3 Methods

In this chapter we describe the way in which the study was conducted, under three headings: preparatory steps, data collection, and data analysis.

3.1 Preparatory steps

The Northern Territory Department of Health and the then Commonwealth Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) collaborated in engaging communities. Meetings were held in each community, with residents being talked through the aims of the project, a draft copy of the questionnaire, and thoroughly informed of what their participation would entail. As a result of these meetings, permission to participate was given by all eight communities involved. Management of one of the licensed clubs declined to be involved, however the community concerned agreed to participate. In this instance our researchers visited the community but did not interview the club manager.

After these initial meetings the communities were kept informed of the progress of the research by letters.

Ethical clearance for the project was received from the Human Research Ethics Committee of the Menzies School of Health Research and NT Department of Health.

3.2 Data collection

The study drew on three types of data: administrative quantitative data, selected in order to assess the impact of community-based alcohol outlets on health and wellbeing; a community survey, and observations made in the course of field visits. Each is described further below.

3.2.1 Assessing the impact of licensed clubs: quantitative analysis

In order to examine alcohol consumption patterns and the impact of the presence of licensed venues in communities on health and wellbeing, four sources of data were utilized:

- wholesale supplies of liquor to licensed venues;
- assaults recorded by police;
- alcohol-related separations at NT hospitals, and
- admissions to NT sobering-up shelters.

Quarterly wholesale supplies of liquor to licensed clubs collated by the NT Licensing Commission were provided by the NT Department of Business for the years 2005 to 2012 inclusive. As Table 2.1 shows, there were substantial gaps in the data made available. In fact, complete wholesale supply figures were provided for only two of the

seven outlets: Nguiu and Pirlangimpi. The most serious gap in data related to Beswick, for which no supply figures were provided more recent than the third quarter 2007. It appears that, like a number of other small outlets in the NT, Beswick Community Store (who hold the licence for the club) has purchased liquor not from a recognized wholesaler, but from another retail outlet in the NT in recent years.

Table 2-1: Wholesale supplies of liquor to licensed clubs - data provided and data missing

Outlet	Provided (quarter ended)	Missing (quarter ended)
Beswick Community Store	31 March 05-30 Sept 07	31 Dec 07-31 Dec 12
Gunbalanya Sports & Social Club	All except quarters at right	31 Mar 07 31 Mar 08 31 Mar 09 31 Mar 10
Milikapiti Sports & Social Club	31 March 05-30 June 11	30 Sept 11-31 Dec 12
Wurrimiyanga (Nguiu) Club	31 March 05-31 Dec 12	None
Peppimenarti Club	All except quarters at right	31 Mar 08 31 Mar 09 30 June 09 31 Mar 10 31 Mar 11 30 June 11 30 June 12
Pirlangimpi Community Club	31 March 05-31 Dec 12	None
Kalkarindji (Warnkurr) Sports & Social Club	All except quarters at right	30 Sep 10 31 Dec 10 30 June 11 30 Sep 11 31 Dec 11

Wholesale supply data was provided as litres of pure alcohol (PAC), which in turn were derived by the NT Licensing Commission by applying beverage – specific conversion factors based on alcohol content to the litres of particular kinds of beverage supplied by wholesalers. Estimates of per capita consumption at the venues were obtained by

utilising Australian Bureau of Statistics estimates of resident populations aged 15 years and over.

The number of assaults recorded by NT Police in each of the seven communities with licensed venues for the years 2004-05 to 2011-12 inclusive was analysed. Assaults were classified by police using three categories:

- Alcohol involved;
- No alcohol involved;
- Alcohol involvement unknown.

Numbers of assaults were converted to rates per 10,000 population, and compared with two indicators:

- The NT-wide rates of recorded assaults, per 10,000 population, for the years 2006-07 to 2011-12;
- The corresponding rate of assaults over the same period in 'NT Balance'. This is the NT total, minus all urban centres, i.e. Darwin, Palmerston, Katherine, Tennant Creek, Alice Springs, Nhulunbuy, Alyangula. The 'NT Balance' is, in effect, the aggregate of remote settlements in the NT.

A count of numbers of patients, and patient episodes, for all patients admitted to an NT hospital between 2005 and 2012 inclusive, with an alcohol-related primary diagnosis, as defined by a list of ICD10 codes with an alcohol Population Attributable Fraction greater than 0.5 (see table below), was provided by the NT Department of Health. (The list of conditions is based on a 2009 study by the National Health Service of Scotland (ISD Scotland, 2009).)

Table 2-2: Primary diagnoses included under alcohol-related hospital separations

Wholly attributable conditions	All ages attributable fraction	
	M	F
Alcohol induced Cushing's Syndrome	By definition, all of these have a PAF = 1	
Wernicke's encephalopathy		
Mental and behavioural disorders due to use of alcohol		
Alcoholic polyneuropathy		
Alcoholic myopathy		
Alcoholic cardiomyopathy		
Alcoholic gastritis		
Alcoholic liver disease		
Alcoholic induced chronic pancreatitis		
Fetus and newborn affected by maternal use of alcohol		
Fetal alcohol syndrome		

Excessive blood level of alcohol	
Toxic effect of alcohol	
Accidental and intentional poisoning by and exposure to alcohol inc NOS	
Evidence of alcohol involvement determined by blood alcohol level	
Evidence of alcohol involvement determined by level of intoxication	
Poisoning by and exposure to alcohol, undetermined intent	

Partly attributable conditions	All ages attributable fraction	
	M	F
Lip oral cavity and pharyngeal cancer	.51	.48
Oesophageal varices	.73	.67
Unspecified liver disease	.73	.67
Portal hypertension	.73	.67
Epilepsy	.53	.53

The count was analysed to compare the rate of alcohol-related hospital separations per 1,000 populations in communities with and without licensed clubs.

Admissions to sobering-up shelters in each of the five regional centres of Darwin, Alice Springs, Katherine, Tennant Creek and Nhulunbuy for the years 2007-2012 inclusive, categorizing according to the recorded place of usual residence of clients, were analysed. Two limitations of this data need to be kept in mind: firstly, the figures record admissions, not individuals. It is well known that admissions to sobering-up shelters include a proportion of high repeat clients. Secondly, not all persons apprehended for being intoxicated in public are taken to shelters. Some persons are taken by police to emergency departments, and some are detained in police cells. The figures used here do not include either of these categories, and therefore are not indicative of the prevalence of public drunkenness in the regional centres concerned.

3.2.2 Community survey

Two interview schedules – one for community members, another for managers and staff of clubs - were developed using an iterative process. Initial drafts were reviewed by the Research Advisory Committee, and by an NT Department of Justice Regional Alcohol Strategy Project Officer (RASPO), before being trialled in the field and further revised. The final versions were approved by staff from FaHCSIA and the NT Department of Health. The interview schedules are included in this report as Appendices 1 and 2.

A team of three researchers visited seven of the eight communities with clubs for five days – Monday to Friday. The eighth community, Ranku, is very small, and it was visited for one day by two researchers. In five of the seven communities local people were engaged to assist in the research. Their role was to help our researchers to identify and locate people who would like to do the survey, and to explain the research to them.

On arrival the researchers located contacts, visited Traditional Owners wherever possible to pay their respects and let them know of the team's presence, and called on service providers and club managers. After these preliminary visits the researchers started to conduct interviews. Each participant had the project explained to them – generally in terms that 'we are here to learn about your club – how it works, what you like about it, what you think could be better….' Researchers were asked to record as much comment as possible on the questions. An average interview took around 30 minutes, and many in-depth conversations occurred. The researchers included extensive qualitative notes in the data entry. Generally the survey was well received at the community level. Many people volunteered to participate once they heard about it, and gave thoughtful and insightful answers to the questions. In each community approximately a quarter to a third of those approached chose not to participate.

3.2.3 Sampling in the community survey

The survey design aimed to interview at least 50 people in each community, using a convenience sample stratified by age and gender on the basis of data from the ABS 2011 Census of Population and Housing, and including if possible representatives of the following:

- Members of the Boards of the clubs
- Members of Shire Boards
- Police
- Health clinics
- Traditional owners
- Government Engagement Coordinators
- Safe house staff
- Individuals who would like to have their say.

A total of 362 people participated in the survey, distributed as shown in Table 2.3. As the table shows, in six of the eight communities, the number interviewed was close to 50. The number was slightly lower in Peppiminarti, a result of it being a smaller community. In Ranku, only 11 people were interviewed.

Table 2-3: No of participants in community survey

Community	No. interviewed
Gunbalanya	51
Beswick	51
Kalkarindji	49
Milikapiti	51
Nguiu	58
Peppiminarti	38
Pirlangimpi	53
Ranku	11
Total	362

Table 2.4 shows the distribution of the sample according to age, gender and drinking status. A little over half of those interviewed were male, with around 70% aged between 25 and 55 years. People aged under 25 are under-represented because this age group are the most difficult to engage in an interview process. This should be kept in mind when interpreting results, as this age group normally includes some of the heaviest drinkers in a population.

Table 2-4: Community survey sample by gender, age & drinking status

Characteristic	Categories	No	%
Gender	Female	154	42.5
	Male	202	55.8
	Not stated	6	1.7
	Total	**362**	**100.0**
Age	Under 18	4	1.1
	18-24	36	9.9
	25-39	129	35.6
	40-55	125	34.5

	Over 55	46	12.7
	Not stated	22	6.1
	Total	**362**	**100.0**
Drinking status	Drinker	275	76.0
	Non-drinker	78	21.5
	Not-stated	9	2.5
	Total	**362**	**100.0**

Just over three-quarters of participants were current drinkers. Based on the information from one club, we estimated that 97.0% of males and 47.7% of females in a given population were members of the club. If we assume that almost all club members are drinkers, this suggests that approximately 75% of the population in the surveyed communities are likely to be drinkers, which in turn suggests that our sample is representative with respect to drinking status.

In addition to conducting the interviews for the survey, the researchers also interviewed club managers and staff, using a separate interview schedule. As describe above, one manager declined to be interviewed, although a member of his staff was interviewed.

3.2.4 Field observations

Researchers visited seven clubs as patrons on both Tuesday and Wednesday evenings. They purchased drinks and food (if available), and conducted low-key observations, chatting with local people if appropriate, and generally absorbing the ambience of the club.

3.3 Data analysis

Quantitative data was analysed by using SPSS Version 22. Qualitative data from survey responses was analysed thematically.