

Morbidity in the Northern Territory 2008-2018

Introduction

Examining the severity of ill-health, injury and disease ("morbidity") in a population is critical to inform health system practice and policy. This factsheet compares causes of hospitalisations using public hospital separation data as an indicator of morbidity in the Northern Territory (NT).

The fact sheet firstly examines all cause hospital separations in the NT. Data was linked with diagnosis to ascertain the reason for hospital and classified according to Statistical Classification of Diseases and Related Health Problems (ICD-10) and ICD-10 chapter headings.¹⁻³ The reason was based on principal diagnosis only, with the exception of injury admissions for which additional diagnoses were used. The analysis has been presented by Aboriginal status and gender. Renal dialysis patients are excluded unless specified because of the routine admissions required for patients receiving dialysis.

All-cause hospital separations

Table 1 presents the number of separation for public hospitals in the NT. From 2008-2018, Aboriginal people accounted for almost 50% (n/N=354,480/732,749) of the non-renal dialysis hospital separations and 70% (n/N=1,025,475/1,474,499) of all separations (including renal dialysis).

Table 1. All-cause hospital separation in the Northern Territory, by year, renal dialysis and Indigenous status, 2008–2018

Years	Excluding Renal Dialysis			Including Renal Dialysis		
	Aboriginal	Non-Aboriginal	Total	Aboriginal	Non-Aboriginal	Total
2008	25,789	25,330	51,119	68,584	30,168	98,752
2009	27,076	26,451	53,527	72,135	31,065	103,200
2010	28,226	27,714	55,940	74,892	32,692	107,584
2011	29,364	29,275	58,639	81,840	35,168	117,008
2012	29,517	30,660	60,177	84,403	36,457	120,860
2013	30,004	33,026	63,030	87,164	38,694	125,858
2014	31,449	33,811	65,260	95,067	39,780	134,847
2015	34,317	38,222	72,539	105,764	45,342	151,106
2016	38,364	41,885	80,249	113,306	49,440	162,746
2017	39,794	43,774	83,568	119,657	52,596	172,253
2018	40,580	48,121	88,701	122,663	57,622	180,285
Total	354,480	378,269	732,749	1,025,475	449,024	1,474,499

The NT population remained relatively stable during the last decade,⁴ but the rate of hospital separations has steadily increased for both NT Aboriginal and non-

Aboriginal patients from 2008 to 2018 (Table 2). Increasing rates of hospitalisation could be a result of increased severity of illness (morbidity), but may also be due to a lack of early diagnosis in primary healthcare⁵ or non-compliance with treatment.⁶

Annual hospital separation rates for Aboriginal patients were double that of non-Aboriginal patients for both genders. In 2018, Aboriginal females had the highest separation at 733.2 per 1,000 population and non-Aboriginal males had the lowest separation at 286.3 per 1,000 population.

Table 2. All-cause hospital separation rates in the Northern Territory, by year, sex and Indigenous status, 2008–2018

Years	Male		Female	
	Aboriginal	Non-Aboriginal	Aboriginal	Non-Aboriginal
2008	429.4	189.6	500.8	195.1
2009	439.7	193.5	526.9	190.8
2010	457.7	196.0	534.6	199.3
2011	462.0	198.8	546.0	210.9
2012	454.9	205.4	558.2	213.2
2013	444.5	205.3	561.9	231.1
2014	456.7	207.8	578.6	233.5
2015	489.6	230.6	624.5	260.2
2016	536.2	255.5	681.9	282.0
2017	536.5	260.2	708.4	290.4
2018	546.6	286.3	733.2	313.2
Total	481.6	222.9	600.9	240.8

Note: Rates calculated as separations per 1,000 population adjusted to 2001 Australian estimated resident population using direct age-standardisation.

Cause of hospital admissions

Table 3 and 4 show the reason for hospitalisation using the ICD-10 chapters. Rates are present by gender (Table 3 males, Table 4 females) and Aboriginal status.

Table 3. Separations by ICD-10 chapter, NT males, 2008–2018

ICD-10 chapter	Aboriginal			Non-Aboriginal		
	n	Crude rate	Adjusted rate	n	Crude rate	Adjusted rate
Injury and poisoning	26,722	68.3	74.9	28,387	29.2	32.0
Respiratory disease	19,941	51.0	69.2	12,752	13.1	17.3
Ill-defined	12,622	32.3	46.0	18,506	19.0	22.4
Digestive system	11,085	28.3	37.3	21,339	21.9	23.7
Skin & subcutaneous	9,941	25.4	28.0	8,521	8.8	9.4
Mental disorders	9,169	23.4	26.7	6,914	7.1	7.4
Factors influencing health ^a	9,044	23.1	30.5	17,446	17.9	21.0
Circulatory	8,662	22.2	36.6	13,526	13.9	18.8
Endocrine nutritional	7,052	18.0	26.5	5,413	5.6	6.1
Infectious disease	6,802	17.4	19.6	5,519	5.7	6.6
Nervous system	6,629	17.0	24.9	9,446	9.7	12.5
Musculoskeletal	4,940	12.6	17.5	7,570	7.8	8.8
Perinatal	3,897	10.0	6.1	4,526	4.7	4.6
Genitourinary	3,837	9.8	14.9	7,439	7.6	9.4
Childbirth	2,990	7.6	4.7	3,680	3.8	3.8
Neoplasm	2,135	5.5	11.8	10,545	10.8	14.4
Congenital malformation	1,000	2.6	1.6	1,348	1.4	1.4
Blood & blood forming	941	2.4	3.9	2,581	2.7	3.3

Note: Rates calculated as separations per 1,000 population adjusted to 2001 Australian estimated resident population using direct age-standardisation.

^aFactors influencing health are ICD categories Z00-Z99 and are for occasions where a diagnosis is not a disease or injury.²

Hospital rates were higher among Aboriginal males compared to non-Aboriginal males across all ICD-10 chapter categories, with the exception of neoplasms (Table 3). Injury and poisoning was the most common reason of hospital admissions among non-Aboriginal and Aboriginal males. Respiratory disease ranked second among Aboriginal males, whereas digestive system admissions ranked second among non-Aboriginal males (Table 3).

Hospital rates were higher among Aboriginal females compared with non-Aboriginal females across all ICD-10 chapters (Table 4). For females, pregnancy related conditions were the most common cause among Aboriginal and non-Aboriginal females (Table 4). Injury and poisoning ranked second among Aboriginal females compared to factors influencing health among non-Aboriginal females (Table 4).

Table 4. Separations by ICD-10 chapter, NT females, 2008–2018

ICD-10 chapter	Aboriginal			Non-Aboriginal		
	n	Crude rate	Adjusted rate	n	Crude rate	Adjusted rate
Pregnancy related	30,344	79.1	65.8	46,071	53.3	45.3
Injury and poisoning	28,265	73.7	78.9	15,650	18.1	21.9
Respiratory disease	21,996	57.3	69.4	9,128	10.6	13.0
Ill-defined	15,864	41.3	50.1	16,963	19.6	22.4
Digestive system	12,712	33.1	38.0	16,289	18.9	21.0
Skin & subcutaneous	11,601	30.2	32.2	4,444	5.1	5.8
Mental disorders	7,985	20.8	22.6	4,918	5.7	6.0
Factors influencing health ^a	12,763	33.3	38.2	20,271	23.5	24.4
Circulatory	8,581	22.4	31.6	6,496	7.5	11.6
Endocrine nutritional	10,629	27.7	36.9	3,429	4.0	4.6
Infectious disease	9,135	23.8	26.2	4,699	5.4	6.2
Nervous system	7,455	19.4	24.7	9,029	10.5	13.4
Musculoskeletal	5,400	14.1	17.7	6,370	7.4	9.0
Perinatal	3,275	8.5	5.6	3,644	4.2	3.9
Genitourinary	11,917	31.1	37.0	11,041	12.8	13.5
Childbirth	3,114	8.1	5.3	3,748	4.3	4.0
Neoplasm	3,039	7.9	11.7	7,128	8.3	10.4
Congenital malformation	582	1.5	1.1	859	1.0	0.9
Blood & blood forming	2,015	5.3	7.2	2,292	2.7	3.3

Note: Rates calculated as separations per 1,000 population adjusted to 2001 Australian estimated resident population using direct age-standardisation.

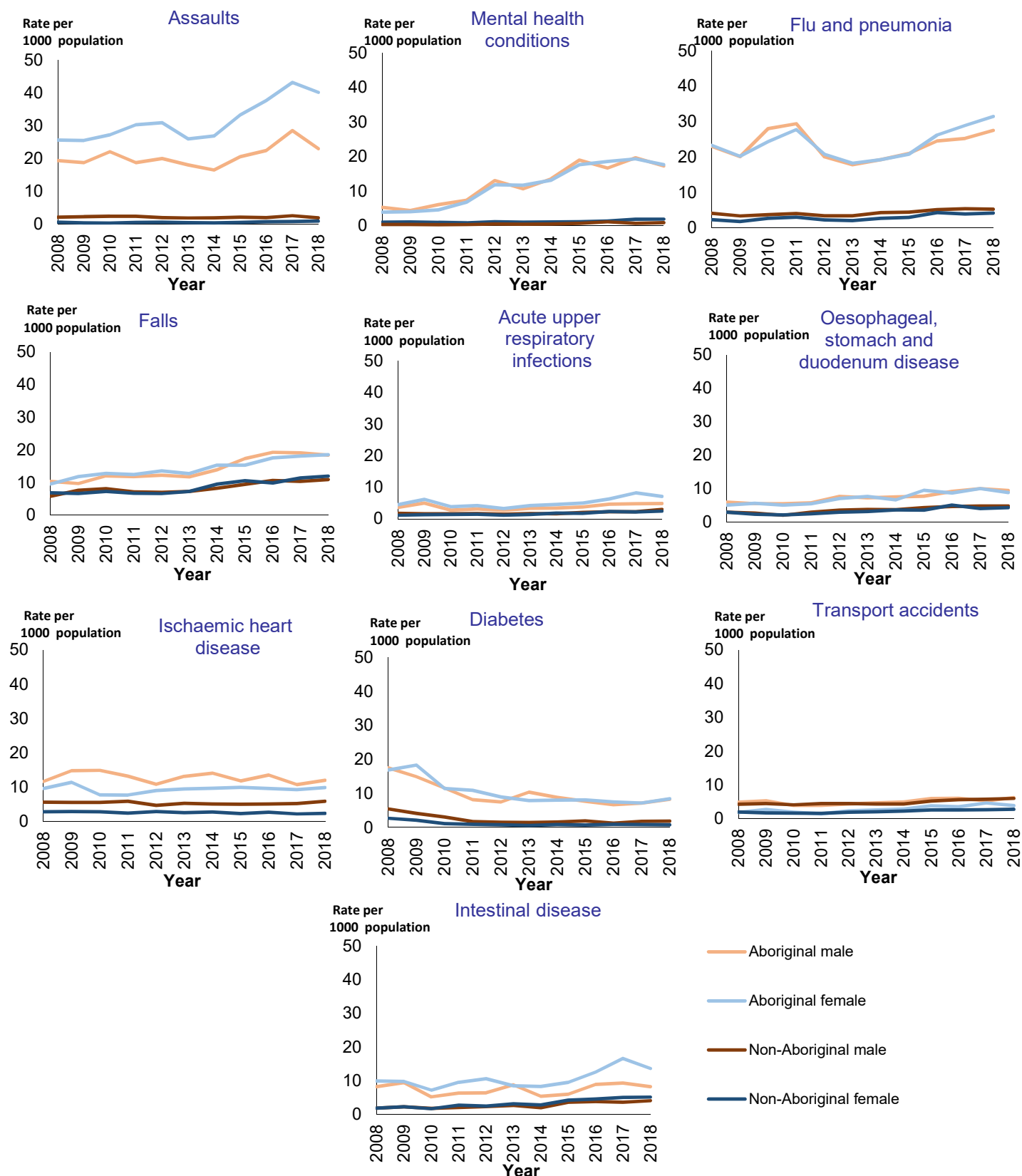
^aFactors influencing health are ICD categories Z00-Z99 and are for occasions where a diagnosis is not a disease or injury.²

Admissions by top 10 conditions

The highest rates of hospitalisation in the NT were for assaults, mental health conditions, falls, flu and pneumonia (Figure 1). The rates of assaults, mental health and, flu and pneumonia increased from 2008 to 2018 and were higher among the Aboriginal population compared to the non-Aboriginal population. Rates of assaults are particularly high among the Aboriginal population.

The condition with the largest decline in admissions over the reporting period was diabetes, which is largely a result of improved primary healthcare management of this disease. The rates of other conditions: ischaemic heart disease, transport accidents, oesophageal, stomach and duodenum disease, acute respiratory infections have remained relatively stable from 2008 to 2019.

Figure 1. Top 10 health conditions contributing to hospitalisations in NT, age-adjusted separation rates per 1,000 population, by sex and Indigenous status, 2008–2018



References

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