Alcohol Consumption and Harms at A Northern Australian Music Festival

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Introduction: Despite the Northern Territory's (NT) high levels of alcohol consumption and related harms, limited research has investigated consumption and harms in NT festival settings. We aimed to examine the characteristics associated with planning to drink more than 7 standard drinks at a festival and to identify predictors of drinking less, the same, or more than planned.

Method: In 2022 at a large single-day music festival, attendees were invited to complete a survey about alcohol consumption and harms early in the day ('pre'). Two days later respondents were invited to complete a 'post' survey. These surveys were linked and multilevel regression models were used to investigate characteristics associated with drinking intentions and actual consumption.

Key Findings: There were 460 pre-survey respondents (68% female, median age 26) and 114 linked respondents (74% female, median age 26). Planning to consume 7 or more drinks was associated with male gender (OR=1.93, CI=1.17, 3.17) and drug use in the past month (RR=1.97, CI= 0.95, 2.31). Over half (60%) of respondents drank the amount initially planned. Respondents who had used drugs in the past month were 4.35 times more likely to drink less (95% CI=1.06, 17.79) than originally planned.

Conclusion: It appears intention to drink may be a reasonable proxy for actual consumption at single day festivals, perhaps due to cultural priming regarding festivals as high consumption setting. Respondents who used drugs in the past month were likely to drink less than planned, which warrants further investigation with a larger dataset.

Methods overview

Domestic and family violence was defined by the ED diagnosis code and description. We included codes: T749/4 (Domestic Violence), T749/2 (Domestic Assault), X990 (Stabbing by Domestic Partner), X991 (Stabbing, Domestic, Except by Partner), and Z045/3 (Observation of Child or Wife Battering). All records with these codes for patients aged 14 and below were excluded in the analysis. This paper is concerned with adult DFV, which the ABS defined as abuse which occurs when the victim is aged 15 and older (13). Child abuse, while a facet of DFV, is beyond the scope of this paper. Trends were analysed at a regional level. To exclude the impact of the COVID-19 pandemic and related public health measures on trends we only analysed data from 1 Jan 2014 – 29 Feb 2020.

We used the *itsa* command (16) in Stata 17 (17). These interrupted time-series models estimate the impacts of the policies on the levels and trends of the outcomes, while controlling for autocorrelation in the time-series data (16). We performed Portmanteau's test for white noise to test model fit. In order to account for the variation in PALI roll out across regions (and lack of PALIs in Darwin, the capital city) we conducted analyses for the NT as a whole, as well as separately for the regions in the NT. The number of people on the BDR has increased over time. Interrupted time series models allow us to treat the BDR as both an immediate (step variable) and gradual intervention (slope variable). Because of the timing of interventions in Alice Springs, we were unable to model the introduction of MUP (1 Oct 2018) and full coverage of PALIs (also Oct 2018) separately.

Sample overview

From 1 Jan 2014 – 29 Feb 2020 11035 emergency department diagnoses of domestic and family violence were recorded for adult patients (aged 15+). Over half (65%) of the records in this dataset are a repeat patient with an ED diagnosis of DFV. To contextualise this data, Table 1 presents a brief descriptive overview for each NT hospital. In each regional the majority of patients with a DV injury were female and Aboriginal.

Table 1. Interrupted time series models for DFV as defined by the ED diagnosis description

|	Northern Territory			Greater Darwin			Katherine			Tennant Creek			Alice Springs		
	Coef.	**95% CI**	**p**	**Coef**	**95% CI**	**p**	**Coef**	**95% CI**	**p**	**Coef**	**95% CI**	**p**	**Coef**	**95% CI**	**p**
Time	**0.39**	**0.05, 0.74**	**0.026**	**0.28**	**0.16, 0.40**	**0.000**	**0.14**	**0.03, 0.26**	**0.016**	0.09	-0.02, 0.21	0.117	-0.12	-0.47, 0.23	0.486
BDR (step)	4.48	-10.27, 19.24	0.546	-4.99	-10.68, 0.681	0.083	-0.42	-5.45, 4.61	0.867	2.94	-0.97, 6.85	0.137	7.30	-5.99, 20.56	0.277
BDR x Time (slope)	**1.84**	**0.53, 3.13**	**0.006**	0.28	-0.34, 0.90	0.367	-0.05	-0.46, 0.36	0.810	**0.35**	**0.02, 0.67**	**0.039**	**1.74**	**0.73, 2.75**	**0.001**
Post intervention trend (BDR + Time + BDR x Time)	**2.23**	**0.98, 3.48**	0.001	0.56	-0.05, 1.18	0.072	0.10	-0.31, 0.50	0.635	**0.44**	**0.12, 0.77**	**0.010**	**1.62**	**0.67, 2.57**	**0.001**
MUP (step)	**-64.32**	**-87.77, -40.87**	**0.000**	-11.10	-40.12, 17.92	0.447	3.26	-1.57, 8.10	0.182	-0.93	-6.32, 4.46	0.732	**-58.10**	**-75.75, -40.40**	**0.000**
PALIs (step)		N/A			N/A		**-7.09**	**-12.40, -1.79**	**0.010**	-4.27	-10.35, 1.82	0.166		N/A	
Purchase limits (step)		N/A			N/A			N/A		**-11.63**	**-16.85, -6.40**	**0.000**		N/A	
Palmerston ED opens		N/A		11.49	-17.04, 40.02	0.81		N/A			**N/A**			N/A	
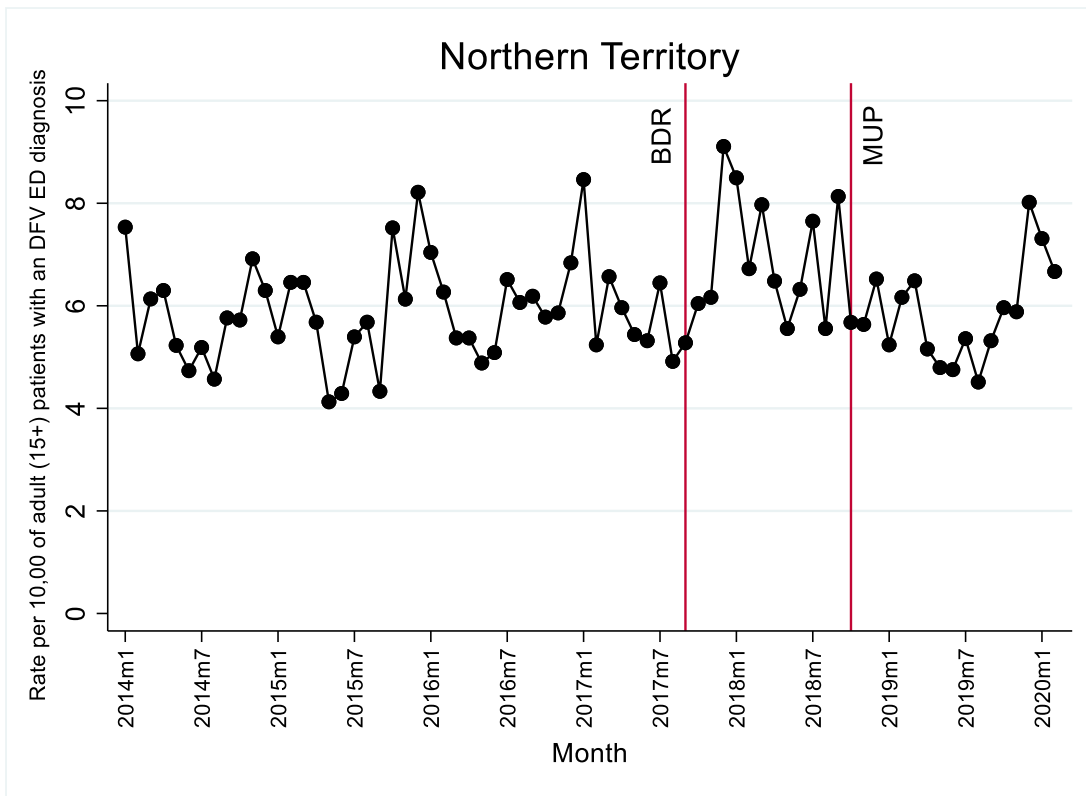
Figure 1: Rate per 10,000 of DFV ED diagnosis for all NT hospitals from Jan 2014 – Feb 2020
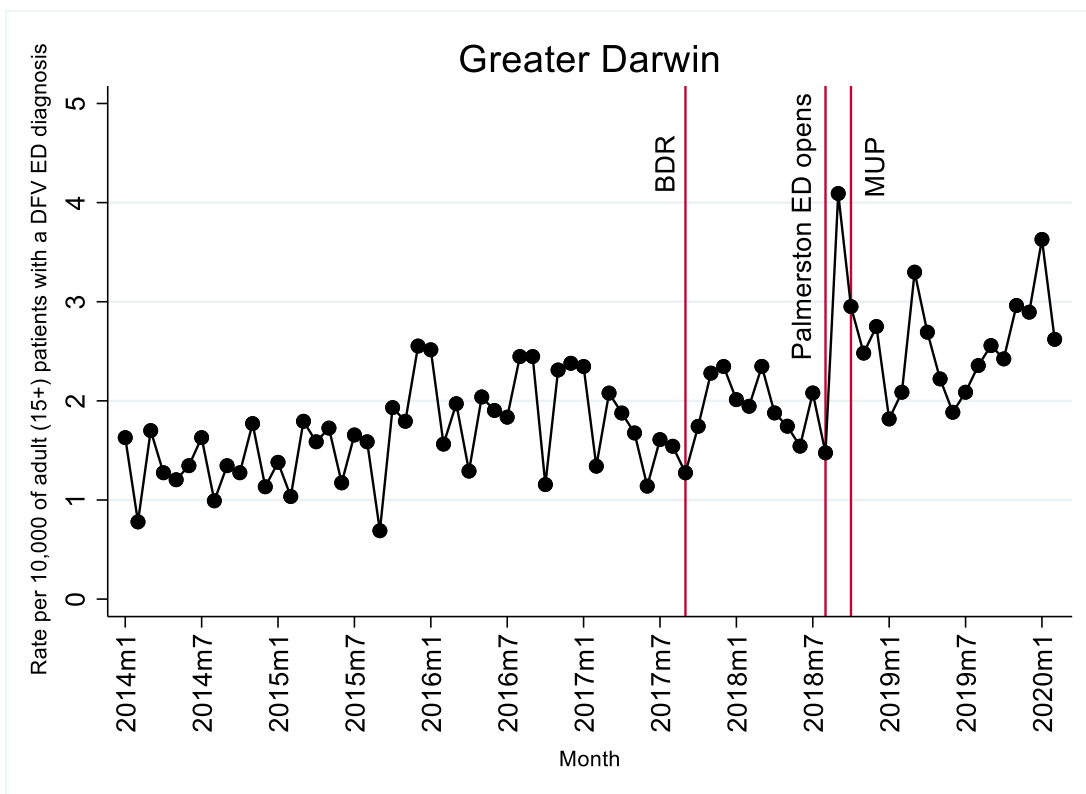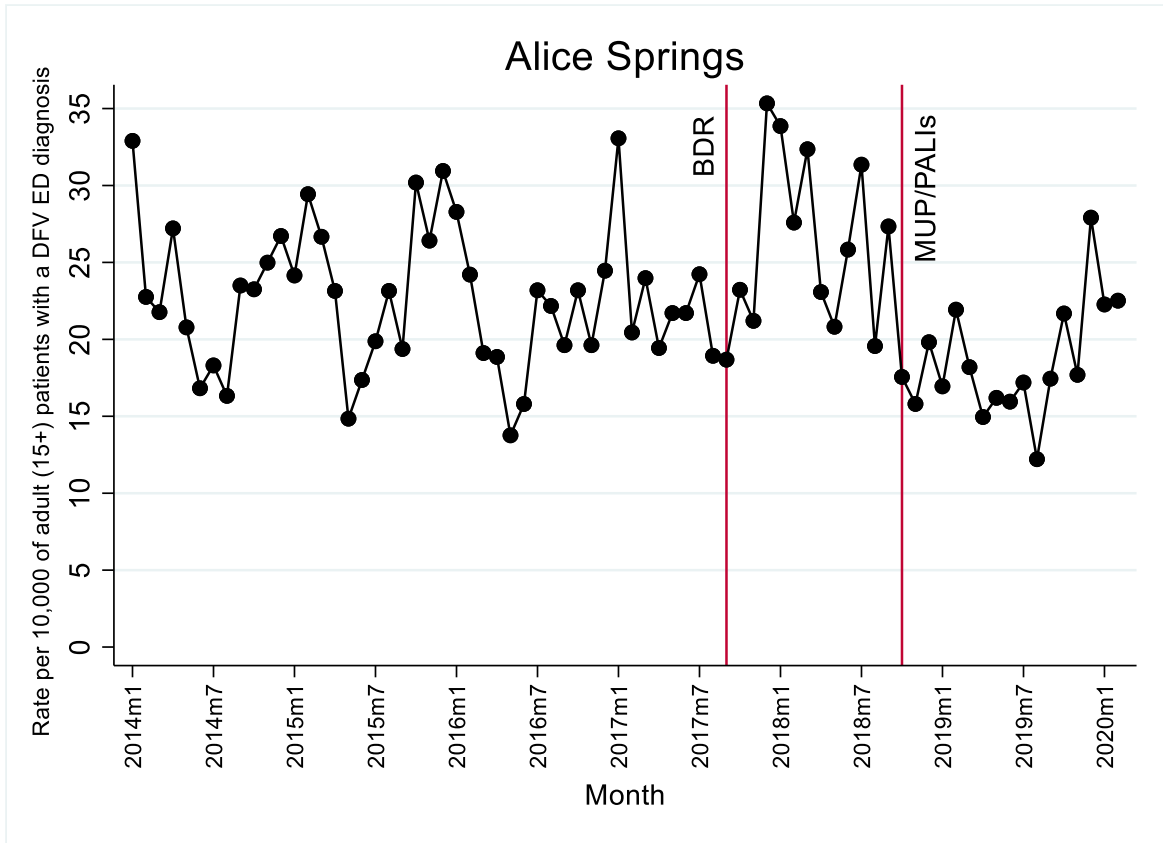

Figure 2: Rate per 10,000 of DFV ED diagnosis for Royal Darwin and Palmerston Regional Hospitals from Jan 2014 – Feb 2020
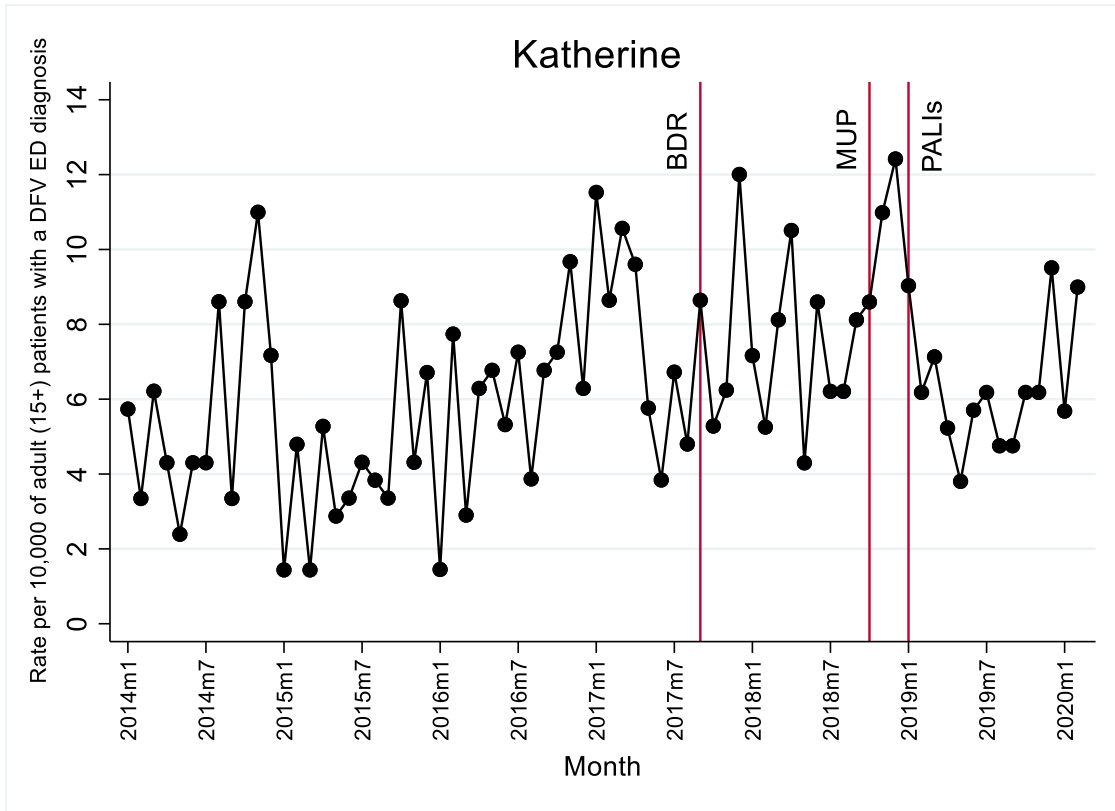
Figure 3: Rate per 10,000 of DFV ED diagnosis for Katherine Hospital from Jan 2014 – Feb 2020
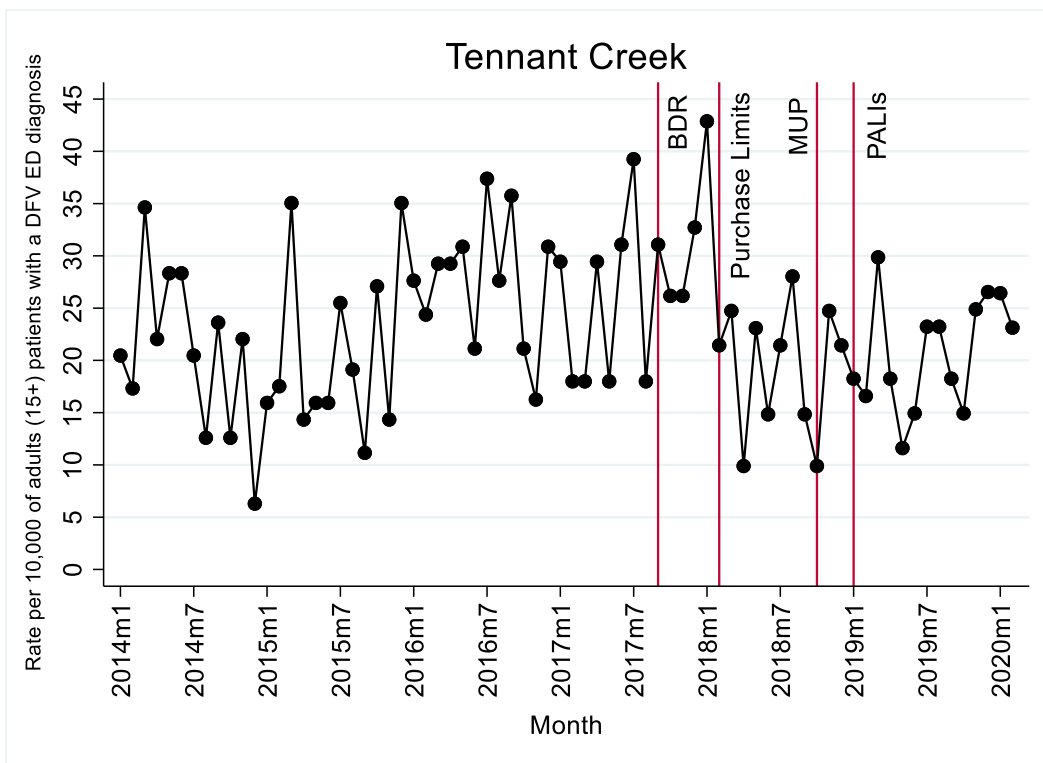
Figure 4: Rate per 10,000 of DFV ED diagnosis for Tennant Creek Hospital from Jan 2014 – Feb 2020

Figure 5: Rate per 10,000 of DFV ED diagnosis for Alice Springs Hospital from Jan 2014 – Feb 2020