years by Admission Type, Southland 2006–2010

Primary Diagnosis/Procedure	Number: Total 2006–2010	Number: Annual Average	Rate per 1,000	Percent (%)
Southland 15–24 Years				
Reproductive Admissions by Primary Diagnosis				
Pregnancy / Delivery / Postnatal	2,945	589.0	83.2	87.6
*Therapeutic/Other/Unspecified Abortion	228	45.6	6.44	6.8
Spontaneous Abortion / Other Early Pregnancy Loss	188	37.6	5.31	5.6
Total Reproductive Admissions	3,361	672.2	95.0	100.0
Acute Admissions by Primary Diagnosis				
Injury / Poisoning	1,392	278.4	19.1	32.0
Mental Health	374	74.8	5.14	8.6
Abdominal/Pelvic Pain	289	57.8	3.97	6.6
Appendicitis	182	36.4	2.50	4.2
Skin Infections	148	29.6	2.03	3.4
Gastroenteritis	128	25.6	1.76	2.9
Urinary Tract Infection	79	15.8	1.09	1.8
Total Acute URTI	77	15.4	1.06	1.8
STI / Pelvic Inflammatory Disease	55	11.0	0.76	1.3
Asthma	55	11.0	0.76	1.3
Other Diagnoses	1,571	314.2	21.6	36.1
Total Acute Admissions	4,350	870.0	59.8	100.0
Arranged Admissions by Primary Diagnosis				
Injury / Poisoning	180	36.0	2.47	14.5
Neoplasm / Chemotherapy / Radiotherapy	58	11.6	0.80	4.7
Mental Health	42	8.4	0.58	3.4
Removal of Internal Fixation Device	39	7.8	0.54	3.1
Other Diagnoses	924	184.8	12.7	74.3
Total Arranged Admissions	1,243	248.6	17.1	100.0
Waiting List Admissions by Primary Procedure				
Musculoskeletal Procedures	273	54.6	3.75	18.9
Dental Procedures	185	37.0	2.54	12.8
Tonsillectomy +/- Adenoidectomy	149	29.8	2.05	10.3
Gastrointestinal Procedures	135	27.0	1.86	9.4
Procedures on Skin/Subcutaneous Tissue	114	22.8	1.57	7.9
No Procedure Listed	103	20.6	1.42	7.1
Procedures on Nose	28	5.6	0.38	1.9
Grommets	26	5.2	0.36	1.8
Inguinal Hernia Repair	21	4.2	0.29	1.5
Procedures on the Cervix	16	3.2	0.22	1.1
Other Procedures	391	78.2	5.37	27.1
Total Waiting List Admissions	1,441	288.2	19.8	100.0
Southland Total	10,395	2,079.0		100.0

Source: Numerator: National Minimum Dataset; Denominator: Statistics NZ Estimated Resident Population. Note: Reproductive Rates are per 1,000 *females* thus overall rate not provided due to use of gender-specific denominator for reproductive admissions; Injury ED cases excluded; NMDS coverage of therapeutic abortions is incomplete, and thus may underestimate regional totals.



Summary

In New Zealand during 2006–2010, issues associated with pregnancy, delivery and the postnatal period were the leading reasons for hospital admission in young people. In terms of other admission types, injury/poisoning and abdominal/pelvic pain were the leading reasons for acute admissions, injury/poisoning and neoplasms/chemotherapy/radiotherapy the leading reasons for arranged admissions, and musculoskeletal and gastrointestinal procedures the leading reasons for waiting list admissions. During 2004–2008, intentional self-harm, vehicle occupant transport injuries and neoplasms were the leading causes of mortality in young people aged 15–24 years.

In the South Island during 2006–2010, issues associated with pregnancy, delivery and the postnatal period were the leading reasons for hospital admissions in young people in all DHBs. In terms of other admission types, injury/poisoning, mental health issues and abdominal/pelvic pain were the leading reasons for acute admissions. Injury/poisoning, neoplasm/chemotherapy/radiotherapy, mental health issues, dialysis and dental conditions were frequent reasons for arranged admissions, while gastrointestinal, musculoskeletal, and skin procedures, tonsillectomy +/- adenoidectomy and dental procedures were frequent reasons for waiting list admissions. During 2004–2008, intentional self-harm and vehicle occupant transport injuries were the leading causes of mortality in South Island young people 15–24 years.

