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Are Indigenous admitted patients more likely to discharge against medical advice than non-Indigenous patients?

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Discharge against medical advice (DAMA) is a category collected within the Queensland Health Admitted Patient Data Collection that indicates whether an admitted patient left hospital against the expressed advice of their treating physician. Research highlights that discharge against medical advice is associated with increased patient morbidity and the risk of hospital readmission^a. This paper considers whether Indigenous^b patients in Queensland public acute hospitals are more likely to self-discharge than non-Indigenous patients and examines any variance associated with a range of patient and admission characteristics. For the purpose of this analysis, patients admitted for renal dialysis, those who died in hospital, and patients in psychiatric hospitals were excluded.

The patient characteristics (age and sex) and attributes of their hospital stay such as principal diagnosis, average length of stay (ALOS) and admitting health service district are compared for Indigenous and non-Indigenous admitted patients who discharge against medical advice (DAMA). Table 1 provides basic summary data for the past five years. For the period July 2003 to June 2008, there were 3,229,583 patients discharged from Queensland public hospitals. Of these patients, 0.9% (n = 30,255) discharged themselves against medical advice. Indigenous patients (3.0%) were approximately three times more likely to discharge themselves than non-Indigenous patients (0.8%). Overall, the rate of patients discharging themselves from Queensland public acute hospitals had increased over the five years studied (Table 1).

Table 1: Summary of the characteristics of patients by discharge status and associated rates, July 2003 to June 2008

Year	Indigenous		non-Indigenous		Sex	Indigenous		non-Indigenous		
	DAMA Rate(%)	DAMA Rate(%)	DAMA Rate(%)	DAMA Rate(%)		DAMA Rate(%)	DAMA Rate(%)			
2003/2004	998	2.8	4,313	0.7	Male	2,966	3.7	14,625	1.0	
2004/2005	1,092	3.0	4,548	0.8	Female	2,670	2.4	9,994	0.6	
2005/2006	1,087	2.8	4,653	0.8	Age Group					
2006/2007	1,180	3.1	5,250	0.8		0-14	248	0.6	662	0.2
2007/2008	1,279	3.1	5,855	0.9		15-17	199	2.7	547	0.8
Average Length of Stay (ALOS)						18-24	935	3.6	3,794	1.5
Same day/Overnight	3,465	3.3	15,026	0.8	25-39	2,329	4.8	8,333	1.4	
2 to 4 days	1,456	2.8	6,100	0.9	40-59	1,736	3.9	7,604	1.1	
5+ days	715	2.2	3,493	0.6	60+	189	0.8	3,679	0.3	

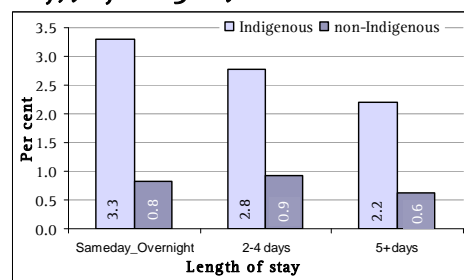
Source: Queensland Hospital Admitted Patient Data Collection

Note: non-Indigenous includes 'not stated' as coding to this category varies across facilities and is a data coding standard adopted by the Australian Institute of Health and Welfare

Figure 1 shows that Indigenous patients had a higher rate of self discharge across all length of stay categories. Of those patients that discharged against medical advice, over 60% had a length of stay of same day or overnight. Patterns were similar for both Indigenous and non-Indigenous DAMA patients.

While proportionally more females (n= 1,714,803; 53.1%) were admitted to hospitals than males (n= 1,514,780; 46.9%), Figure 2 shows that DAMA rates were higher for males than females. Furthermore, DAMA rates for Indigenous patients were significantly higher across all age groups for both males and females than non-Indigenous patients.

Figure 1: Proportion of DAMA patients by Indigenous status and length of stay, July 2003 to June 2008



Source: Queensland Hospital Admitted Patient Data Collection

For both Indigenous and non-Indigenous males, DAMA rates were highest in the 25-39 age group (6.9% and 2.4% respectively). Female Indigenous DAMA rates were highest in the 25-39 age group, however, non-Indigenous female DAMA rates were highest in the 18-24 age group.

Of significant concern is that DAMA rates for Indigenous males and females aged 15-17 were very high (3.4% and 2.4% respectively) given that these patients are technically minors.

For patients that had a psychiatric condition as their principal diagnosis, DAMA rates were significantly higher for both Indigenous (7.3%) and non-Indigenous patients (3.3%) compared with other conditions (2.7% and 0.7% respectively). Indigenous DAMA patients with a psychiatric condition who were admitted to a non-dedicated psychiatric unit had significantly higher rates of DAMA (10.3%) compared with those admitted to a dedicated psychiatric unit (5.4%). Non-Indigenous DAMA patients had less variation between the two types of units (4.3% versus 3.1%).

An analysis of DAMA by the 16 Queensland Health districts^c of admission shows there was a significant variation in the rates of DAMA for both Indigenous and non-Indigenous patients. Table 2 provides a proportional summary of discharge against medical advice comparing Indigenous patients and non-Indigenous patients by public acute hospitals within the 16 districts. As shown, there was significant variance across the Queensland Health districts.

A summary analysis did not identify any significant difference in DAMA rates between patients who were admitted locally and those who travelled to hospitals outside their local area.

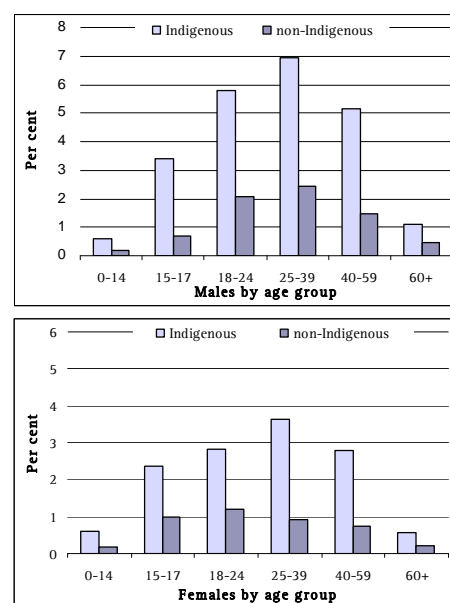
In summary, this paper has shown that Indigenous patients are three times more likely to discharge themselves than non-Indigenous patients. In particular males are more likely to self-discharge, and both Indigenous and non-Indigenous patients with a psychiatric principal diagnosis are approximately three times more likely to self-discharge. There was also significant variation in DAMA rates, when districts were compared. To reduce DAMA rates at a facility level, further in-depth analysis will be required to develop local intervention strategies.

^a Franks, P., Meldrum, S., and Fiscella, K. (2006). Discharge against medical advice: Are race/ethnicity predictors? *Journal of General Internal Medicine*, pp. 955-960.

^b The term Indigenous is used through out this paper when referring to Aboriginal and Torres Strait Islander people collectively.

^c Mater Public Hospitals included for completeness of public hospital activity.

Figure 2. Proportion of DAMA patients by Indigenous status, age groups, and sex, Queensland, July 2003 to June 2008



Source: Queensland Hospital Admitted Patient Data Collection

Table 2. Proportion of admitted patients discharged against medical advice by Indigenous status, Queensland, July 2003 to June 2008

District	% of Indigenous DAMA patients	% of non-Indigenous DAMA patients
Mt Isa	5.4	1.8
Metro North	4.3	1.1
Central Queensland	4.3	1.1
Townsville	3.8	0.9
Darling Downs-West Moreton	3.2	0.9
South West	3.1	1.0
Metro South	2.7	0.7
Cairns and Hinterland	2.2	0.7
Sunshine Coast-Wide Bay	2.2	0.8
Mackay	2.0	0.8
Central West	1.9	0.9
Gold Coast	1.5	0.8
Cape York	1.4	1.1
Mater Public Hospitals ^c	1.3	0.3
Torres Strait-Northern Peninsula	0.5	0.4
Children's Health Services	0.1	0.1
Grand Total	3.0	0.8

Source: Queensland Hospital Admitted Patient Data Collection