

# Beating the grog: an evaluation of the Tennant Creek liquor licensing restrictions

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**M**ore than a decade ago, a coalition, spearheaded by Julalikari Council Aboriginal Corporation and Anyinginyi Aboriginal Congress, began a campaign to 'Beat the Grog' in Tennant Creek, Northern Territory (NT).<sup>1,2</sup> Between August 1995 and February 1996, the Northern Territory Liquor Commission conducted a trial of increased restrictions on the availability of alcohol in the town. According to the Commission Chairman:

*The conclusion to be drawn from the evaluation (of the trial) is that ... there has been an improvement in the area of police incidents, public order, health and welfare.<sup>3</sup>*

Consequently, in March 1996, the Commission amended the licences of Tennant Creek hotels and takeaway outlets (but not licensed clubs) to include the following restrictions.<sup>4</sup>

- Takeaway outlets from hotels and liquor stores to be closed on Thursdays.
- Sales of all wines in casks >2 litres volume prohibited.
- Sales of all wines in casks ≤2 litres

restricted to one transaction per person per day.

- No wine to be sold in glass containers over one litre volume.
- No third party sales to taxi drivers.
- Hotel front bars to be closed on Thursdays.
- Lounge bars not to open before noon on Thursdays and Fridays.
- Lounge bars to make food available.
- On week days other than Thursdays, takeaway sales limited to between noon and 9 pm.
- In front bars, wine only to be sold with substantial meals.
- In front bars, light beer to be the only alcoholic beverage sold between 10 am and noon.
- Takeaway sales of fortified wines restricted to containers of ≤1,125mL.

The restrictions were given particular effect on Thursdays because this was the day on which most social security entitlements and Community Development Employment Program wages were paid.

Two years later, in the face of assertions

## Abstract

**Objective:** To review the effectiveness of, and community attitudes towards, increased restrictions on the availability of alcohol in Tennant Creek.

**Method:** Estimates of quarterly per capita consumption of pure alcohol by persons aged ≥15 years, admissions data from the local hospital, women's refuge and sobering up shelter, and police data on detentions in custody and common offences were compared for the 12 months prior and 24 months subsequent to the introduction of the restrictions. A random sample survey of residents aged ≥18 years was conducted to ascertain attitudes towards the restrictions.

**Results:** Over the two years following the introduction of the restrictions, there was a reduction of 19.4% in annual per capita consumption of pure alcohol. This was accompanied by declines in: hospital admissions for acute alcohol-related diagnostic related groups; and persons taken into police custody and the proportions of offences reported on Thursdays. A majority of survey respondents was in favour of retaining or strengthening the existing restrictions.

**Conclusions:** The restrictions were effective in reducing alcohol consumption and acute related harm and had the support of the majority of people in Tennant Creek. On the basis of this evidence, the NT Liquor Commission made a decision to retain them. Restrictions do not provide a simple answer to the problems associated with excessive alcohol consumption. However, they can be an effective part of a broad public health strategy to deal with such problems.

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that they were not working, the Commission agreed to a review of the restrictions. As part of this, the Commission conducted public meetings, received written submissions, and – after some lobbying – agreed to allow a short period of time for an independent evaluation. The broadly representative ‘Tennant Creek Beat the Grog Sub-Committee’ was formed to facilitate the evaluation, the objectives of which were to report on:

- the continuing impact of the restrictions on the community;
- the effectiveness of the restrictions; and,
- the ongoing response of the community to the restrictions.

## Methods

Given Liquor Commission deadlines, only a nine-week period was available to conduct the evaluation. This imposed severe restrictions on the data that could be collected and analysed. Both qualitative and quantitative data were used in the evaluation. Qualitative data included written submissions on the restrictions made to the Liquor Commission and semi-structured interviews with 38 representatives of stakeholder organisations. These data were analysed to identify issues related to the restrictions, and to develop an interview schedule for a random sample survey of Tennant Creek residents. Quantitative data included results of the survey and various statistical collections.

The Liquor Commission provided data on purchases of alcoholic beverages by outlet type for the four quarters prior to the introduction of the trial restrictions through to the first quarter of 1998. These data were converted to litres of pure alcohol using methods described elsewhere, and estimates of per capita consumption were made using as a denominator the population of the Tennant Creek Statistical Local Area aged  $\geq 15$  years at the 1996 Census.<sup>5,6</sup> (Data from the Tennant Creek Town Council indicate this population remained stable over the period under consideration.) The data were:

- subjected to time series analysis using SPSS 6.1 to identify changes in the level of consumption;
- analysed to identify any changes in the types of beverages purchased and the places in which they were purchased; and
- used to test assertions that the restrictions were being circumvented.

The health, welfare, and law and order impacts of the restrictions were assessed using a simple pre-test post-test design and comparing the following data for periods of 12 or 24 months prior to (depending on availability of data), and 24 months subsequent to the introduction of the trial restrictions:

- all hospital admissions for those aged  $\geq 1$  month;
- admissions of those aged 18-35 years (those most likely to consume large amounts of alcohol);
- admissions for diagnostic-related groups (DRGs) – a categorisation based on diagnosis, severity, presence of complications, and patient age – to which alcohol was potentially a significant contributor;
- admissions to the women’s refuge and sobering up shelter; and

- police data on detentions in protective custody and the most common offences.

These data were analysed using Microsoft Excel, SPSS 6.1, and Statview 512+.

DRGs were used because they are coded for all admissions and are reliably recorded by the Northern Territory Health Service. All common potentially alcohol-related admissions (these included all DRGs for alcohol-specific diagnoses, all DRGs for acute injuries, and DRGs for acute gastrointestinal conditions likely be associated with harmful levels of alcohol consumption) were included. Broad categories were used to reduce the potential for any changes in classification over time to influence results.

A random sample survey of persons aged  $\geq 18$  years was undertaken to ascertain community views on the restrictions. The structure of the interview schedule and the sampling methods were similar to those employed by d’Abbs et al. – on advice from the Australian Bureau of Statistics – in evaluation of the trial restrictions.<sup>3,6</sup> The sample comprised 271 persons (approximately 10% of the population). In terms of age, sex and Aboriginality, there were no statistically significant differences between the sample and the population of Tennant Creek as enumerated in the 1996 Census. Interviews were conducted by three members of the evaluation team, and by two non-Aboriginal and four Aboriginal people recruited locally and trained by the evaluation team. Using SPSS 6.1, responses to the survey questions were simply tabulated, and frequencies, proportions, and 95% confidence limits calculated.

## Results

### Alcohol consumption

Quarterly data on the purchase of pure alcohol show seasonal fluctuations with peaks occurring in the third quarter of each year. The data presented in Table 1 and Figure 1 begin on one of these peaks and fall to the second quarter of 1995. In this 12-month period, mean quarterly purchases totalled 17,577 litres. In the third quarter 1995, when the trial restrictions were introduced, there

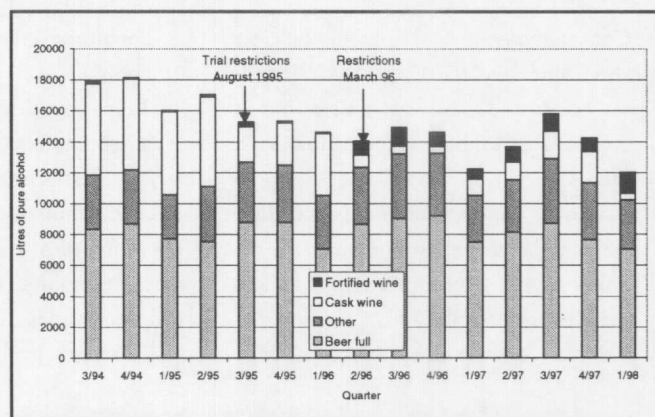


Figure 1: Liquor purchases (pure alcohol) by Tennant Creek licensees by beverage type, third quarter 1994 to first quarter 1998.

**Table 1: Liquor purchases (litres of pure alcohol) by Tennant Creek licensees by beverage type, third quarter 1994 to first quarter 1998.**

Type	3/94	4/94	1/95	2/95	3/95	4/95	1/96	2/96	3/96	4/96	1/97	2/97	3/97	4/97	1/98
Beer full	8,331	8,676	7,714	7,519	8,789	8,775	7,040	8,656	9,034	9,187	7,512	8,145	8,725	7,642	7,015
Cask wine	5,873	5,843	5,376	5,791	2,289	2,716	3,981	788	475	407	1,051	1,121	1,780	2,002	418
Spirits	1,984	1,761	1,340	1,873	1,997	1,763	1,754	1,852	2,132	1,902	1,512	1,869	2,220	1,838	1,579
Beer low	1,164	1,372	1,258	1,211	1,339	1,480	1,278	1,351	1,443	1,696	1,204	1,176	1,484	1,463	1,268
Bottled wine	372	386	269	507	575	482	472	483	626	494	311	373	483	424	378
Fortified wine	214	95	69	173	309	141	107	919	1,231	936	665	997	1,125	891	1,372
Cider full	163	202	173	241	209	252	157	157	246	206	147	200	208	184	134
Spirits mixed	108	103	67	82	163	122	72	104	111	99	65	117	136	112	187
Total	18,208	18,437	16,268	17,396	15,671	15,730	14,862	14,309	15,297	14,928	12,469	13,997	16,161	14,555	12,350

was a marked fall in purchases. From that point to the first quarter of 1998 there was a continuing decline – albeit marked by seasonal fluctuation. In this latter period, mean quarterly purchases declined 17% to 14,575 litres. Time series analysis of these data indicates that prior to the third quarter 1995 there was actually an upward trend in purchases (masked by seasonal variation) and since that time a downward trend. Statistical testing indicated these trend lines were significantly different ( $p=0.001$ ).

There was decline in per capita consumption of pure alcohol among persons aged  $\geq 15$  years from 25.3 litres in 1994/95 to 21.8 litres in 1995/96, and to 20.4 litres in 1996/97 (Table 2). Given, the stability of the Tennant Creek population, this cannot be attributed to a population decline nor, as Table 2 shows, can it be attributed to a decline in consumption in the NT as a whole.

A factor that did contribute to the decline was the NT Government's levy of \$0.35 per litre on cask wine – introduced in July 1995. In the NT as a whole, in the two-year period in which the levy was in place mean quarterly per capita consumption of pure alcohol was 4% lower than in the previous and following four quarters.<sup>7,8</sup> However, given that sales of casks  $>2$  litres were banned in Tennant Creek, the levy only affected sales of smaller casks and the contribution of the levy to the decline there was less than elsewhere in the NT. The limited impact of the levy in Tennant Creek is also indicated by the fact that consumption there continued to fall while elsewhere it increased following the lifting of the levy.

### Circumvention of the restrictions

It was alleged in some submissions to the Commission that the restrictions were being circumvented by: a shift to consumption of fortified wine; by increased purchases from licensed clubs

that were not subject to the restrictions; and by increased purchases from licensed premises outside the town. Mean quarterly purchases of fortified wines in the period following the introduction of the trial restrictions increased by 573 litres (570%) over the mean for the previous four quarters (Table 1). However, this offset only 14% of the mean quarterly decline of 4,173 litres of pure alcohol purchased as cask wine.

In the period following the introduction of the trial restrictions, mean quarterly purchases by licensed clubs was 2,801 litres of pure alcohol compared with 1,799 for the previous four quarters – a 55.7% increase. This offset the decline in purchases by other licence types by 25%. In the four quarters prior to the introduction of the restrictions, purchases by out-of-town premises averaged 2,313 litres of pure alcohol per quarter. In the period following the introduction of the trial restrictions, this increased to 2,899 litres per quarter (25%). However, this increase was only 20% of the mean quarterly decline of 3,002 litres that occurred in Tennant Creek itself.

### Health and welfare effects

General admissions, and admissions of those aged 18–35 years of age, to Tennant Creek Hospital increased over the years 1993–94 to 1997–98. However, in the latter age category, there were statistically significant declines in admissions for potentially alcohol-related DRGs ( $\chi^2 df_4 = 45.96, p < 0.0001$ ) and in admissions of males ( $\chi^2 df_4 = 16.0, p < 0.003$ ). The decline in these admissions began in 1995–96 when the trial restrictions were introduced. A second decline occurred in 1997–98 (see Table 3) and was probably related to an increase in persons being taken into protective custody by the police in that year (see below). In the two years before the trial restrictions were introduced, the mean

**Table 2: Licensee purchases of pure alcohol and per capita consumption, Tennant Creek and the Northern Territory 1994/95 to 1996/97.**

Location	Measure	1994/95	1995/96	1996/97
Tennant Creek	Litres of alcohol	70,309	60,572	56,691
	Litres per capita	25.3	21.8	20.4
Northern Territory	Litres of alcohol	2,144,278	2,100,873	2,184,364
	Litres per capita	15.0	14.3	14.8

**Table 3: Admissions of persons 18–35 years for possibly alcohol-related and all other diagnostic related groups, Tennant Creek Hospital 1993/94 to 1997/98.**

Diagnostic related group	1993/94	1994/95	1995/96	1996/97	1997/98
Alcohol-specific DRGs	9	5	8	10	1
Injuries					
Head injuries	32	32	14	11	21
Other injuries	91	88	71	86	64
Gastrointestinal DRGs possibly related to alcohol					
Oesophagitis, gastroenteritis and miscellaneous GI conditions	29	22	18	19	5
Pancreatic disorders	12	17	9	11	2
Gastrointestinal haemorrhage	6	7	3	2	2
Unclassified conditions	2	3	11	6	5
All alcohol-related DRGs	181	174	134	145	100
Other DRGs	450	458	539	545	553
Total	631	632	673	690	653

number of admissions for potentially alcohol-related DRGs was 177.5; in the three subsequent years it was 126.3 – a 28.8% decline. In the same periods, males made up 36.7% and 31.7% of admissions in the 18–35 year age group – a 5.0% reduction.

Alcohol is a factor in the majority of admissions to the Tennant Creek Women's Refuge and a factor in all admissions to the Sobering Up Shelter. Unfortunately, in both agencies, changes occurred independently of the licensing restrictions that made it difficult to draw conclusions from their admissions data. Admissions to the Women's Refuge in 1997 and 1998 returned to 1994 levels after a decline that preceded the restrictions. This was probably related to changes in both management and record keeping in the intervening period. There was, however, a slight reduction in the mean number of admissions to the Refuge on Thursdays. During the period under consideration, the Sobering Up Shelter experienced large fluctuations from one of its main sources of referrals – the police. These fluctuations were related to changes in policing policy, rather than to the restrictions. However, since the introduction of the restrictions, the Sobering Up Shelter has been closed on Thursdays.

#### Impact on public order

The number of people taken into protective custody by the

police increased substantially in the two years following the introduction of restrictions. However, there was a reduction in the numbers taken into custody on Thursdays. In interviews, the police – and other informants – attribute this to increased police activity and improved police performance. In addition, the police suggested that the apparent increase may have been due to improvements in their recording procedures.

Prior to the restrictions, the police had three 'busy' days per week; subsequently, this was reduced to two. Fridays and Saturdays continued to account for just over 50% of protective custodies – a percentage similar to that before the trial. However, the percentage of detentions on Thursdays declined from 20.4% to a mean of 8.5% and it became the second quietest day of the week. Also, following the initial trial of restrictions, the ratio of Aboriginal to non-Aboriginal people taken into protective custody declined from over 3:1 to about 2.5:1. This may reflect a real effect on the drinking behaviour of Aboriginal people attributable to the restrictions.

The numbers of the most commonly reported offences showed relatively small changes over the period under consideration. The exception was a significant increase in unlawful entries to dwellings between April and June 1996 – the first year after the introduction of the restrictions. Reports of this offence subsequently

**Table 4: Numbers in protective police custody, numbers of offences reported, and percentage of each on Thursdays, Tennant Creek.**

Reported offences	Pre-trial year 1/4/94–31/3/95		Trial – 6 months 14/8/95–11/2/96		First year post-trial 1/4/96–31/3/97		Second year post-trial 1/4/97–29/3/98 <sup>a</sup>	
	n	% Thu	n	% Thu	n	% Thu	n	% Thu
Protective custody	633	20	343	15	960	9	1169	7
Offences								
Assault	95	19	67	4	116	9	108	9
Unlawful entry to buildings	72	8	27	4	67	9	51	11
Unlawful entry to dwellings	69	13	25	8	151	13	59	10
Criminal damage	188	12	63	8	195	11	170	6
Total above offences	424	13	182	8	521	11	396	9

Notes:

(a) Data provided by Police Dept only up to 29/3/98, not 31/3/98.

returned to around pre-trial levels. The number of all offences in the year to March 1998 was about 7% lower than in the year to March 1995. As with detentions in protective custody, there appeared to have been a marked reduction in percentage of assaults and lesser reductions in the percentages of other offences reported on Thursdays. Again – given more intensive policing – there may have been a real decrease in the total number of offences committed as opposed to those recorded.

**Community attitudes**

In the survey, each restriction was listed and respondents were asked whether they thought the restrictions should be ‘dropped altogether, eased, remain the same, or be strengthened’. In Table 5, responses to these questions are ranked according to the level of support for each restriction. Those with the least support were: closure of takeaway outlets on Thursdays; the ban on the sale of wine in casks >2 litres; and, the closure of hotel front bars on Thursdays. Respectively, 30% and 7%, 28% and 9%, and 35% and 4% thought these should be dropped or eased. It should be noted, however, that a small number of the respondents who took these positions did so because they thought the restrictions were not working, rather than because they were opposed to them in principle. Nevertheless, those who believed that the restriction with the least support – the closure of hotel front bars on Thursdays – should be dropped or eased made up only 39% of the

sample and, overall, there was a majority in favour of retaining or strengthening all of the restrictions.

Respondents were also asked if they were in favour of other restrictions that had been suggested to the Liquor Commission. Three of these suggestions each had the support of more than half the sample: discouraging the sale of alcohol in glass containers (71%), limiting the sale of high-alcohol content drinks to one bottle per person per day (57%) and extending the restriction on Thursday takeaway sales to licensed premises within a 50 kilometre radius of Tennant Creek (56%). With regard to a fourth suggestion – extension of Thursday restrictions to licensed clubs – opinion was almost equally divided with slightly more people opposed to it (48%) than in favour (46%). The majority of respondents opposed other suggestions, including banning all alcohol sales on Thursdays.

**Conclusions**

The evidence indicates that, over the two years following the introduction of the restrictions, there was a 19.4% reduction in annual per capita consumption of pure alcohol. Nevertheless, consumption in Tennant Creek remained over twice the national average.<sup>9</sup> Hospital and police data provide evidence that this reduction in consumption was accompanied by a reduction in acute alcohol-related harm – particularly on Thursdays – and there is

**Table 5: Respondent attitudes to the future of current restrictions (n=271).**

Restrictions	Attitude			
	Strengthen % 95% CI	Retain % 95% CI	Ease % 95% CI	Drop % 95% CI
Lounge bars to make food available	11 7.7-15.2	75 69.5-79.8	1 0.3-2.9	10 6.8-13.9
No third-party sales to taxi drivers	26 20.83-31.3	51 44.9-56.8	2 0.7-4.0	17 12.8-21.8
No wine to be sold in glass containers over one-litre volume	22 17.5-23.4	54 47.9-59.8	2 0.7-4.0	17 12.8-21.8
Sales of fortified wines restricted to containers of less than 1.25 litres	24 19.1-29.3	51 44.9-56.8	2 0.7-4.0	15 11.2-19.7
Takeaway sales limited to between noon and 9pm on weekdays	14 10.3-18.5	57 50.9-62.6	7 4.4-10.5	18 13.8-23.0
Lounge bars not to open before noon on Thursdays and Fridays	11 7.7-15.2	59 53.1-64.8	3 1.4-5.5	23 18.2-28.2
Sales of all wines in casks of two litres or less restricted to one transaction per person per day	7 4.4-10.5	61 54.9-66.6	4 2.2-6.9	22 17.5-23.4
Wine only sold with meals in front bars	7 4.4-10.5	59 53.1-64.8	4 2.2-6.9	23 18.2-28.2
Between 10am and noon bar sales limited to only light beer	9 5.9-12.7	56 50.1-61.9	2 0.7-4.0	29 23.9-34.8
Takeaway outlets from hotels and liquor stores to be closed on Thursdays	13 9.3-17.3	46 40.2-52.1	7 4.4-10.5	30 24.7-35.5
Sales of all wines in casks greater than two-litres volume prohibited	8 5.3-11.8	47 40.9-52.8	9 5.9-12.7	28 22.9-33.6
Hotel front bars closed on Thursdays	9 5.9-12.7	46 40.9-52.8	4 2.2-6.9	35 29.5-40.9

also some support for this in data provided by the Sobering Up Shelter. It may have been the case that the majority of people in Tennant Creek was opposed to the restrictions when they were first imposed by the Liquor Commission. However, the results indicate that, when they had experienced their operation and effect, the majority was in favour of them. A majority of the population had also come to favour some additional restrictions.

The evidence for the effectiveness of, and support for, the Tennant Creek restrictions that is summarised in this paper was accepted by the NT Liquor Commission. On the basis of this, on 19 November 1998 the Commission handed down a decision that 'All existing restrictions shall be retained' subject to a further review commencing in November 2000.<sup>10</sup>

For several years now, Aboriginal communities throughout Australia have sought to include licensing restrictions in their strategies to 'beat the grog'.<sup>11-13</sup> As d'Abbs et al. argue, in isolation, restrictions do not provide a simple answer to the problems associated with excessive alcohol consumption. Attention to both the demand for, and supply of, alcohol is crucial. However, restrictions can be an effective part of a broad public health strategy to deal with alcohol-related problems. Despite flying in the face of commercial and ideological pressures for de-regulation of the alcohol industry, the Tennant Creek experience demonstrates that – when shown to be effective – both Aboriginal and non-Aboriginal people are prepared to support restrictions as an important means of reducing alcohol-related harm. To end on a less sanguine note, however, a change to the Department of Social Security payment cycles – that came into effect on 1 July 1999 and which allows for the payment of benefits on days other than Thursdays – has the potential to undermine this and similar interventions in other communities.

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