Discharges against medical advice: relationship with rurality in ischaemic heart disease admissions

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Introduction and relevance: Discharges against medical advice (DAMA) are associated with adverse outcomes for patients and service providers. We investigated risk factors for DAMA, including residential and hospital locality, in patients hospitalised with ischaemic heart disease (IHD) in Western Australia (WA) between 2000 and 2008.

Methods: All patients admitted to WA hospitals with a first-ever discharge principal diagnosis of IHD were identified in the linked WA Hospital Morbidity Data Collection. DAMA was identified from the discharge type variable. Demographics, (accessibility-remoteness of residence, hospital type, age, sex, Aboriginality and area-level social disadvantage), as well as clinical variables (Charlson Comorbidity Index and a history of mental health or alcohol-related admissions based on five-year admission history; IHD type (myocardial infarction/unstable angina/other IHD) and admission type) were investigated as predictors for DAMA using multivariate logistic regression modelling.

Results: Of the 37,704 incident IHD cases identified, 21% were rural, 69% male, 4% were Aboriginal, and 0.6% (n=224) were DAMAs. Rural patients admitted to rural hospitals were more likely to DAMA (OR=1.51; 95% CI 1.04–2.18) whereas rural patients admitted to metropolitan public hospitals were less likely to DAMA (OR=0.46; 95% CI 0.28–0.77) compared with metropolitan residents admitted to metropolitan public hospitals after controlling for covariates. Patients admitted to private hospitals were unlikely to DAMA (OR 0.17; 95% CI 0.08–0.36). When stratified by Aboriginality, the increased ORs of DAMA among rural residents admitted to rural hospitals was non significant in both Aboriginal (OR 1.96; 95% CI 0.97–3.9) and non-Aboriginal patients (OR 1.39; 95% CI 0.89–2.19). Although both Aboriginal (OR 0.37) and non-Aboriginal (OR 0.55) rural residents admitted to metropolitan hospitals were less likely to DAMA than metropolitan residents, only the findings for Aboriginal patients reached significance. In a rural sub-analysis, rural patients were three times more likely to DAMA from district and regional hospitals than from metro teaching hospitals.

Conclusion: Although relatively uncommon, DAMA is often considered an indicator of the quality of hospital care. Rural residents admitted to rural WA hospitals for IHD have the highest risk of DAMA, even after adjustment for clinical and demographic factors. One explanation is that constraints in resources and expertise are adversely impacting on rural services. This suggests that the clinical and psychosocial management of IHD in rural WA hospitals requires review as part of a high-quality health system.