

## Chapter 1: Introduction

### 1.1 Introduction

The most recent information available from The World Health Organization (2007) and Morgan & McAtamney (2009) has given cause for concerns to be raised both nationally and internationally, about the harm associated with alcohol consumption. The increase in assaults related to alcohol consumption (Ringland & Baker, 2009) has also heightened the media's interest in the topic (Barker, Swaminathan, Arora, & Scott, 2011). The National Health and Medical Research Council (NHMRC) recognises that alcohol-related harm may occur in different drinking contexts, including at individual drinking events and over a lifetime (NHMRC, 2009). Using Australian NHMRC (2009) standards, a 2014 Australian Institute of Health and Welfare (AIHW) survey found that in 2011–2012, one in five adults (20% of adults surveyed) drank to excessive levels and were thus at risk of harm and that men were at greater risk of harm than women (29% of men were at risk of harm compared with 10% of women).

High levels of alcohol consumption have been found to be strongly associated with various types of violence (Graham & Homel, 2008) in a number of locations, including the home. The AIHW National Drug Strategy Household Survey (2010) showed that during 2009:

- 25% of Australians had experienced alcohol-related verbal abuse;
- 14.3% of Australians had experienced fear as the result of an interaction with someone under the influence of alcohol; and
- 8.1% of Australians who are 14 years or older had experienced physical abuse by someone under the influence of alcohol.

Some evidence suggests that Australians' daily consumption of alcohol has decreased since 2007 (Australian Bureau of Statistics, 2015a); however, the incidence of individuals drinking to risky levels (AIHW, 2014a) and the number of individuals reporting being abused by an intoxicated person (AIHW, 2011) has increased. Of the Australian population those in their teens and early 20s are the most likely to drink to risky levels that exceed the NHMRC's guidelines (AIHW, 2014a). Previous research has shown that young men who have consumed alcohol are more likely to be the victims of assault (Fothergill & Hashemi, 1990; Warburton & Shepherd, 2006). Further, females are more likely to be assaulted 'at home' by someone they know (Phillips & Vandebroek, 2014), but are less likely than men to present to EDs (Fothergill & Hashemi, 1990). The excessive consumption of alcohol can lead to acute effects that place individuals at risk of injury, including road and other accidents, acts of domestic and public violence. Additionally, the excessive consumption of alcohol can lead to chronic health conditions such as liver and brain damage and has been shown to be related to family breakdowns and broader social dysfunctions in communities (Ministerial Council on Drug Strategy, 2011).

In 2011–2012, 1% of hospitalisations were associated with drug-related principal diagnoses and, of this number, 57% were alcohol-related (AIHW, 2014b). Thus, while the number of admissions related to alcohol may appear small, this number only refers to individuals with a *primary* drug-related diagnosis. Further, drug and alcohol use contributes significantly to admission rates through comorbidity. A report entitled *Alcohol's Burden of Disease in Australia* by Victoria Health and the Foundation for Alcohol Research and Education (Gao, Ogeil, & Lloyd, 2014) stated that the rate of hospitalisations and deaths from alcohol-attributed conditions in Victoria had increased by 62% over the last decade; however, it should be noted that

this figure did not include individuals who had received a primary drug diagnosis. Globally, alcohol is responsible for approximately 1.8 million deaths per year and approximately half of these deaths can be attributed to alcohol-related injuries (WHO, 2007). Further, it has been estimated that 10–18% of presentations to EDs are the result of alcohol-related injuries (WHO, 2007).

Injury Surveillance Systems (ISSs) include information and public health records that can be used to analyse, report and estimate the burden of injuries, monitor trends, detect events in relation to time, places and individuals and evaluate the effect of injuries on individuals and the system (Mitchell, Cameron, & Bambach, 2014). The Queensland Injury Surveillance Unit (QISU) performs this function on behalf of the Queensland Government. The information recorded from national minimum data set reporting is used to make national and international comparisons and in policymaking. Public and media attention has focused on alcohol-related violence that results in injuries in public places (Laing, Sendall, & Barker, 2013). However, a recent report from Queensland indicates that the home is one of the most common places in which alcohol-related injuries occur (39% of alcohol-related injuries are sustained 'at home' while only 23% are sustained in public spaces) (Barker et al., 2011).

A review of ED data from 31 participating QISU hospitals over an 11.5-year period (from January 1999 to June 2010) revealed that alcohol contributed to at least 3% of all ED presentations (Barker et al., 2011). During this time, a total of 9,431 patients aged 12 and over presented to QISU participating EDs across Queensland with alcohol-related injuries. Many factors appear to contribute to alcohol-related ED presentations, including regional differences (e.g., patterns of alcohol consumption, social and cultural variations, differences in socio-economic status and educational levels) and alcohol policies (WHO, 2007). Such contributing factors could play a role

in the rising number of alcohol-related ED presentations and the locations in which they occur in Queensland.

The study sought to explore and describe the clinical and epidemiological features of 'at home' alcohol-related injury presentations to EDs in Queensland from 2003 to 2012 (inclusive). Queensland was selected, as the researcher had access to the Queensland Injury Surveillance Unit (QISU) database. To conduct the study, a descriptive analysis was undertaken using Injury Surveillance (IS) data collected from public hospital EDs in Queensland that participate in QISU data collection.

## **1.2 Aim**

The aim of the study was to explore and describe the patterns and scale of 'at home' alcohol-related injury presentations to participating EDs in Queensland from 2003 to 2012. Individuals that attended ED departments having sustained injuries at or around the home (or at the home of another person) and who were identified (via self-reporting or the clinical observation of an ED staff member) as having consumed alcohol at the time of the incident were included in the study.

## **1.3 Research Question**

The following research question was asked: What were the patterns and scale of 'at home' alcohol-related injury presentations to EDs in Queensland from 2003 to 2012?

## **1.4 Design**

A descriptive, retrospective, observational study was undertaken using IS data collected from participating public hospital EDs in Queensland from 2003 to 2012.

## **1.5 Theoretical Perspectives**

Alcohol-related injuries affect both individuals and communities. This study used the health promotion model and the Public Health Approach (PHA) to understand the phenomenon of alcohol-related injuries sustained 'at home'.

### **1.5.1 Health Promotion**

Health promotion offers a platform to understand why some individuals engage in risky or health compromising behaviours and others engage in health protective behaviours (Crosby, Kegler, & DiClemente, 2002). Traditional health promotion theories (e.g., the Health Belief Model, the Theory of Reasoned Action and the Theory of Planned Behaviour) have focused on individual determinants of behaviours and been widely applied to behaviours surrounding health conditions (Armstrong, Berlin, Sanford-Swartz, Propert, & Ubel, 2001; Fisher & Fisher, 2000). However, many researchers have questioned whether individual theories can bring about sustainable changes in health behaviours (Smedley & Syme, 2000).

Environmental factors influence behavioural choices and outcomes (WHO, 2004). Thus, approaches that seek to bring about behavioural changes by education alone are likely to fail or have limited success (Howat, Sleet, Elder, & Maycock, 2004). Environmental cues for alcohol consumption include alcohol use by family members and peers, images in advertising and the media, and the availability, cost and nature of alcoholic beverages (Stockwell et al., 1997). To reduce alcohol problems successfully, a health promotion approach is needed that incorporates a balance of individually targeted strategies to create environments that support the development of healthy behaviours (Howat et al., 2004). In focusing on EDs and the information provided through IS, this study can inform the development of health promotion strategies.

Alcohol consumption in Australia has been linked to societal expectations and norms about how individuals should behave in certain social situations. Certain special events in Australia (e.g., sporting events and family celebrations) carry an expectation of alcohol consumption (Roche et al., 2007). As alcohol-related injuries represent a public health concern, knowledge of Australia's drinking culture could lead to recommendations being made for public health interventions. Alcohol-related injuries that occur 'at home' need to be understood within the environmental and social context of Australia so that appropriate interventions can be developed and implemented to reduce their occurrence.

### **1.5.2 Public Health Approach**

Prior to the commencement of any research, an analysis framework should be developed that specifies the variables to be analysed and the type of analysis to be conducted (Kumar, 2014). The PHA is an analytical framework that can be applied to various fields of public health to respond to health problems (Krug, Sharma, & Lozano, 2000; Mercy, Rosenberg, Powell, Broome, & Roper, 1993). Identifying the risk factors associated with alcohol-related injuries is important in developing interventions to reduce associated risks. The PHA provides a framework for the entire process of health intervention decision making (i.e., from problem identification through to the implementation of interventions). The PHA comprises four interrelated elements (see Figure 1.1).

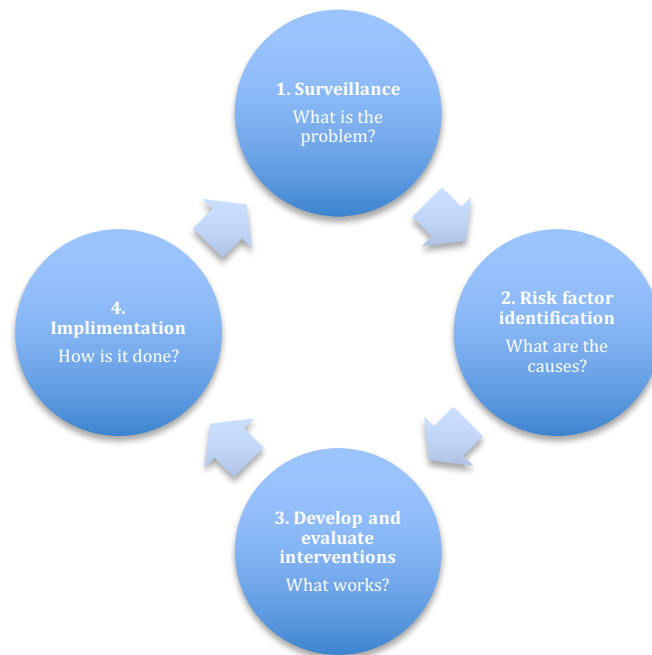


Figure 1.1. Diagram of the Public Health Approach (Mercy et al., 1993).

#### ***1.5.2.1 Element One: Surveillance***

Surveillance involves a consideration of the magnitude, scope and characteristics of a problem. It also aims to explore the circumstances, demographic characteristics and geographical features related to incidents.

#### ***1.5.2.2 Element Two: Risk identification***

Risk identification is used to define high-risk populations. This element aims to identify factors that increase the risk of injury and to determine potentially modifiable factors.

#### ***1.5.2.3 Element Three: Develop and Evaluate Interventions***

The third element aims to assess measures that can be implemented to prevent injury based on the information obtained in the above-mentioned steps.

#### ***1.5.2.4 Element Four: Implementation of Interventions***

The final element is concerned with the implementation of interventions that are likely to be broadly effective.

This study aimed to address the first and second elements of the PHA. In relation to the third and fourth elements of the PHA, a number of recommendations are outlined for consideration.

## **1.6 Rationale for the Study**

The most recent research available pertaining to alcohol-related injuries show a significant proportion of ED presentations in Australia are alcohol related, a large number of which occur on weekends (Poynton, Donnelly, Weatherburn, Fulde, & Scott, 2005). The treatment of alcohol-related injuries represents a significant cost to health services (Hoskins & Bengner, 2013; Laing et al., 2013). Such injuries are also a safety concern and create additional work for already overworked ED staff (Gunasekara et al., 2011). Patients who present to EDs with alcohol-related injuries could benefit from attendances at ED by health care professionals who understand the intricacies of alcohol-related injuries. Such professionals would be able to respond better to the needs of their patients by implementing strategies such as brief interventions, offering education and referring patients to specialists. These interventions would also benefit communities.

In relation to the first element of the PHA, IS is recognised as a key component of effective injury prevention (Holder et al., 2001). Injury surveillance systems have become an increasingly popular way to monitor and reduce injuries in Australia and other countries. Large amounts of information related to patients are routinely collected and stored in computerised databases. Such information is routinely collected at national and international EDs; however, it is not regularly subjected to monitoring or interrogation. This may result in potentially misdirected public and individual health responses.



The Queensland Parliamentary Inquiry into Alcohol-Related Violence (Legislative Assembly of Queensland, Parliament of Queensland, 2010) and the National Preventative Health Strategy (National Preventative Health Taskforce, 2009) recommended that EDs collect comprehensive data that document numbers and types of alcohol-related incidents. The WHO has also recognised the importance of collecting and analysing ED data in identifying and addressing public health issues (Butchart et al., 2008; Holder et al., 2001). However, while many countries routinely collect ED data, the use of these data as a means of preventing injuries and understanding ED presentations remains underdeveloped in many countries (Quigg, Hughes, & Bellis, 2012). By providing evidence and drawing community attention to areas of concern, the collection and analysis of ED data could act as a catalyst for change.

It is important that nurses and other health professionals are aware of the data collected from ED presentations and understand how this information can be used to implement strategies that encourage behavioural changes. Unfortunately, ED data in Australia do not explicitly monitor alcohol-related injury presentations (Laing et al., 2013).

## **1.7 Outline of Thesis**

The thesis is presented in both traditional and thesis by publication format; that is, two chapters contain manuscripts that have been accepted for publication. Chapter 1 provides an introduction to the thesis. Chapter 2 comprises a literature review in manuscript form (i.e., it sets out a manuscript that has been accepted for publication by *Collegian: The Australian Journal of Nursing Practice, Scholarship and Research*). Chapter 3 outlines the methodology and methods used in this study. Chapter 4 comprises the research findings in manuscript form (i.e., the manuscript accepted for

publication in the *Journal of Clinical Nursing*). Finally, Chapter 5 provides a summary of the research results and an outline of the study limitations, and sets out recommendations for practice, education and further research.

## **1.8 Summary**

This chapter provided an overview of the background to the study and outlined the aims of the study and the research question. It discussed a range of perspectives related to 'at home' alcohol consumption and detailed the rationale for the study. It also noted that alcohol-related injuries are an individual and public health issue that should be of interest to a range of health care professionals. The next chapter presents the literature review in manuscript form.

## Chapter 2: Literature Review

### 2.1 Introduction

This chapter provides an overview of the literature relevant to this study's aims and research question. It is presented as a paper for publication (further details are provided below).

**Manuscript Submitted to:** *Collegian: The Australian Journal of Nursing Practice, Scholarship & Research* on 9 July 2015, revised manuscript submitted on 17 November 2015, second revised manuscript submitted on 26 February 2016, manuscript accepted for publication on 19 April 2016 and published online on 11 May 2016.

## **Chapter 3: Design and Methodology**

### **3.1 Introduction**

This chapter presents an overview of the methods used to conduct the study. It demonstrates an alignment among the research aims and question, design, methodology, sample and setting, data analysis techniques and ethics. A descriptive retrospective observation study was undertaken using IS data collected from participating public hospital EDs in Queensland.

### **3.2 Aim**

As stated above, the aim of the study was to explore and describe the patterns and scale of 'at home' alcohol-related injury presentations to participating EDs in Queensland from 2003 to 2012. Individuals who attended ED departments having sustained injuries at or around the home (or at the home of another person) and who were identified (via self-reporting or the clinical observation of an ED staff member) as having consumed alcohol at the time of the incident were included in the study.

### **3.3 Research Question**

The following research question was asked: What were the patterns and scale of 'at home' alcohol-related injury presentations to EDs in Queensland from 2003 to 2012?

### **3.4 Design**

A descriptive, retrospective, observational study was undertaken using IS data collected from participating public hospital EDs in Queensland from 2003 to 2012. Descriptive studies are appropriate when little is known about a topic and are often undertaken using existing data (Graham, 2010). These studies may not have *a priori* hypotheses; rather, they aim to observe and describe a population (Graham, 2010).

Observational studies, or 'one shot' studies, are used to determine 'the prevalence of a phenomenon, situation, problem, attitude, or issue, by taking a cross-section of the population' (Kumar, 2014, p. 134). Consequently, they have also been referred to as 'prevalence' studies (Graham, 2010). This type of study is useful when an overall picture of the situation is desired (Kumar, 2014) and was selected for this study, as it met the first element of surveillance under the PHA.

### **3.5 Methodology**

Injury surveillance systems are used to monitor and generate information intended to reduce injuries. Data related to injuries are routinely collected in EDs in Australia and other countries. Many such databases also contain narrative text fields that can be used to help further understand that which cannot be understood from numerical databases alone (McKenzie, Scott, Campbell, & McClure, 2010).

This study used IS sourced from the QISU. The data were collected at triage using various computerised and paper-based collection methods from participating EDs, including up to 31 hospitals across Queensland (QISU, 2009). The data collected included the triage descriptions, demographic information, injury diagnoses and other information describing the injury events. Free text narratives were also included (Barker et al., 2011). Data from a 10-year period were used so that patterns or changes could be identified.

#### **3.5.1 Sample and Procedure**

The QISU collected Level 2 National Data Standards for Injury Surveillance (NDSIS) data at triages from participating EDs across Queensland using a standardised data collection tool. The QISU collected data from approximately 31 hospitals in rural, regional and urban Queensland locations over the 10-year period 2003 to 2012; however, it should be noted that the number and location of collection sites varied over

the study period. Using a combination of standardised coded and non-standardised free triage text data, the QISU has established and published a robust methodology for attributing and validating the role of alcohol in the presentation of injuries (Barker et al., 2011).

The data collected at each ED included the following standard IS data items: age, sex, date of ED presentation, location where injury sustained, body region injured, injury intent, injury severity (triage category) and admission status. The sampling frame for the present study comprised patients presenting to the EDs of participating hospitals for treatment of alcohol-related injuries from January 2003 to December 2012. QISU staff confirmed alcohol involvement in each case as per established and published methods (Barker et al., 2011).

### **3.5.2 Participants**

The study population included patients aged 12 and above who presented at one of the participating QISU EDs and were identified as having alcohol-related injuries. Laing et al. (2013) argued that while children under 12 years of age may be victims of alcohol-related violence, their injuries are often poorly reported. Thus, a minimum participant age of 12 was applied to this study.

The QISU extracted a total of 12,296 alcohol-related injury cases over the relevant 10-year period. Of these, 8,131 (66%) were male and 4,160 (34%) were female (the sex of five participants was not defined). Based on residential postcode information, of the participants that presented to the EDs, 96.49% (11,865) were residents of Queensland and 3.51% were visitors or tourists. The age range of participants (excluding participants aged  $\geq 100$  years) was 12 to 99 years, with a mean age of 32 years (calculated ages based on an incorrect date of birth or a default presentation date [age  $\geq 100$  years] were excluded [  $n = 19$  cases]).

### **3.5.3 Data Analysis**

Four categories were used to recode the locations of participants' injuries as being sustained: 'at home', at licensed venues, on the road/street or at 'other' locations. The 'other' locations category included farms, residential institutions, recreation areas (e.g., parks), sports or athletics areas, hospitals or health services, shops or shopping centres, bush/camping grounds or caravan parks, service stations, mines or quarries, industrial or construction areas, schools and other unspecified areas.

Injury intent was categorised as either intentional (i.e., self-harm, assault or maltreatment by a spouse or partner) or accidental. Age was coded based on years and age groups. The first two age groups and the last age group were uneven. The 12- to 17-year age group (a 6 year age range) comprised adolescents who were under the legal age limit to purchase or consume alcohol. Notably, the 18- to 24-year age group (a 7-year age range) has previously been shown to be the age group that sustains the greatest proportion of alcohol-related injuries (AIHW, 2010). Data were then collated across 5-year age groups; patients aged over 65 were grouped together.

The data were summarised using means, standard deviation and percentages. A univariate analysis was used to assess the relationship between demographic variables and injury locations. Sex and location were assessed using a Chi-square test and age and location of injury were assessed using an Analysis of Variance (ANOVA) and Tukey's post-hoc tests. The relationship between intent, mode of separation, body region of injury, triage category and location of injury were assessed using Chi-square tests and post-hoc tests. Multiple logistic regression analyses were conducted to determine whether any significant associations existed between injury location, risk factors and potentially confounding demographic characteristics. Injury location was used as the outcome variable. The independent variables included in the model were

age, sex, assault, drugs, maltreatment by spouse or partner (i.e., domestic violence), age\*sex and sex\*assault. The enter method was used (i.e., all independent variables were entered into the equation in one step). Results are expressed as Odds Ratios (OR) and 95% Confidence Intervals (CI). The data were analysed using SPSS, version 22 (IBM SPSS Inc., Armonk, NY, USA). *P* values < 0.05 were considered statistically significant.

The data analysis related to the second element of the PHA (i.e., identifying risk factors). In analysing the results, trends were revealed that enabled the remainder of the PHA approach to be enacted. In the absence of data collection (i.e., element one of the PHA) and identifying risk factors (i.e., element two), the development and evaluation of interventions (i.e., element three) and implementation (i.e., element four) would not have been possible.

### **3.6 Ethics**

Ethical processes were implemented to ensure that the human participants were not unnecessarily subjected to research and were protected from harm. The National Statement on Ethical Conduct in Human Research (2007, updated March 2014) recognises that research contributes to the greater human good. The Australian Code for the Responsible Conduct of Research (2007), jointly developed by the NHMRC, the Australian Research Council and Universities Australia, provides guidelines for the responsible conduct of research in Australia. The research undertaken in this study maintained the principles of responsible research as outlined in these codes. This includes measures such as safe, secure storage, access and retention of data; publishing findings via a peer review process; accurately reflecting authorship; properly citing literature reviewed and utilising appropriate research methodologies. Further, the effective use of existing data sets was also considered ethical.



Research on anonymous datasets is often deemed exempt from the need for ethical approval (see sections 5.1.22 and 5.1.23 of the National Statement on Ethical Conduct in Human Research 2007, updated March 2014); however, ethical approval to conduct the study on the collected de-identified data was sought and granted by the University of New England's (UNE's) Human Research Ethics Committee (HREC; HE14–226; see Appendix III) where the researcher is enrolled as a Masters of Philosophy candidate. Access to de-identified QISU data was available to the researchers upon request. Permission to access the QISU data was granted by Dr Ruth Barker (see Appendix IV).

### **3.7 Summary**

This chapter outlined the aim of the research and the research question. A descriptive retrospective observation study design was adopted to examine IS data collected at public hospital EDs in Queensland. The data sampling, methodology, collection and analysis procedures used in this study were also described in the chapter. Finally, information on the ethics approval granted for this research study was provided.

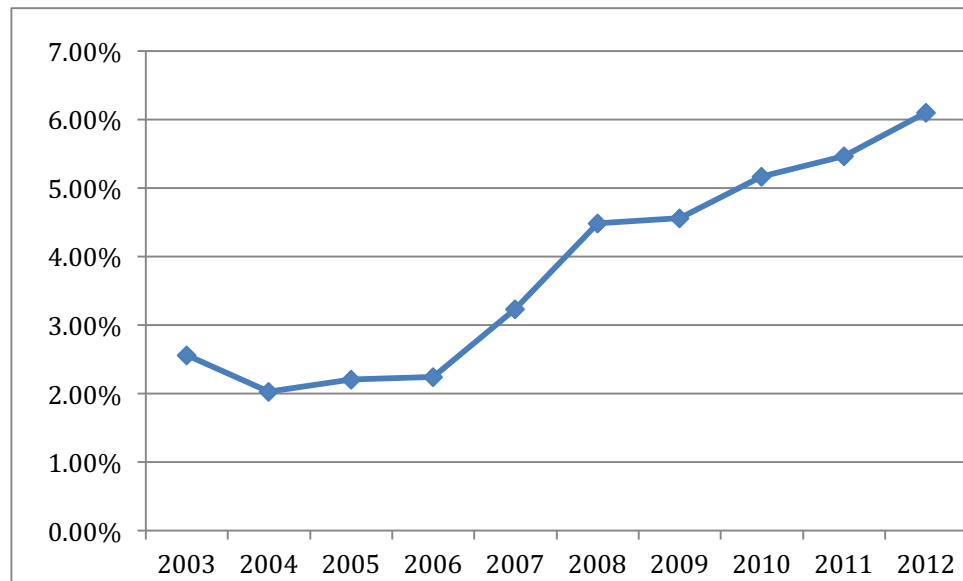
## **Chapter 4: Results**

### **4.1 Introduction**

This chapter presents the results of the study. First, alcohol-related injuries that were sustained 'at home' are presented as a percentage of all injuries and trends. Next, details are provided on the geographic and specific 'at home' locations where the injuries were sustained including the mechanisms of injuries, whether domestic violence by a spouse or partner was involved, the times and days of presentation to EDs and the demographic characteristics of participants (e.g., ages and sex).

### **4.2 Alcohol-related Injuries as a Percentage of All Injuries**

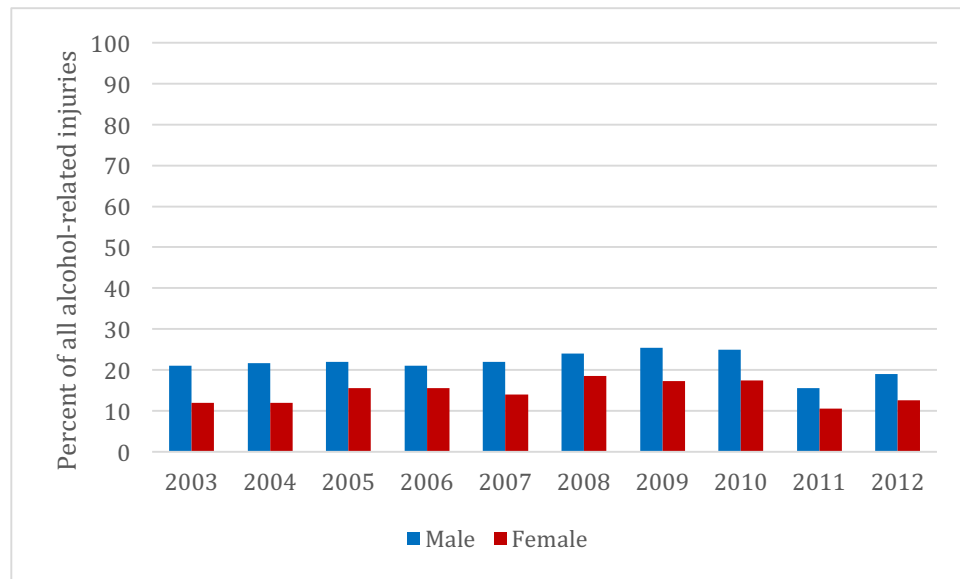
A total of 406,312 injured participants were identified as presenting to hospital EDs participating in the data collection for QISU from 2003 to 2012. Of this number, alcohol consumption was noted to have contributed to 12,296 (3.02%) of the injuries in patients aged  $\geq 12$  years. In relation to the four geographic locations, 'at home' locations accounted for 4,444 of the alcohol-related injuries (36.14%), while licensed venues accounted for 1,203 (9.78%), on the road/street accounted for 1,599 (13%) and 'other' locations accounted for 5,050 (41.07%) of the alcohol-related injuries. On average, 1,229 alcohol-related presentations occurred per year. Over the 10-year period from 2003 to 2012, alcohol-related injuries as a proportion of all injuries increased by 138% (from 2.56% to 6.10%; see Figure 4.1).



*Figure 4.1.* Trends in the proportion of alcohol-related emergency department presentations for injuries (n = 12,290) as percentage of all Queensland Injury Surveillance Unit emergency department presentations (n = 406,312) from 2003–2012.

#### **4.2.1 Trends in 'At Home' Alcohol-Related Injuries**

As a percentage of all ED presentations for alcohol-related injuries, 21.65% of 'at home' injuries were suffered by males and 14.56% were suffered by females (see Figure 4.2). The number of males that sustained 'at home' injuries (as a proportion of all alcohol-related injuries) was consistently higher over the 10-year period of data collection than the number of females that sustained 'at home' injuries in the same period. In total, 4,442 alcohol-related injuries were reported as being sustained 'at home'. The sex of some participants was unspecified. However, 2,635 participants (59%) were identified as male and 1,807 (41%) were identified as female. Thus, the male to female ratio was 3:2. The overall mean age for alcohol-related injuries was  $32.5 \pm 14.2$  years. Notably, females were slightly younger than males (the mean age for males was  $32.6 \pm 14.1$  years and the mean age for females was  $32.5 \pm 14.3$  years).

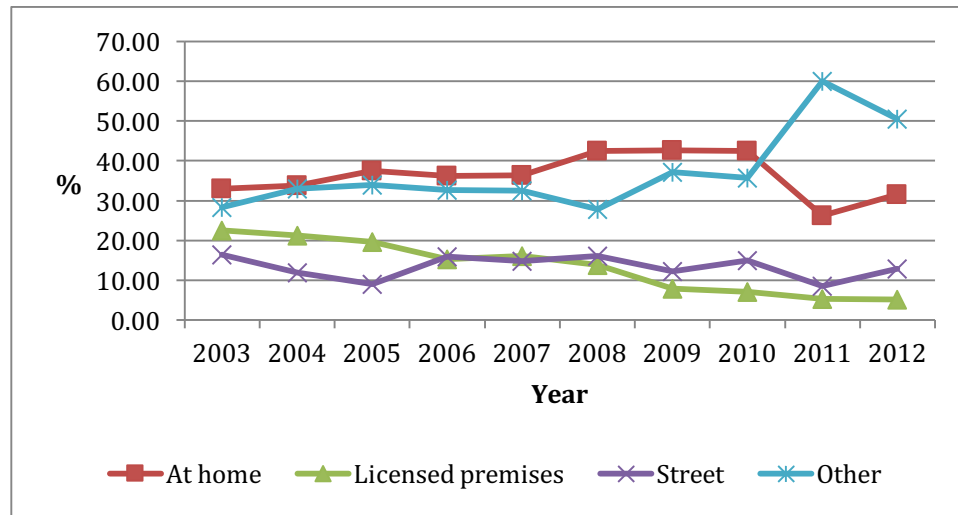


*Figure 4.2.* Trends in the proportion of male and female alcohol-related emergency department presentations for injuries sustained 'at home' (n = 2,635 and n = 1,807, respectively) as a percentage of all alcohol-related emergency department presentations (n = 12,296).

#### 4.2.2 Geographic Location

The geographic locations at which the alcohol-related injuries were sustained were classified as 'at home', at licensed venues, in the street or at 'other' locations (see Figure 4.3). The 'at home' location was consistently the most prevalent location at which alcohol-related injuries occurred from 2003 until 2010; however, the 'other' locations became more prevalent than 'at home' locations after 2010. In relation to alcohol-related injuries that occurred on the street and at licensed venues, more alcohol-related injuries were sustained at licensed venues until 2006; however, between 2006 and 2008, fluctuations occurred and then from 2008 to 2012, more alcohol-related injuries were sustained on the street than at licensed venues. Over the 10-year data collection period, the proportion of ED presentations of alcohol-related injuries sustained 'at home' decreased by 4.45%, the proportion sustained at licensed venues decreased by 77.37% and the proportion sustained on the street decreased by

21.68%. The only category that had an overall increase of alcohol-related injuries was the 'other' locations category; this category increased by 78.16% over the same 10-year period. The 'at home' location demonstrated a steady increase from 2003 through until 2010; however, a decrease occurred in 2011, followed by an increase in 2012.



*Figure 4.3.* Trends in the proportions of participants presenting to emergency departments with alcohol-related injuries sustained at various geographic locations ( $n = 4,442$ ) as a percentage of all alcohol-related emergency department presentations ( $n = 12,290$ ).

#### 4.2.3 Specific 'At Home' Location of Injury

Figure 4.4 shows the specific locations in 'at home' environments where injuries were sustained, stratified by sex. Males were found to be more likely to be injured outside of the home (35.15% of males were injured outside the home in a gardens or other exterior areas). This represents the largest differential between males and females across all categories. Conversely, females were more likely to sustain alcohol-related injuries within the home (25.97% of females sustained injuries within the home).

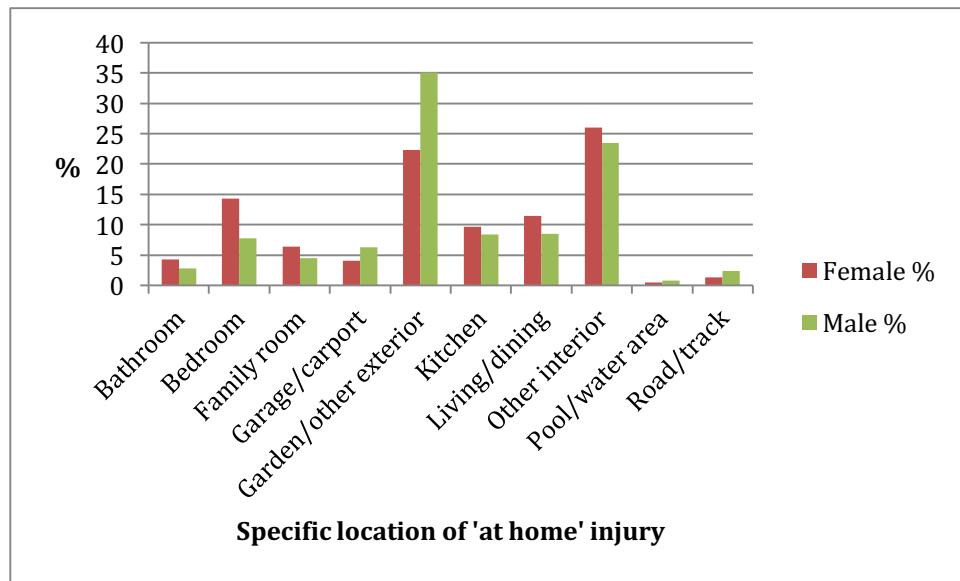
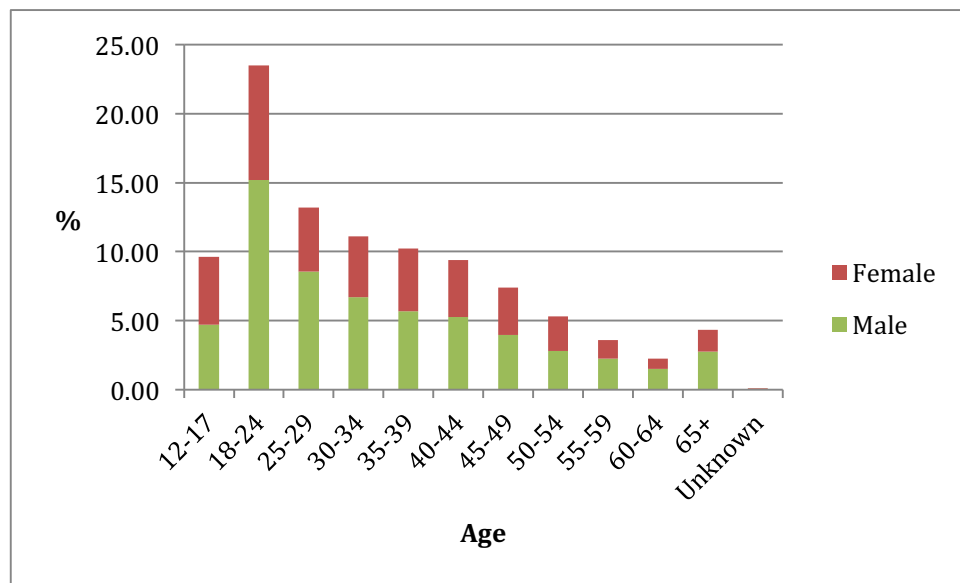


Figure 4.4. Specific location of 'at home' injuries by sex as a percentage of 'at home' alcohol-related injuries (n = 3,508).

#### 4.2.4 Age and Sex

Age and sex distributions were explored in relation to alcohol-related injuries sustained 'at home' (see Figure 4.5). Participants in the 18–24 age group sustained the most injuries 'at home'. Specifically, 15.17% of males and 8.33% females in this age group presented to EDs with alcohol-related 'at home' injuries. This age group also showed the largest sex differences (6.84%). Sex differences decreased as age increased up until the 50–54 age group (0.34% difference in male/female injuries). In the 55–59 age group, gender differences rose to 0.90% and then declined to 0.74% for the 60–65 age group. Overall, the 12–17 and 18–24 age groups (9.61% and 24%, respective) comprised approximately 33% of all 'at home' alcohol-related injuries presentations to EDs. Every age group after the 18–24 age group demonstrated a decline in the number of presentations to EDs with alcohol-related injuries until the 65 and over age group. The rise in the 65-and-over age group may be attributable to the large number of patients represented in this group. The 12–17 age group was the only group in which

females represented a higher proportion (4.93%) of participants presenting to EDs with 'at home' alcohol-related injuries than males (4.68%).



*Figure 4.5.* Distribution of participants that sustained 'at home' alcohol-related injuries from 2003 to 2012 based on age group and sex of (n = 4442). (NB: The sex of two participants was not recorded.)

#### 4.2.5 Time and Day of Presentation

Figure 4.6 depicts participants with 'at home' alcohol-related injuries presenting to EDs based on days of the week and sex. Participants that presented with 'at home' alcohol-related injuries on Saturdays and Sundays comprised 42.41% of all presentations to EDs by participants with alcohol-related injuries.

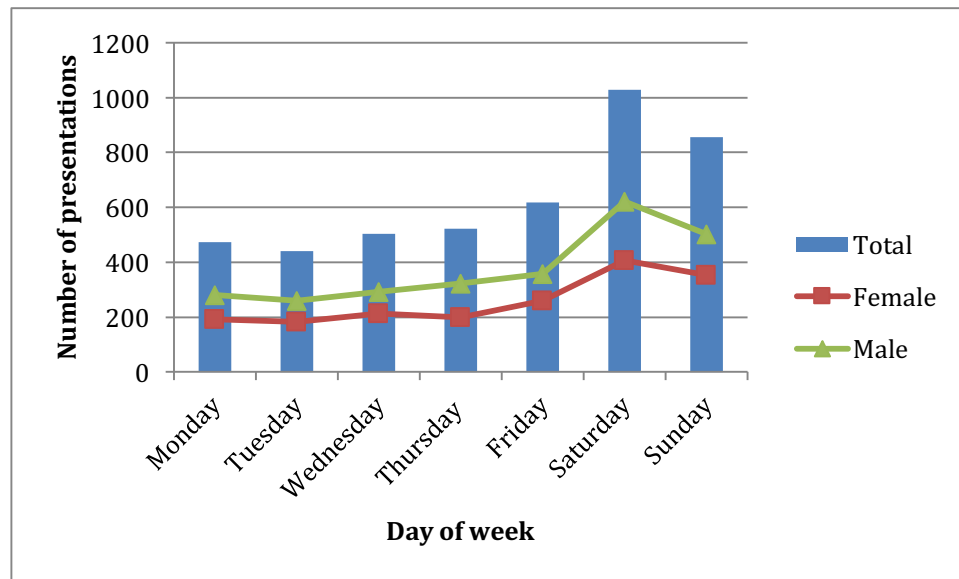


Figure 4.6. Distribution of participants that sustained 'at home' alcohol-related injuries from 2003 to 2012 (n = 4,442) based on day of attendance at hospital EDs and sex. (NB: The sex of two participants was not recorded.)

Figure 4.7 shows 'at home' alcohol-related ED presentations based on presentation times and sex. The time of 12:01:00 am was used as the computer default, if data on time had not been collected and entered. Cases in which time was unknown or sex was not specified were then culled from the 4,442 results (125 attendances were culled). In relation to the remaining 4,317 cases, presentation times peaked between 23:00 and 23:59; that is, 348 presentations (8.06%, 194 male and 156 female) occurred during this period. Presentations dropped to their lowest levels between 6:00 and 6:59; that is, only 60 presentations (1.39%, 35 male, 25 female) occurred during this period. A spike occurred between 10:00 and 10:59; that is, 127 presentations (2.94%) occurred during this period of which the male to female ratio was the most equal compared with other time presentations (73 male, 54 female). The largest differential between male to female ratios of presentation occurred between 22:00 and 22:59, of which 61.25% (204) were males and 44.74% (149) were females.



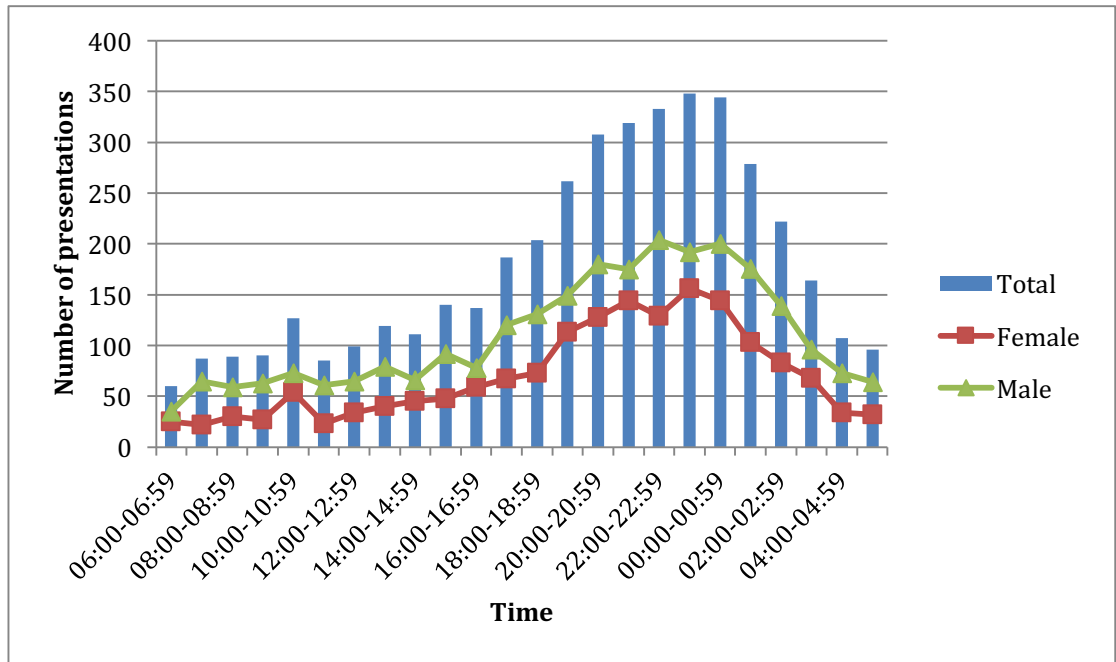


Figure 4.7. Distribution of participants that sustained ‘at home’ alcohol-related injuries from 2003 to 2012 (n = 4,442) based on injury time and sex. (NB: The sex of two participants was not recorded).

#### 4.2.6 Comparing Alcohol-Related Injuries sustained ‘At Home’ to Alcohol-Related Injuries sustained at ‘Other’ Locations

##### 4.2.6.1 Mechanisms of Injury

Table 4.1 compares the top five mechanisms by which alcohol-related injuries were sustained ‘at home’ and licensed venues. Falls from a low height were the first and second most likely mechanisms of injury for ‘at home’ (24.8%, n = 1102) and licensed venues (23.6%, n = 284), respectively. Being struck by or colliding with a person was the most likely mechanism of injury at licensed venues (46.2%, n = 556) and the second most likely mechanism of injury ‘at home’ (23.3%, n = 1038). Both locations shared being struck by or colliding with objects as the third most likely mechanism of injury. The fourth most likely mechanism of injury at both locations was poisoning; however, ‘at home’ individuals were poisoned with drugs or medicinal

substances while at licensed venues individuals were poisoned with other or unspecified substances. Being cut or pierced by an object was the fifth most likely mechanism for being injured 'at home' and other specified external cause was the fifth most likely mechanism for licensed venues.

Table 4.1

*Top Five Mechanisms of Injury 'At Home' and 'At Licensed Venues'*

Top five mechanisms of injury	'At home'	<i>n</i>	%	At licensed venues	<i>n</i>	%	Top five mechanisms of injury
1	Fall from low height (i.e., from the same level or < 1 metre)	1,102	24.8	Being struck by or colliding with an individual	556	46.2	1
2	Being struck by or colliding with an individual	1,038	23.3	Fall from low height (i.e., from the same level or < 1 metre)	284	23.6	2
3	Being struck by or colliding with an object	575	12.9	Being struck by or colliding with an object	108	8.9	3
4	Poisoning by a drug or medicinal substance	574	12.9	Poisoning by other/ unspecified substance	64	5.3	4
5	Being cut or pierced by an object	467	10.5	Other specified external cause	57	4.7	5

**4.2.6.2 Domestic Violence by Spouse or Partner**

Of the 510 alcohol-related injuries that were identified as occurring as a result of domestic violence (coded as maltreatment in the database) by a spouse or partner, 59.5% were sustained 'at home' (see Table 4.2). Of the alcohol-related injuries, 30.3% were sustained at 'other' locations as a result of maltreatment by spouse or partner. In

relation to participants who reported that their injuries occurred as a result of maltreatment by a spouse or partner, 62% were females and 38% were males.

#### ***4.2.6.3 Demographic Characteristics and Location***

Comparing demographic data with injury location showed that females were most likely to sustain alcohol-related injuries that resulted in ED presentations 'at home' and least likely to sustain such injuries at licensed venues (43.4% of females sustained alcohol-related injuries 'at home' and 8.2% of females sustained alcohol-related injuries at licensed venues; see Table 4.2). Conversely, males were most likely to sustain injuries at 'other' locations (42.1%) and least likely to sustain injuries at licensed venues (10.6%). The geographic location with the greatest differences between females and males was the street/road location. Chi-square tests revealed that the location at which males and females were most likely to sustain alcohol-related injuries differed significantly; males were more likely to sustain injuries at 'other' locations and females were more likely to sustain injuries 'at home' ( $p < 0.001$ ).

The mean age of those presenting to EDs with alcohol-related injuries was lowest for participants who sustained injuries at licensed venues (29.6 years). Conversely, participants that sustained injuries 'at home' had the highest mean age (34 years; see Table 4.3). An ANOVA and post-hoc Tukey test revealed a significant relationship between mean ages and injury locations ( $p < 0.001$ ). Notably, participants who were older were more likely to be injured 'at home' than at 'other' locations.

Alcohol-related injuries that resulted in ED presentations that were categorised as assaults were most prevalent at 'other' locations (41.1%). The 'at home' location (29.2%) predominated over the licensed venue location (16.5%) with the fewest assault-related injuries being sustained on the street (13.1%; see Table 4.2).

Chi-square tests revealed a significant difference between sex, assault injuries and location ( $p = <0.001$ ). Female alcohol-related assault presentations were more likely to originate 'at home' and male alcohol-related assault presentations were more likely to originate at 'other' locations. Table 4.2 shows that assault and maltreatment by spouse or partner was significantly associated with alcohol-related injuries that occurred 'at home'. Alcohol-related injuries due to assault were less likely to occur 'at home' compared with 'other' locations (OR = 0.84) while alcohol-related injuries caused by the maltreatment of a spouse or partner (i.e., domestic violence) were significantly more likely to occur 'at home' (OR = 1.31). The 'other' location had no limitations placed on it when analysing the data other than to exclude 'at home', licenced venue and street/road. This may account for the large number (158) of domestic violence victims seen in the 'other' category.

Forty-three per cent of participants who attended EDs as a result of alcohol-related injuries sustained 'at home' were subsequently admitted to hospital as inpatients or transferred to other hospitals (see Table 4.2). Chi-square tests revealed a significant relationship between hospital admittance and the location at which an injury was sustained ( $p < 0.001$ ). Notably, participants with alcohol-related injuries that had been sustained 'at home' were more likely to be admitted to hospital. This finding indicates that the severity of participants' injuries was greater if those injuries were sustained 'at home'.

Table 4.2

*Comparison of Demographic Characteristics and Locations of Alcohol-related Injuries*

	Home <i>n</i> (%)	Licensed venue <i>n</i> (%)	Street/road <i>n</i> (%)	Other <i>n</i> (%)	<i>P</i> value
Sex					< 0.001
Female	1,807 (43.4)	340 (8.2)	387 (9.3)	1,626 (39.1)	
Male	2,635 (32.4)	863 (10.6)	1,210 (14.9)	3,423 (42.1)	
Age— <i>M</i> (SD)	34.1 (14.9)	30.0 (12.7)	31.78 (14.1)	32.05 (13.7)	< 0.001
Assault	1,161 (29.2)	656 (16.5)	520 (13.1)	1,634 (41.1)	< 0.001
Female	476 (11.99)	120 (3.02)	105 (2.64)	502 (12.64)	
Male	685 (17.25)	536 (13.50)	415 (10.45)	1,132 (28.51)	
Admitted	909 (43.2)	155 (7.4)	241 (11.4)	800 (38.0)	< 0.001
Triage					< 0.001
1	61 (30.3)	6 (3.0)	45 (22.4)	89 (44.3)	
2	410 (42.4)	39 (4.0)	150 (15.5)	367(38.0)	
3	1,782 (38.2)	348 (7.5)	579 (12.4)	1,955 (41.9)	
4	1,926 (34.3)	650 (11.6)	712 (12.7)	2,323 (41.4)	
5	259 (31.0)	154 (18.4)	109 (13.1)	313 (37.5)	
Unspecified	6 (31.6)	6 (31.6)	4 (21.1)	3 (15.8)	
Body location					< 0.001
Torso	257 (38.2)	41(6.1)	103 (15.3)	271 (40.3)	
Upper limbs	1,010 (41.7)	204 (8.4)	265 (11.0)	941 (38.9)	
Lower limbs	391 (30.1)	142 (10.9)	193 (14.8)	575 (44.2)	
Head/neck/face	1,464 (30.9)	651 (13.7)	720 (15.2)	1,900 (40.1)	
Unspecified body location	1138 (44.4)	282 (11.0)	216 (8.4)	927 (36.2)	
Multiple injuries involving more	184 (30.4)	48 (7.9)	102 (16.9)	271 (44.8)	

than one body  
location

Domestic violence by spouse or partner (n = 510)	304 (59.5)	14 (2.8)	34 (6.7)	158 (31.0)	
Male	118 (23.0)	8 (1.6)	10 (2.0)	60 (11.8)	< 0.05
Female	186 (36.5)	6 (1.2)	24 (4.7)	98 (19.2)	

Chi-square and post-hoc tests demonstrated a significant relationship between triage codes and injury locations ( $p < 0.001$ ; see Table 4.2). Injuries sustained 'at home' and 'other' locations were classified as the most urgent. In relation to the triage codes, of the alcohol-related injuries that were recorded as Category 1 (i.e., the most urgent) injuries on presentation to EDs, 44.3% were sustained at 'other' locations, 30.3% were sustained 'at home', 22.4% were sustained on the street/road and 3% were sustained at licensed venues. Forty-two per cent of participants with alcohol-related injuries that presented to EDs sustained their Category 2 injuries 'at home' while 38% sustained their Category 2 injuries at 'other' locations.

The most frequent body regions to sustain injuries were the head, neck and face (38.5%) followed by 'unspecified' body areas (20.8%) and the upper limbs (19.68%). In relation to the body regions and geographic locations, injuries to the head, neck and face sustained at 'other' locations represented the largest proportion (15.45%) of injuries followed by injuries that were sustained 'at home' (11.91%). 'At home' injuries were most likely to be sustained to the head, neck and face region (32.94), followed by unspecified regions (25.61%) and upper limb regions (22.73%). A significant association was found between the body region injured and the geographic location of the injury ( $p < 0.001$ ; see Table 5.1).

Fifty-eight per cent of all 'at home' alcohol-related injuries were assault related ( $p < 0.001$ ). Similarly, of the assaults identified as alcohol-related 'at home' injuries, 58% occurred to participants' head, face and neck regions ( $p < 0.001$ ).

Multiple logistic regression analyses were conducted to assess the association between injury location (coded as 1 = home and 0 = not home), risk factors and potentially confounding demographic variables. Table 4.3 shows that (after controlling for age and sex) only assault and maltreatment by a spouse or partner remained significantly associated with alcohol-related injuries sustained 'at home'. The strongest predictor of alcohol-related injuries sustained 'at home' was maltreatment or domestic violence by a spouse or partner (OR 0.84). Further, it was shown that alcohol-related injuries caused by domestic violence were 1.3 times more likely to occur 'at home' than at 'other' locations. Alcohol-related injury due to assault has an inverse relationship with the home location, recording an OR of 0.84. This indicates that injury due to assault is 84% as likely (less likely) to occur in the home location compared with the other combined locations.

Table 4.3

*Logistic Regression Analyses of Injury Locations and Risk Factors*

Demographic or risk factor	Characteristics	Regression coefficient	Adjusted OR	95% CI	P values
Age		-0.001	0.99	0.99–1.00	0.589
Sex	Male	1.00	(reference)		
	Female	0.01	0.96	0.78–1.29	0.35
Drugs	No drugs	1.00	(reference)		
	Drugs involved	0.08	1.08	0.94–1.26	0.26
Assault	Not assault	1.00	(reference)		
	Assault	-0.18	0.84	0.74–0.94	0.003
Maltreatment	No maltreatment	1.00	(reference)		
	Maltreatment	0.27	1.31	1.03–1.67	0.026
Age*Sex		-0.01	0.99	0.99–1.00	1.01
Assault*Sex		0.00	1.00	0.81–1.23	0.99

Note: Reference = reference or baseline category for comparisons

### 4.3 Summary

This chapter presented data on participants aged over 12 that presented to EDs with alcohol-related injuries sustained ‘at home’ over a 10-year period. The ‘at home’ location proved to be a significant place of origin for alcohol-related injuries. Notably, it was found that males were more likely to sustain alcohol-related injuries ‘at home’ than females. Further, males’ injuries were most likely to be sustained outside of the home dwelling, whereas females’ injuries were most likely to be sustained within the home dwelling.

Age was also significant in the findings; a large majority of alcohol-related injuries occurred in the 12–17 and 18–24 age groups. The areas of the body that most frequently sustained alcohol-related injuries ‘at home’ were the head, neck and face, particularly in assault-related cases. Participants were most likely to present to EDs between 19:00 and 1:00 on Saturdays and Sundays. ‘At home’ alcohol-related injury presentations represented the largest proportion of triage Categories 1 and 2, indicating



that these injuries were more severe than injuries sustained at 'other' locations. Fifty-nine per cent of alcohol-related injury presentations were identified as having being sustained because of maltreatment by spouse or partner and occurred 'at home'.

The following chapter presents a manuscript (currently under review) that describes and discusses these findings.

## **Chapter 5: Results Manuscript**

This chapter includes a manuscript that has been accepted for publication by the *Journal of Clinical Nursing*. The manuscript provides an overview of the results and a discussion of these results in relation to previous research. The results manuscript is entitled: 'Patterns of "At Home" Alcohol-Related Injury Presentations to Emergency Departments'.

## **5.1 Summary**

The manuscript included in this chapter presented and discussed the results of the study. It identified a lack of previous research in this area and drew attention to the importance of assessing and reporting alcohol-related injuries sustained by patients presenting to EDs. It also showed that domestic violence was linked to alcohol-related injuries sustained 'at home' and noted that nurses and other health professionals should be aware of this problem.

## **Chapter 6: Overview, Discussion and Conclusion**

### **6.1 Introduction**

This chapter provides an overview of the findings and discussion and presents the conclusions of this study. It also sets out a number of recommendations for practice, education and future research. Finally, the limitations of the study are discussed.

### **6.2 Summary of the Findings**

This study showed that alcohol-related injuries (as a proportion of all injuries) increased in the Queensland cohort by 138% over the 10-year period 2003 to 2012. The 'at home' location was found to be statistically significant in alcohol-related injuries, particularly in regards to age, sex and domestic violence. This finding is important, as recently published research on alcohol-related injuries has focused on injuries sustained at public places such as licensed venues. The focus of alcohol-related injuries at public locations has been fuelled to some extent by a popular interest in the media (Doherty & Roche, 2003; Flemming, 2008; Miller et al., 2011).

This study showed that males were more likely to sustain alcohol-related injuries than females 'at home' locations. Further, males were most likely to be injured outside of the home (i.e., in gardens or other exterior areas). Conversely, females were more likely to be injured within the home.

For eight of the 10 years in which data were collected, the 'at home' location was found to be the location at which most alcohol-related injuries were sustained. However, for two of the 10 years, 'other' locations were identified as the locations at which most alcohol-related injuries were sustained. In relation to age groups, participants in the 18–24 age group sustained more 'at home' alcohol-related injuries than participants in any other age group. Together, the 12–17 and 18–24 age groups

comprised approximately one-third of the total 'at home' injured population. As age increased, the likeliness of sustaining an injury 'at home' decreased. Participants injured 'at home' locations had a mean age of 34.1 years, an age slightly higher than the overall mean age of 32.5 years. Participants injured 'at home' also had the oldest mean age across all venue categories. Conversely, participants injured at licensed venues had the youngest mean age (30.0 years). The only location category to demonstrate an overall increase in injury occurrence was 'other' locations (78.16%). Conversely, 'at home' locations saw a modest decrease of 4.45%, while licensed venues and the street decreased by of 77.37% and 21.68%, respectively.

Weekends were the most likely time for ED presentations of alcohol-related injuries that originated 'at home' locations. Tuesday was the day on which 'at home' alcohol-related presentations were least likely to occur. The peak time for presentations of 'at home' alcohol-related injuries was between 23:00 and 23:59. Conversely, the time at which presentations were least likely to occur was between 6:00 and 06:59.

The mechanism of injury was assessed in relation to 'at home' and licensed venue locations. Of five mechanisms, the top two mechanisms of injury at both 'at home' and licensed venues injury were falls from low heights and being struck by or colliding with a person. Being struck by or colliding with an object was the third most likely mechanism of injury. The top two mechanisms of injury occurred with similar frequency 'at home' and at licensed venues (24.80% and 23.3%, respectively); however, at licensed venues, contact with a person occurred more frequently than 'at home' (46.2% and 23.6%, respectively).

The 'at home' location was the most likely location at which alcohol-related injuries were sustained as a result of violence by a spouse or partner. Females were far

more likely than males to present to EDs with an 'at home' injury that was the result of violence by a spouse or partner. Females were most likely to be maltreated by spouse or partner and sustain an injury 'at home' that resulted in ED presentation and least likely to sustain such an injury at a licensed venue. Conversely, males were most likely to be maltreated by a spouse or partner and sustain an alcohol-related injury at 'other' locations and least likely to sustain such an injury at licensed venues. Females and males were more likely to present at EDs having sustained assault-related injuries at 'other' locations followed by 'at home' locations. In relation to alcohol-related injury presentations to EDs for injuries sustained 'at home', approximately one-third were categorised as assaults and, of these, 55.60% were injuries to the head, neck and face.

The urgency of treatment required for participants presenting alcohol-related injuries was assessed using triage categories. Injuries sustained at 'other' locations were most frequently assessed as Triage Category 1 injuries, followed by injuries sustained 'at home' locations. Triage Category 2 comprised more 'at home' location injuries, followed by 'other' location injuries.

The body region injured was also explored. Alcohol-related injuries sustained to the head, neck and face were the most common across all locations. Unspecified body regions were the next most frequently identified injured body region for the 'at home' location, followed by injured upper limbs.

### **6.3 Recommendations**

This study provided new insights into the nature of presentations to EDs of patients with alcohol-related injuries sustained 'at home'. This knowledge should enable nurses and Other Health Care Professionals (OHCP) to actively identify and target patients for health promotion interventions. The results of this study can be used

in the development and evaluation (element 3 of the PHA), and implementation of interventions (element 4 of the PHA). To achieve this objective a number of recommendations for education, practice and research are proposed.

### **6.3.1 Education**

- Nurses and other health care professionals need to be aware of the importance of 'at home' locations as venues where alcohol-related injuries are sustained. This information needs to be included in undergraduate and postgraduate curricula and professional development workshops. Awareness of this issue will help prepare nurses and enable OHCP to recognise alcohol as an issue and apply health promotion strategies under the PHA to the growing number of patients who sustain alcohol-related injuries 'at home'.
- The likelihood of domestic violence being linked to alcohol-related 'at home' injuries should also be addressed in the education of health care professionals. Specifically, OHCP should be aware that victims are unlikely to report acts of domestic violence when they attend EDs.
- The hours and days at which participants presented at EDs have implications for administrators and OHCP. This information should be used to ensure that EDs are adequately staffed with appropriately qualified staff equipped to manage alcohol-related injuries at peak presentation times.
- Nurses and OHCP need to be prepared to manage injured patients under the influence of alcohol. This has implications for health promotion training and the physical design of practice environments. In treating patients presenting at EDs from 'at home' environments, nurses should consider the risk of injury, domestic violence and chronic health issues related to alcohol.

- The home is a common location at which alcohol-related injuries are sustained. OHCP charged with enacting elements three and four of the PHA and individuals working within the public health domain should target this location for harm minimisation interventions such as brief interventions, education and referrals to specialist services.

### **6.3.2 Practice**

- ED nurses need to advocate to policy makers to consider strategies that address the issue of alcohol consumption 'at home', as it is becoming a popular drinking location and an increasing number of alcohol-related injuries are being sustained 'at home'.
- There are a number of practical issues, such as time and staffing constraints, associated with ED nurses being able to deliver screenings and brief interventions; however, it is recommended that nurse engage in such practices where possible, as they have proven to reduce alcohol intake.

### **6.3.3 Research**

- This study showed that very little research has been conducted on alcohol-related injuries sustained 'at home'. Given the high and increasing rate of alcohol-related injuries sustained 'at home', further research is needed in this area so that the findings can be generalised to a wider context.
- This study focused on a data set from one Australian state (i.e., Queensland); similar research should be undertaken using national data to confirm that the findings are generalisable to a wider context.

### **6.3.4 Limitations**

This study has a number of limitations. IS data were reported for one state only (i.e., Queensland). Thus, the outcomes of the study may not be generalisable to other



Australian states or other countries. However, it should be noted that the Queensland hospitals in the study were representative of urban, regional and rural locations. Further, given the size of the dataset and the similarity of recent reports of alcohol use and injuries across Australia, it is possible that results obtained in other areas would be similar. The results of the study must also be viewed in light of the unique population of Queensland, where more than half of the population live outside the greater metropolitan area of Brisbane (Queensland Government, 2014), as it has been found that people living in regional or remote areas drink more than people living in major cities and towns (NHMRC, 2009). Further, it should be noted that ED data are rarely population based and can be biased by factors such as location (Quigg et al., 2012).

The self-reporting of alcohol use at the time of injury is another potential limitation of this study. The study results may have been affected by recall or method bias—an issue related to rating one's own behaviour (Toomingas, Alfredsson, & Kilborn, 1997). The use of ED attendance codes and triage notes may also have led to the under-identification of patients suffering from alcohol-related injuries. Additionally, while a systematic search of the triage free text was undertaken to identify words and terms associated with alcohol (e.g. ETOH, Alc and drinking), references to alcohol may not always have been entered as free text.

Further, the data could not be used to identify who had consumed alcohol. In some cases, the patient presenting at an ED may not have consumed alcohol, but may have been the victim of an injury sustained due to others consuming alcohol. However, in this study, it was assumed that most cases occurred as a result of personal alcohol consumption. Additionally, the data used identified place of injury, but not place of drinking. However, the place of drinking could have differed from the place of injury.

Finally, as case capture varied throughout the study period, not all cases of alcohol-related injuries could be identified.

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## Appendix I: Ethical Approval from the University of New England



Ethics Office  
Research Development & Integrity  
Research Division  
Armidale NSW 2351  
Australia  
Phone 02 6773 3449  
Fax 02 6773 3543  
jo-ann.sozou@une.edu.au  
www.une.edu.au/research-services

### HUMAN RESEARCH ETHICS COMMITTEE

**MEMORANDUM TO:** Prof Kim Usher, Dr Cindy Woods & Ms Naomi Bunker

#### School of Health

This is to advise you that the Human Research Ethics Committee has approved the following:

**PROJECT TITLE:** Patterns of 'in home' alcohol related injury presentations to emergency departments in Queensland

**APPROVAL No.:** HE14-226

**COMMENCEMENT DATE:** 02 September, 2014

**APPROVAL VALID TO:** 31 December, 2016

**COMMENTS:** Nil. Conditions met in full

The Human Research Ethics Committee may grant approval for up to a maximum of three years. For approval periods greater than 12 months, researchers are required to submit an application for renewal at each twelve-month period. All researchers are required to submit a Final Report at the completion of their project. The Progress/Final Report Form is available at the following web address:  
<http://www.une.edu.au/research/research-services/rdi/ethics/hre/hrec-forms>

The NHMRC National Statement on Ethical Conduct in Research Involving Humans requires that researchers must report immediately to the Human Research Ethics Committee anything that might affect ethical acceptance of the protocol. This includes adverse reactions of participants, proposed changes in the protocol, and any other unforeseen events that might affect the continued ethical acceptability of the project.

In issuing this approval number, it is required that all data and consent forms are stored in a secure location for a minimum period of five years. These documents may be required for compliance audit processes during that time. If the location at which data and documentation are retained is changed within that five year period, the Research Ethics Officer should be advised of the new location.



Jo-Ann Sozou  
Secretary/Research Ethics Officer

## **Appendix II: Manuscripts included in the Thesis**

<b>Paper</b>	<b>Target Journal</b>	<b>Progress</b>
Literature review	Collegian: The Australian Journal of Nursing Practice, Scholarship and Research	Accepted: Now available online in early view
Results	Journal of Clinical Nursing	Accepted

## Appendix III: Approval from the Queensland Injury Surveillance Unit to use Data



Mater Hospital  
Level 2, Aubigny Place  
Raymond Terrace  
South Brisbane, QLD 4101

19/8/2014

Research Ethics Officer, Jo Sozou  
Human Research Ethics Committee  
University of New England

Dear Jo,

Re: Ethics application for "Patterns of 'in home' alcohol related injury presentations to emergency departments in Queensland"

I have reviewed the ethics application and support the intended analysis and statements made in the application. In particular, that data will be provided in a format that does not allow the researchers to re-identify cases.

I have a sound working relationship with the researchers and will be reviewing analysis and results throughout the project.

Regards, Ruth



Dr Ruth Barker  
Director, Queensland Injury Surveillance Unit  
Emergency Paediatrician, Mater Children's Hospital



Mater Hospital  
Lvl 2 Aubigny Place  
Raymond Terrace  
South Brisbane, Qld 4101

**AGREEMENT FOR THE PROVISION OF QUEENSLAND INJURY SURVEILLANCE UNIT (QISU) UNIT RECORD LEVEL DATA**

QISU provides injury data to a wide range of data users. The provision of this data at unit record level is subject to the following:

1. Individual QISU records are assigned a unique QISU identification number. In addition to this, when data is provided in unit record level format, a separate, project specific identification number is generated. These numbers allow re-identification of the original QISU file and potential verification of data after any external data manipulation. Therefore, any QISU identification numbers must not be removed from the file.
2. Data that is identifiable or potentially identifiable (e.g. contains a hospital UR number, date of birth, or any combination of variables that could potentially identify an individual) will only be released after appropriate ethics and Public Health Act ('PHA') clearance has been obtained, unless that data is being released solely back to the hospital that supplied the data or to the Health Statistics Centre within QH.
3. Anonymous unit record level data (data where individuals cannot be identified) may be released to selected users. Ethics clearance is not required for requests for anonymous data, but a copy of any ethics clearance of relevance to the project/ paper for which the data is intended must be provided to QISU.
4. All QISU data provided to organisations or individuals must be kept securely and used in accordance with the relevant Privacy and Patient Confidentiality requirements and legislation.
5. QISU data must **only** be used for the research purposes outlined in the research proposal and approved by the Director of QISU. Separate approval from the Director of QISU must be sought to use the data for research purposes not described in the original data request. Further ethics/ PHA clearance may be required prior to approval being granted by QISU.
6. Where arrangements are in place for acknowledgement and/or co-authorship, QISU must be included in a consultative process and provided with draft documents prior to publication, with sufficient time to assess the material and consent to its publication.
7. In the absence of co-authorship, draft versions of research products that utilize QISU unit record level data must be provided to QISU for review and comment prior to submission or publication, with sufficient time to assess the material and provide feedback.
8. For the purposes of this agreement, 'research products' include: reports, manuscripts, abstracts, presentations and posters, or any other output where QISU data are described or have been used.
9. QISU (through the Mater Hospital Marketing Department) must be provided with advanced notice of any media releases and/or media attention in relation to research that includes reference to QISU data.
10. Once data has been provided, project reporting must be completed on a six monthly basis using the QISU mail query web link ([www.qisu.org.au](http://www.qisu.org.au)) to notify QISU of progress, changes and milestones of the project.

**Agreement:**

To be completed by Researcher:

I, Cindy Woods of James Cook University Signature: 

(Designation) SRO agree to be bound by the obligations contained in this document. Date: 04/06/15

I, Josie Vaiese of JAMES COOK UNIVERSITY Signature: 

To be completed by Manager / Supervisor Date: 4-6-15