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## Young adults' experience of responsible service practice in NSW

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*Findings from a recent NSW survey of 18 to 39 year olds who report drinking at at-risk levels for acute alcohol-related harm are presented. It was found that over half of those who consume alcohol in this age group reported that their last location of at-risk drinking occurred at a licensed premises. Of these, over half reported showing at least one sign of intoxication, while almost one in five reported showing at least three signs of intoxication. Only 10 per cent of those reporting signs of intoxication also reported that they had experienced responsible service initiatives from licensed premises staff, while over half of these 'intoxicated' patrons reported that they were continued to be served alcohol. Of particular concern was the finding that as the number of signs of intoxication increased, so did the likelihood of continued alcohol service. While these results suggest that intoxicated patrons are not being refused service as often as they should, there was evidence for some degree of responsible service provision with around half of the 'non-intoxicated' patrons reporting that they had seen licensed premises staff intervene with other 'intoxicated' patrons.*

### INTRODUCTION

Examining the role of situational risk factors for acute alcohol-related problems such as violence and injury has assumed increasing importance in crime prevention and health promotion initiatives. Licensed premises have been identified as one important situational factor for alcohol-related harm, though they are by no means the only one (Hommel 1999). What distinguishes licensed premises, however, is that, by their very nature, they are uniquely placed as locations in which harm minimisation strategies can be implemented. In particular, responsible service of alcohol initiatives are thought to be one potentially useful approach for minimising levels of patron intoxication and reducing subsequent alcohol-related harm (Wiggers, Considine, Hazell, Haile, Rees & Daly 2001).

### PREVIOUS RESEARCH

There are a number of lines of evidence showing that the continued service of alcohol to intoxicated patrons is an important factor in the association between licensed premises and alcohol-related harms such as violence, drink-driving and injury.

Stockwell, Lang and Rydon (1993) report the findings of a household survey of 1,160 adults in Western Australia investigating high-risk settings for adverse alcohol-related outcomes. This survey examined in detail the characteristics of 873 respondents who had reported consuming alcohol at least once during the previous three months. Of these 'drinkers', eight per cent reported having experienced at least one of a number of different types of alcohol-related harm, including involvement in a violent argument or fight, sustaining some type of physical injury, having to take time off

work or being arrested for drink-driving. Importantly, this study found that 72 per cent of these problems occurred after the respondent had been drinking at licensed premises.

This study also examined those 'drinkers' who had been consuming alcohol at licensed premises with a view to identifying factors predictive of alcohol-related harm in this context. As well as age and gender being important predictors of the alcohol-related harms examined (i.e. younger persons less than 25 years of age and males), the amount of alcohol consumed and the continual service of alcohol to 'obviously drunk' patrons were also found to be very strong and independent predictors of harm (Lang, Stockwell, Rydon & Lockwood 1995).

Stockwell, Rydon, Gianatti, Jenkins, Ovenden and Syed (1992) provide further evidence demonstrating an

association between levels of intoxication among patrons at licensed premises and harmful outcomes. They classified fifteen licensed premises in Perth as being at either high- or low-risk for alcohol-related harm. This risk status was based on police arrest data in which the last location of drinking was routinely collected from persons arrested for drink-driving. An exit-survey was conducted of patrons leaving these premises which comprised a brief questionnaire about their alcohol consumption and a breath test. It was found that patrons exiting the high-risk premises had on average higher blood alcohol levels (BAL), self-reported higher levels of alcohol consumption while at the premises and received significantly higher intoxication ratings by the survey staff (who were not informed of the risk status of each premises).

Additional evidence linking levels of alcohol consumption to the incidence of assault was provided by a 'natural experiment' in Perth, comparing licensed premises which had been granted extended trading permits with those maintaining standard hours of trading (Chikritzhs, Stockwell & Masters 1997). This analysis found that the level of assaults doubled among the extended trading group compared with the standard trading group. Importantly, it was also found that this effect was accounted for statistically by the increased alcohol sales among the extended trading group.

A number of emergency department studies conducted on the Gold Coast, have shown an association between alcohol-related injuries and drinking at licensed premises. Campbell and Green (1997) conducted a questionnaire study of 154 assault victims presenting to an emergency department of a Gold Coast hospital. Over 80 per cent of these victims were male, around half were 25 years or younger, and over half of the assaults had occurred during the weekend period. For males, it was found that 38 per cent of these assaults had occurred within a bar or nightclub. In a subsequent investigation of 236 injury cases conducted at the same hospital, Roche, Watt, McClure, Purdie and Green (2001) examined a range of injuries including those which were

assault-related. They reported that, of those injured persons who had consumed more than six standard drinks for males or four standard drinks for females, 65 per cent had been consuming the alcohol at licensed premises. Furthermore, half of those who had been drinking at licensed premises in the six hours prior to being injured, had reported observing obviously intoxicated patrons being served alcohol at those premises.

Studies employing direct observation at licensed premises both in Australia (Homel & Clark 1994) and overseas (Graham, LaRoque, Yetman, Ross & Guistra 1980) have identified a range of premises-specific factors predictive of alcohol-related violence. In addition to a number of environmental and physical aspects of the premises, these studies again found that continuing to serve alcohol to obviously intoxicated patrons was highly predictive of aggression and violence. Homel and Clark (1994) went on to argue, however, that the interaction of intoxication with other key environmental factors (such as low comfort, over-crowding and poor entertainment) was a contributing factor in violent and aggressive incidents.

Responsible service of alcohol (RSA) initiatives have been developed and implemented as one approach to minimise harmful outcomes such as aggression, violence and drink-driving by reducing levels of intoxication among patrons of licensed premises. These initiatives typically incorporate a number of strategies, such as avoiding irresponsible alcohol promotions like discounted drinks; training bar staff to be able to recognise signs of intoxication among patrons; and, importantly, imparting staff with the necessary skills to prevent intoxication from occurring among patrons, or refusing them service if they are already intoxicated. However, in practice, it is unclear to what extent RSA approaches succeed in achieving their goals.

In a review of RSA programs, Stockwell (2001) reported that demonstration projects conducted in the United States and Canada during the 1980s initially showed promising results for RSA programs. Attempts to implement such projects at a broader community level,

both overseas and in Australia did not result in the same level of success, particularly in terms of service refusal of intoxicated persons. Stockwell (2001) argued that one reason for the lack of success in replicating beneficial RSA outcomes was that there has been less uniform management commitment to RSA at the broader community level, compared with establishments involved in demonstration projects.

A further factor important to the success of RSA initiatives at the community level is that they need to be supported by effective and visible enforcement of the prevailing liquor laws. Jeffs and Saunders (1983) report the results of a law enforcement initiative at an English seaside resort town in which uniformed police officers visited all licensed premises on a regular basis. The visits, while regular, were not predictable in terms of the specific time of day or week that they occurred. Several uniformed officers would visit each premises and talk with staff and overtly check for either under-aged drinking or acute intoxication among patrons. While the enforcement initiative was operative, public order offences declined by 21 per cent in this town. Once the visits were stopped, however, arrest rates for these offences returned to previous levels. A control town in which no similar enforcement action occurred showed no change in arrest rates over the same period.

This effect was not however replicated in a similar enforcement initiative involving 10 Police patrols in Sydney (Burns, Flaherty, Ireland & Frances 1995). In fact, these authors reported an increase in the number of general and assault offences in the experimental patrols compared with the control patrols during the intervention period. These authors did point out however that this effect may have reflected greater detection of offences as a function of increased police surveillance, given that hospital admissions for assault declined in both the experimental and control areas. Burns et al. (1995) were also unable to rule out the influence of contaminating factors in the control patrols.

Further evidence for the potential role of enforcement in promoting responsible service of alcohol at licensed premises

was provided by an evaluation of a police enforcement initiative in Washtenaw County, Michigan (McKnight & Streff 1994). This initiative involved plain-clothes officers visiting licensed premises and detecting and breaching bar staff who served obviously intoxicated persons. Although the number of citations and warnings were relatively small in number (13 citations and 11 warnings), the percentage of pseudo-drunk patrons who were refused alcohol increased from 18 per cent at baseline to 54 per cent at three-month follow-up (though this fell to 41% by 12-month follow-up). Additionally, the experimental county experienced a marked reduction in the number of persons arrested for drink-driving (from 32% to 23% attributed to licensed premises).

### INTOXICATION PROVISIONS OF NSW LIQUOR LAWS

Given the potential role of law enforcement initiatives in facilitating a responsible alcohol service climate throughout licensed premises in NSW, it is important to have a sound understanding of the provisions of those laws. The NSW liquor laws place the onus on the licensees and their staff to serve alcohol responsibly. Sections 125(1)(b) of the *Liquor Act 1982* and 44A(1) of the *Registered Clubs Act 1976* stipulate that a licensee shall not permit intoxication, or any indecent, violent or quarrelsome conduct on his or her licensed premises. Where there is a person intoxicated on the premises, the licensee is deemed to have permitted intoxication unless he or she can prove that the licensee and his or her employees took the following relevant steps to prevent intoxication:

- a) asked the intoxicated person to leave
- b) contacted, or attempted to contact, a police officer for assistance in removing the person from the premises
- c) refused to serve the person any alcohol after becoming aware that the person was intoxicated

(s.125(4A) *Liquor Act 1982*; see also s.44A(4) *Registered Clubs Act 1976*).

Furthermore, it is an offence for any person at licensed premises, whether or

not he or she is the licensee, to sell or supply liquor to any person who is in a state of intoxication (s.125(3) *Liquor Act 1982*; see also s.44A(2) *Registered Clubs Act 1976*).

A complaint against a licensee can also be made to the Licensing Court of NSW under section 67 of the *Liquor Act 1982* (see also s.17 *Registered Clubs Act 1976*) on the grounds that:

- a) the licensee or manager has engaged in conduct or activities that are likely to encourage misuse or abuse of liquor (such as binge drinking or excessive consumption)
- b) intoxicated persons have frequently been at the licensed premises or have frequently been seen to leave those premises

While these provisions of the NSW liquor laws clearly prohibit the serving of intoxicated persons at licensed premises, the question remains to what extent these provisions are being adhered to. In order to be able to address this issue, it is important to discern what levels of alcohol consumption are more likely to be predictive of acute alcohol intoxication. The National Health and Medical Research Council (NHMRC) has recently produced a new set of guidelines for what constitutes 'at-risk' levels of alcohol consumption (National Health and Medical Research Council 2001). These guidelines distinguish between the acute (e.g. assault, injury and poisoning) and chronic harms (e.g. cirrhosis and various cancers) associated with excessive alcohol consumption. In terms of the acute harm recommendations, that are of particular relevance to alcohol-related crime, the NHMRC recommend that males consume no more than six and females consume no more than four standard drinks per day. It should be stressed, however, that these guidelines specify the lower limits for drinking at risk levels for acute harm and, as the number of drinks increases beyond these thresholds, the risk of harm also continues to increase.

Stockwell, Heale, Chikritzhs, Dietze and Catalano (2001; 2002) conducted secondary analyses of the 1998 National Drug Strategy Household survey (NDSHS) to estimate the

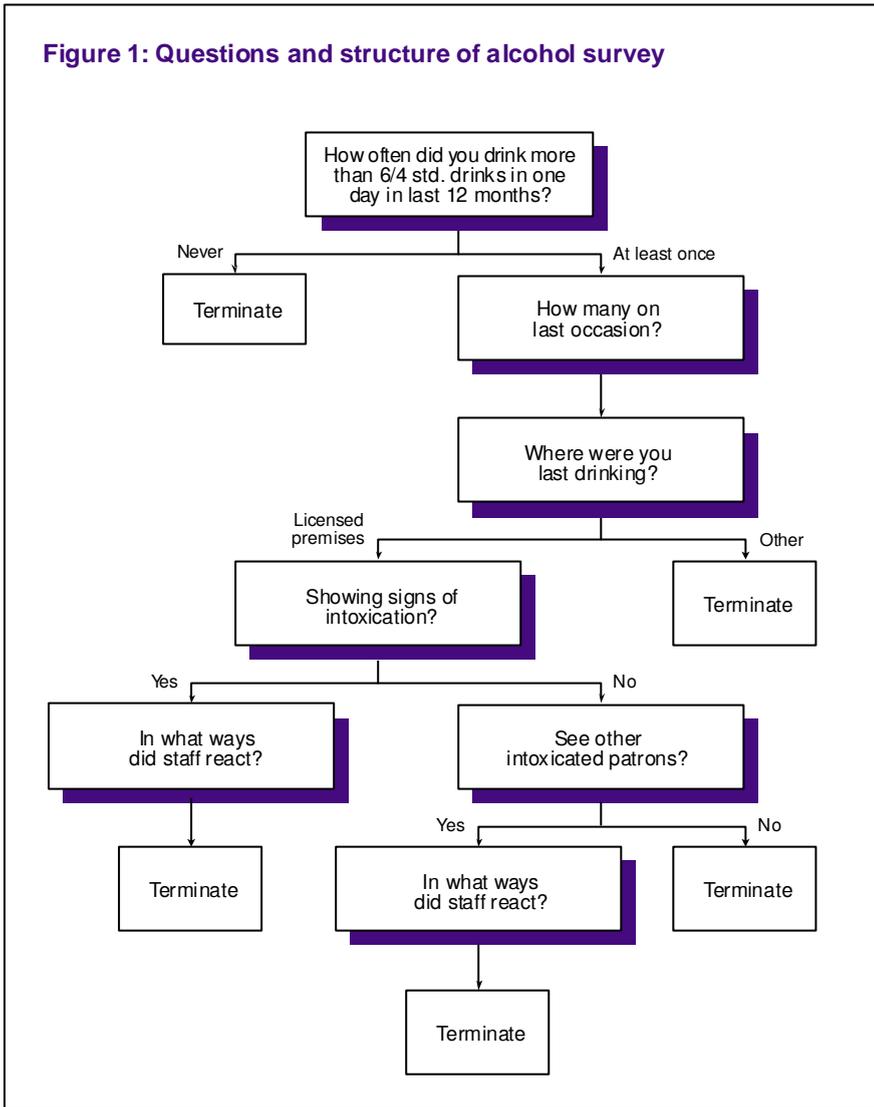
proportion of daily alcohol consumption occurring beyond the levels recommended by the NHMRC. These investigators estimated that, for males aged 18 to 39, the proportion of daily alcohol consumed above the acute-risk guidelines was in the range of 51 to 69 per cent, while, for females aged 18 to 39, the proportion was in the range of 35 to 52 per cent. While these analyses suggest that the prevalence of at-risk drinking for acute harm among younger adults appears to be reasonably high in Australia, there is a lack of available information on the extent to which this acute-risk drinking is occurring at licensed premises. Nor is there any information on the subsequent levels of intoxication amongst these young adults drinking at licensed premises.

### THE CURRENT INVESTIGATION

The primary aims of the current investigation were twofold. Firstly, it sought to provide an estimate of the prevalence of intoxication amongst 18 to 39 year olds who report drinking beyond the NHMRC acute-risk guidelines at licensed premises. Secondly, it aimed to measure the extent to which certain responsible service practices are occurring at NSW licensed premises. In order to address these issues, a telephone survey of young adults aged 18 to 39 years was conducted. The survey sample was restricted to this age range since evidence clearly shows that it is these younger adults who are more likely to consume alcohol at risk levels for acute harm (Stockwell et al. 2001) and to be over-represented in acute alcohol-related outcomes such as death or hospitalisation from assault (Chikritzhs, Jonas, Heale, Dietze & Stockwell 1999) and police-recorded assaults (Briscoe & Donnelly 2001a).

AC Nielsen, on behalf of the Bureau, administered the present survey as part of their regular omnibus survey.<sup>1</sup> A Computerised Assisted Telephone Interviewing (CATI) system was used to administer the survey. All phone calls were made on Friday night from 5.00pm - 9.30pm, Saturday 10.00am - 7.30pm and Sunday 10.00am - 7.30pm. Age, gender and location (Sydney/Regional

Figure 1: Questions and structure of alcohol survey



NSW) quotas were applied to ensure that the sample was representative of the NSW population on these factors. Each respondent asked to participate was informed that the entire survey would take approximately 10 minutes to complete. Five surveys were then administered on a fortnightly basis, with the first commencing on 14 December 2001 and the last completed on 10 February 2002.<sup>2</sup> The order in which the items for the alcohol survey fell as part of the overall omnibus survey varied across occasions.

In total, 2,427 interviews were completed for the omnibus surveys administered over the five weekends. From these, 1,090 respondents were in the age range required for the present study and thus, completed the alcohol survey.<sup>3</sup>

### ALCOHOL QUESTIONNAIRE

A flow chart of the structure of the alcohol survey is provided in Figure 1 and the questionnaire items are provided in full in Appendix A. All respondents were initially asked how often they had consumed more than six (for males) or four (for females) standard drinks in one day during the previous 12 months. This item was taken directly from the 1998 NDSHS and corresponds to the NHMRC acute-risk guideline. Respondents who indicated that they had consumed alcohol beyond the acute-risk guidelines at least once were then asked how many standard drinks they had consumed on the last such drinking occasion and where this drinking location was. Subsequent questions concerning signs of intoxication and staff responses to

these signs were necessarily restricted to those respondents who indicated they were drinking at licensed premises.

Examining the issue of intoxication in a survey presents a number of challenges and requires that clear working definitions be adopted. As there is no statutory definition of 'intoxication' in either the Liquor Act 1982 or the Registered Clubs Act 1976, licensees and their staff generally must rely on some set of objective behavioural signs to assess a patron's level of intoxication. While behavioural indicators of intoxication are likely to vary considerably across individuals, for the present survey it was necessary to determine whether the respondents were displaying some general signs of intoxication that could be readily observed by others. Thus, eligible respondents were asked to indicate whether they showed any of the following five signs of intoxication: (1) *loss of coordination*; (2) *slurred speech*; (3) *staggering or falling over*; (4) *spilling drinks* and (5) *loud or quarrelsome behaviour*. One advantage of asking the number of individual signs of intoxication shown is that it enables one to sum across the signs in order to identify more intoxicated sub-groups of patrons.

Although this list of intoxication signs is not exhaustive, it incorporates key behavioural indicators that have been cited by other sources. Lang et al. (1995) used four of these five signs to characterise people who were 'obviously drunk' in their survey investigating alcohol-related harm and drinking settings conducted in Perth in the early 1990s. These five signs are also consistent with information on signs of intoxication supplied to licensees in a Department of Gaming and Racing information sheet discussing important elements of serving alcohol responsibly on licensed vessels (Department of Gaming and Racing 1997).

Those patrons who indicated that they had shown at least one of the five signs were then asked how the licensed premises staff had responded to these observable signs of intoxication. The following staff reactions were asked and again the respondent could indicate more than one of these responses where appropriate: (1) *they refused to*

serve me any more alcoholic drinks; (2) they asked me to leave the premises; (3) they called the police; (4) they advised me on or organised transport home; (5) they suggested I buy low- or non-alcoholic drinks; (6) they suggested that I buy some food; (7) they suggested that I stop drinking and (8) they continued to serve me alcoholic drinks. Items one through seven for this question were rotated across respondents, however item eight (relating to the continual service of alcohol) was always asked last. Items one through three were included because both the Liquor Act 1982 and the Registered Clubs Act 1976 define these as 'reasonable steps' to prevent intoxication. Items four through six were included as they were consistent with guidelines issued in a Licensing Court Practice Direction relating to harm minimisation (Licensing Court of NSW 1997).

Those respondents who indicated that they were not showing any of the five signs of intoxication while drinking at the licensed premises were asked if they had seen any other patrons showing these signs and, if so, whether they had seen any of the above eight staff reactions to these intoxicated persons.

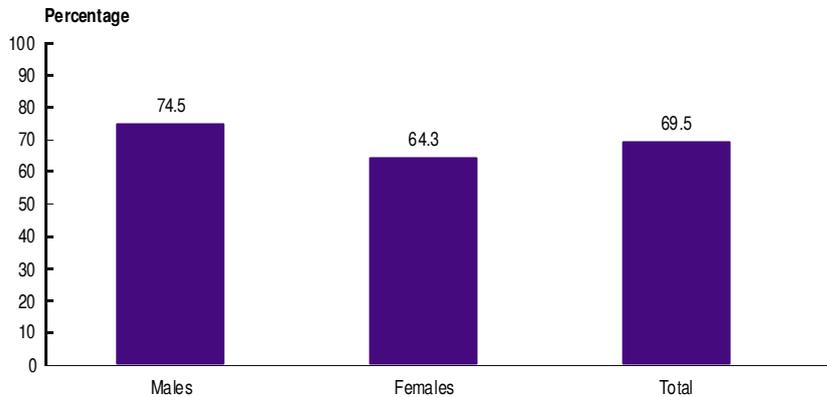
**RESULTS**

**PREVALENCE OF DRINKING AT ACUTE-RISK LEVELS FOR ALCOHOL-RELATED HARM**

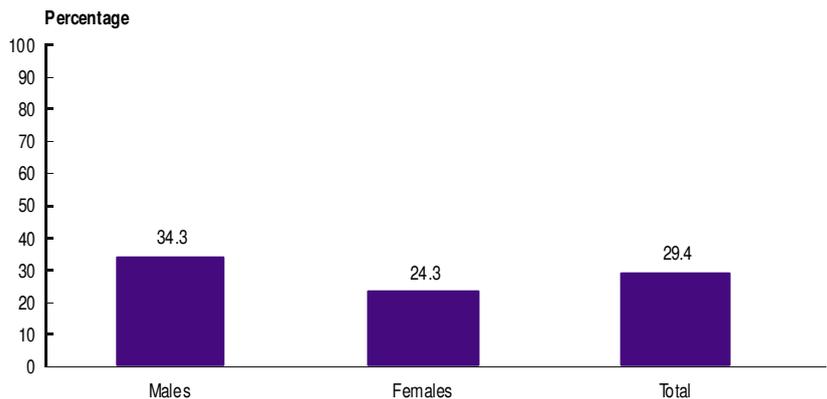
Of the 1,090 respondents, 758 (69.5%) reported that they had drunk at levels exceeding the NHMRC guideline for risk of acute alcohol-related harm at least once in the previous 12 months. As shown in Figure 2, the prevalence of drinking at acute-risk levels varied by gender, with a higher percentage of males (74.5%) reporting drinking at acute-risk levels than females (64.3%). This is despite the NHMRC guideline being more liberal for males than females with regard to what constitutes a drinking level at risk for acute harm (>6 standard drinks for males v. >4 standard drinks for females).<sup>4</sup>

Figure 3 shows the percentage of respondents drinking at acute-risk levels on at least a weekly basis. Over one-

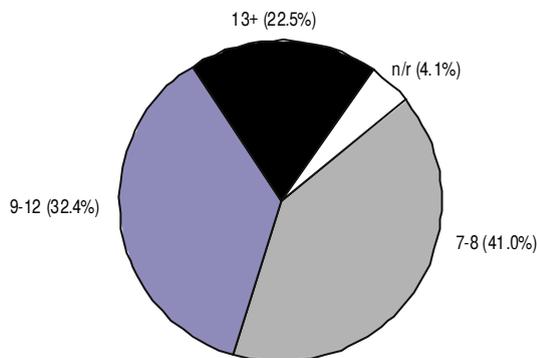
**Figure 2: Percentage drinking at acute-risk levels at least once in previous 12 months (n=1,090)**



**Figure 3: Percentage drinking at acute-risk levels at least weekly (n=1,090)**

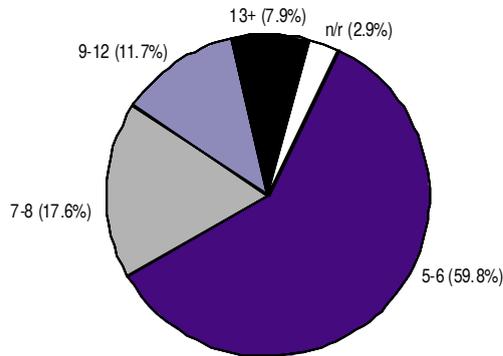


**Figure 4: Percentage breakdown by number of standard drinks consumed - males (n=417)**



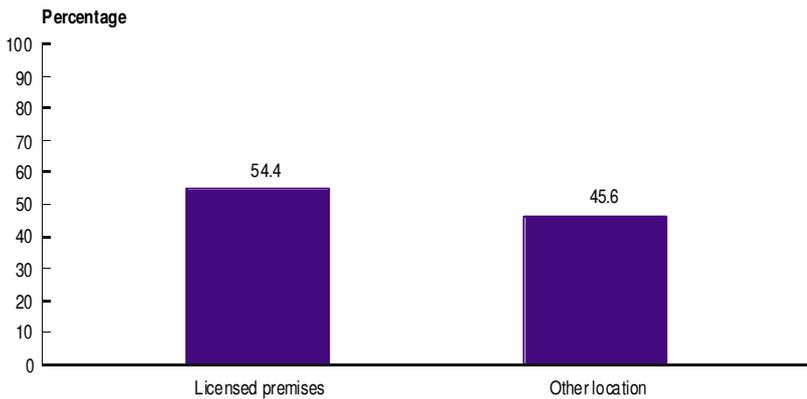
Note: n/r refers to male respondents who did not respond to this question.

**Figure 5: Percentage breakdown by number of standard drinks consumed - females (n=341)**

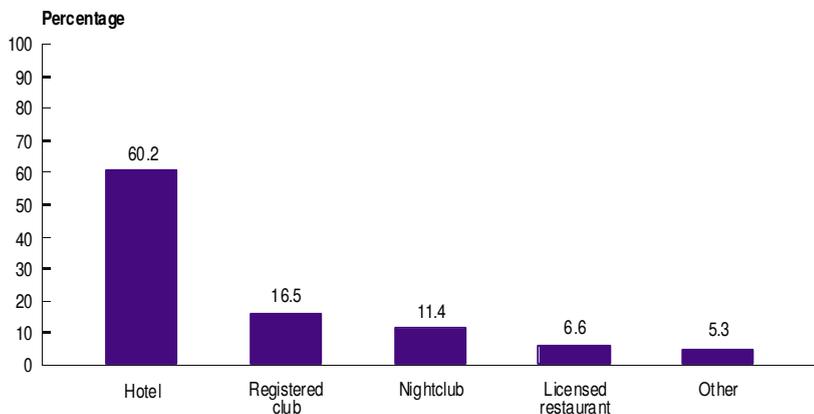


Note: n/r refers to female respondents who did not respond to this question.

**Figure 6: Percentage breakdown by last location of acute-risk drinking (n=758)**



**Figure 7: Percentage breakdown by last location of acute-risk drinking (licensed premises only n=412)**



third of males and almost one-quarter of females aged 18-39 reported drinking at acute-risk levels at least once a week during the previous 12 months.

**NUMBER OF STANDARD DRINKS CONSUMED DURING LAST ACUTE-RISK DRINKING OCCASION**

Those respondents who had drunk at acute-risk levels at least once in the previous 12 months were then asked how many standard drinks they had consumed on their last acute-risk drinking occasion. Figure 4 and Figure 5 display the percentage breakdown of number of standard drinks consumed on this occasion for males and females respectively. For males, 41 per cent reported that they had consumed 7-8 standard drinks, 32 per cent 9-12 standard drinks and a further 23 per cent had consumed 13 or more standard drinks. The breakdown by quantity of alcohol consumed was noticeably different for females, though it should be remembered that, unlike males, the NHMRC risk definition for females includes the 5-6 standard drinks category. For females, 60 per cent reported that they had consumed 5-6 drinks on their last acute-risk drinking occasion. In terms of higher quantities consumed, 18 per cent of females reported drinking 7-8 standard drinks, 12 per cent consumed 9-12 standard drinks, while only eight per cent consumed 13 or more standard drinks.

**LAST LOCATION OF DRINKING AT ACUTE-RISK LEVELS FOR ALCOHOL-RELATED HARM**

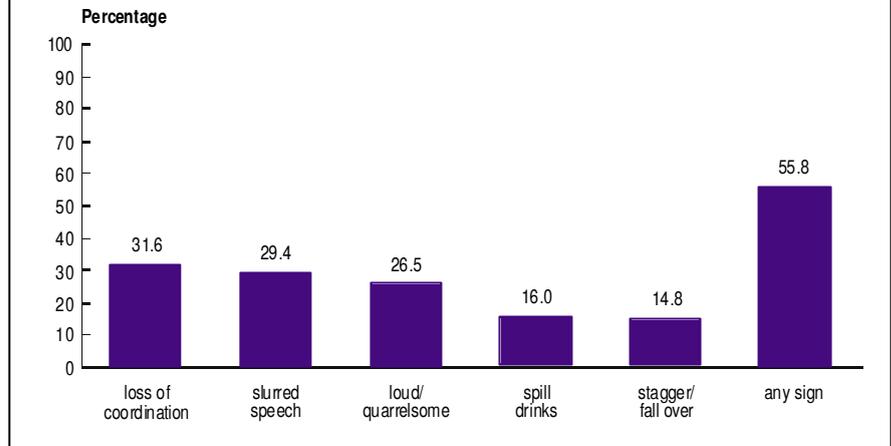
Of the 758 respondents who had consumed alcohol at acute-risk levels at least once during the previous 12 months, 412 (54.4%) reported that on the last such occasion the final place they had been drinking was a licensed premises (see Figure 6). The 346 respondents who reported drinking at a location other than licensed premises were also asked to specify where it was they had been drinking. Half of these respondents stated that they had been drinking at home (50.3%), just over one-third at another private residence (36.1%), while the remainder (13.6%) indicated they had been drinking at some other type of location, including public places.

As shown in Figure 7, 60 per cent of the 412 respondents who had been drinking at licensed premises on their last acute-risk drinking occasion reported that the type of licensed premises where they had been drinking was a hotel. A further 17 per cent stated that they had been drinking at a registered club, 11 per cent at a nightclub, seven per cent at a licensed restaurant and five per cent at some other type of licensed premises. While this last acute-risk drinking occasion at licensed premises could potentially have occurred at any time in the previous year, further analyses revealed that it was likely to have been a recent event. An examination of the frequency of drinking at acute-risk levels shows that almost 80 per cent of this group of 412 respondents indicated that they had drunk above the NHMRC guidelines at least once a month in the previous 12 months. This suggests that the last acute-risk drinking occasion being recalled by the majority of these respondents would have occurred in the four weeks prior to their interview.

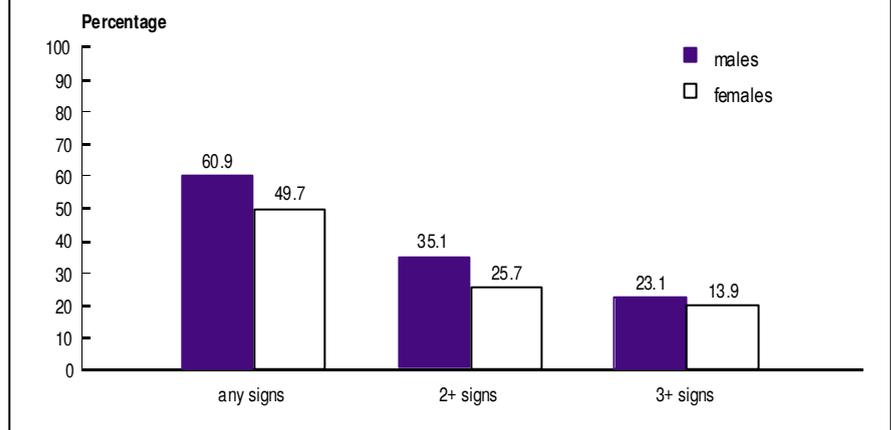
**SIGNS OF INTOXICATION AMONGST THOSE DRINKING AT LICENSED PREMISES**

Respondents who reported that their last acute-risk drinking occasion had occurred while at licensed premises were then asked if they had shown each of the five signs of intoxication. Of these 412 respondents, 32 per cent reported showing signs of ‘loss of coordination’; 29 per cent ‘slurred speech’; 27 per cent ‘loud or quarrelsome behaviour’; 16 per cent ‘spilling drinks’; 15 per cent ‘staggering or falling over’ (see Figure 8). In total, 56 per cent of those who were drinking at licensed premises reported showing at least one of these five signs of intoxication. Since respondents could nominate more than one sign of intoxication, and no single sign is absolutely indicative of intoxication, it was also informative to sum across these individual signs. Doing this reveals that 127 (30.8%) of the 412 respondents drinking at licensed premises reported that they had shown two or more signs of intoxication, while 78 (18.9%) reported showing three or more signs of intoxication.

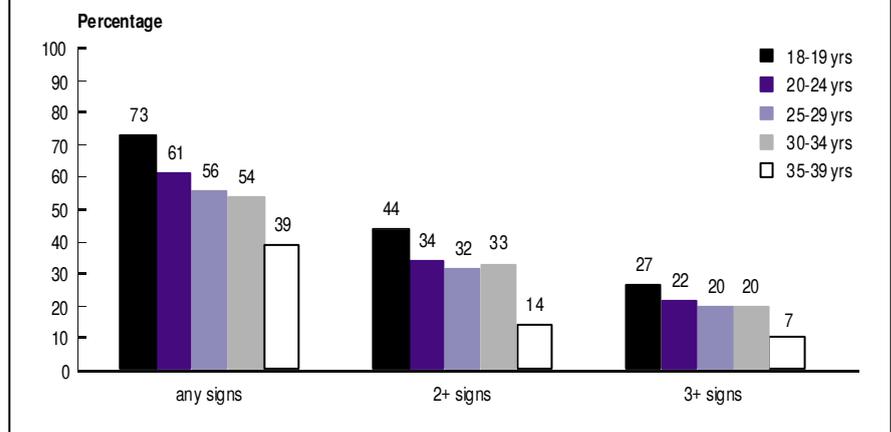
**Figure 8: Percentage reporting each sign of intoxication (n=412 respondents drinking at acute-risk levels at licensed premises)**



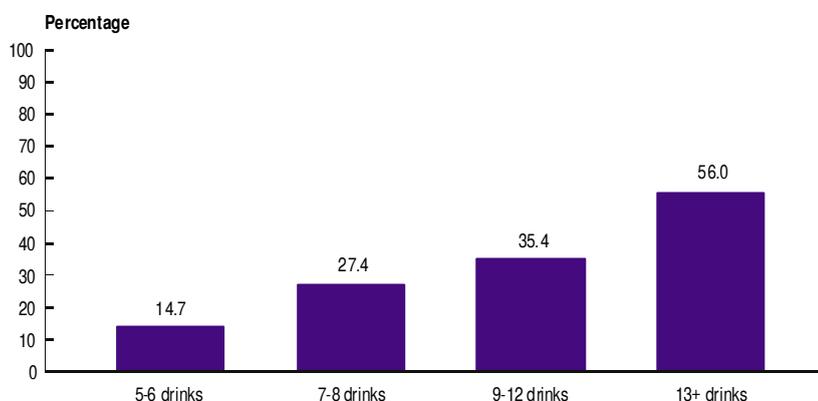
**Figure 9: Percentage reporting any, 2+ and 3+ signs of intoxication by gender (n=412 respondents drinking at acute-risk levels at licensed premises)**



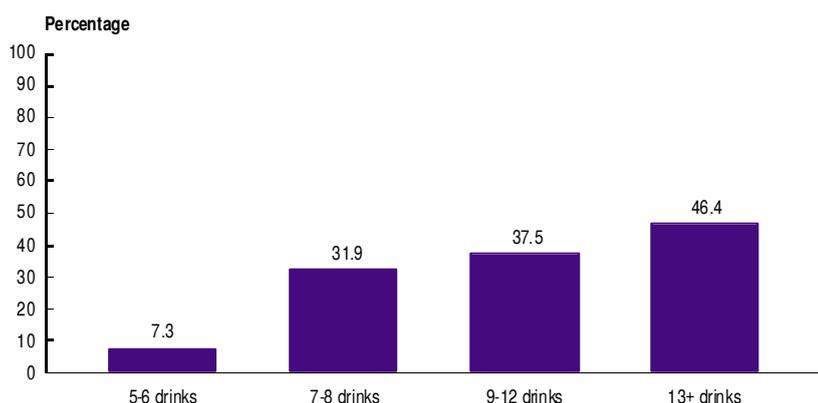
**Figure 10: Percentage reporting any, 2+ and 3+ signs of intoxication by age group (n=412 respondents drinking at acute-risk levels at licensed premises)**



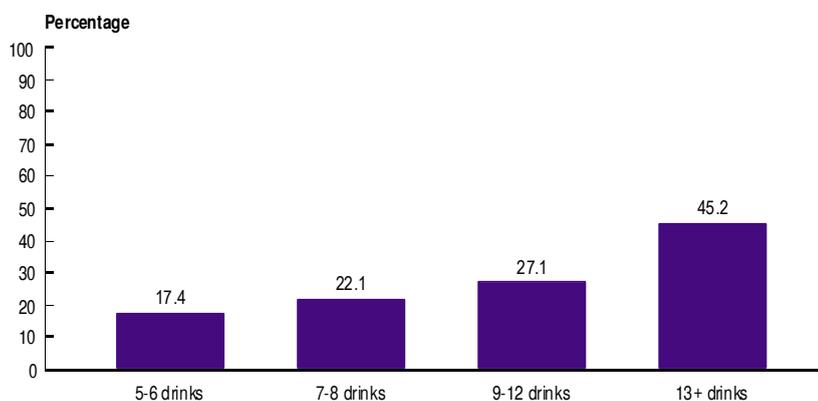
**Figure 11a: Percentage reporting 'loss of co-ordination' by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



**Figure 11b: Percentage reporting 'slurred speech' by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



**Figure 11c: Percentage reporting 'loud or quarrelsome behaviour' by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



Both gender and age were found to be predictive of whether a respondent displayed any signs of intoxication as well as the number of signs of intoxication they displayed. Figure 9 shows that males were more likely than females to have reported any signs of intoxication (60.9% v. 49.7%), two or more signs of intoxication (35.1% v. 25.7%) and three or more signs of intoxication (23.1% v. 13.9%).

Figure 10 shows a strong relationship between age and the number of intoxication signs reported, with younger age groups reporting higher rates of intoxication. For any signs of intoxication the relationship was generally linear, with lower rates of intoxication across successive age groups. Almost three-quarters of those aged 18-19 reported having shown any of the five signs, followed by 61 per cent of 20-24 year olds, 56 per cent of 25-29 year olds, 54 per cent of 30-34 year olds and 39 per cent of 35-39 year olds. In terms of those showing two or more signs or three or more signs, the age pattern was somewhat different. For each of these groups, 18-19 year olds again reported the highest rates of intoxication (44% with two or more signs and 27% with three or more). However, the next three age groups (20-34 year age-band) showed similar rates of multiple signs of intoxication. There was then quite a large decline in the multiple signs of intoxication rates for the 35-39 year olds. Around one-third of those aged 20-34 reported showing two or more signs of intoxication compared with 14 per cent of 35-39 year olds. Similarly, around one-fifth of those aged 20-34 reported three or more signs compared with only seven per cent of the 35-39 year olds.

**RELATIONSHIP BETWEEN NUMBER OF STANDARD DRINKS CONSUMED AND REPORTED SIGNS OF INTOXICATION AT LICENSED PREMISES**

A strong relationship was also found between the number of drinks consumed and the likelihood of showing each of the five signs of intoxication. Figures 11a-11e show the percentage of respondents reporting each of the five signs of intoxication by the number of

drinks consumed.<sup>5</sup> These figures indicate that, in general, the reporting rate for each of the signs increased across the four alcohol consumption categories. This relationship was statistically significant for each of the five signs.<sup>6</sup>

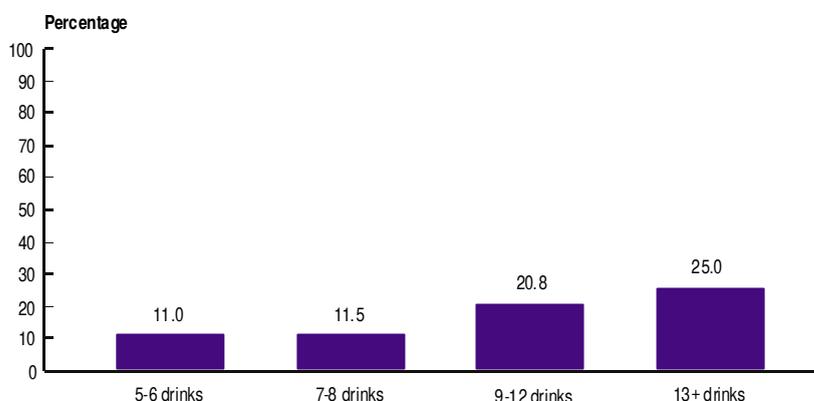
In particular, 'loss of coordination' (see Figure 11a) showed a consistent linear increase across successive consumption categories. The rates for this outcome ranged from 15 per cent of those who consumed 5-6 drinks through to 56 per cent of those who consumed 13 or more drinks. For 'slurred speech' (see Figure 11b), only 7 per cent of those who consumed 5-6 drinks reported this behaviour while 32 per cent of those who had consumed 7-8 drinks stated that they were showing this sign of intoxication. Thereafter there was a consistent linear increase such that 46 per cent of those consuming 13 or more drinks reported that they had 'slurred speech'.

With respect to 'loud or quarrelsome behaviour' (see Figure 11c) the rates increased consistently from 17 per cent of those who had consumed 5-6 drinks through to 27 per cent of those who consumed 9-12 drinks. This was followed by a marked increase to 45 per cent of those who had consumed 13 or more drinks. For 'spilling drinks' (see Figure 11d) the rates ranged from 11 per cent of those who had consumed 5-6 drinks through to 25 per cent of those who had consumed 13 or more drinks. However, this relationship differed somewhat from those described

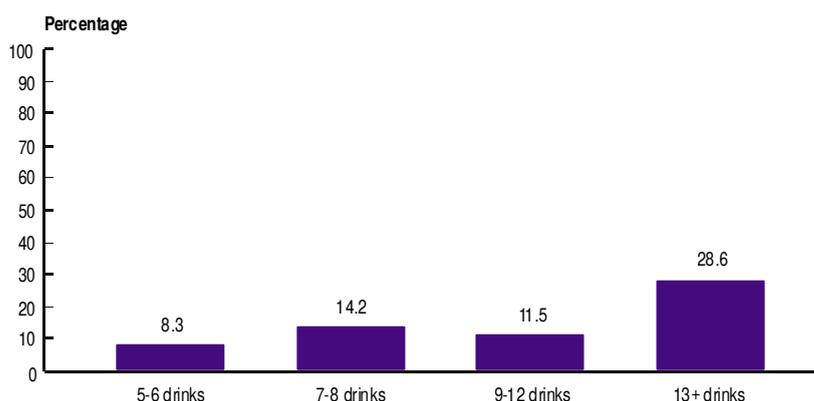
previously in that there appeared to be a threshold effect. This was evident by the fact that those who had consumed 9 or more standard drinks were almost twice as likely to report 'spilling drinks' than those who had consumed less than 9 drinks. A similar threshold effect was apparent for 'staggering or falling over' (see Figure 11e), such that the rate of this reported behaviour was considerably higher for the 13 or more drinks group (29%) compared with the other three consumption categories.

Figures 12a-12c show the relationship between the number of drinks consumed and the rates of respondents reporting any of the five signs of intoxication, two or more signs and three or more signs.<sup>7</sup> In each case strong linear relationships

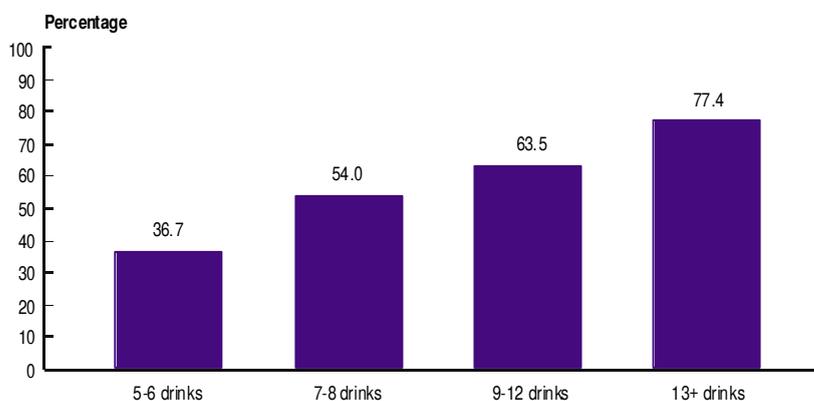
**Figure 11d: Percentage reporting 'spilling drinks' by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



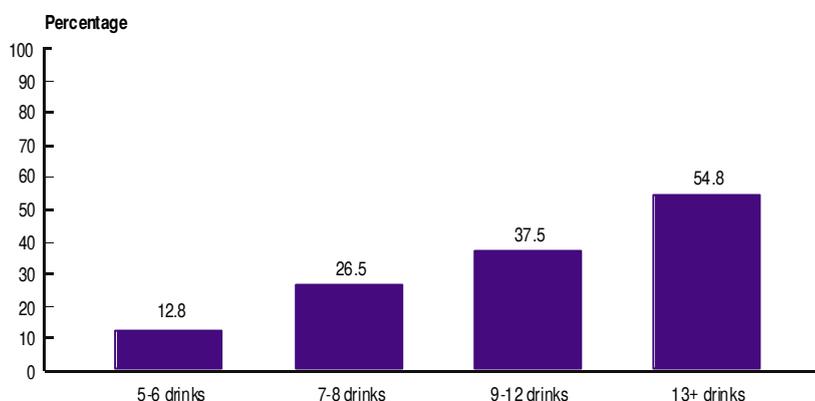
**Figure 11e: Percentage reporting 'staggering/falling over' by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



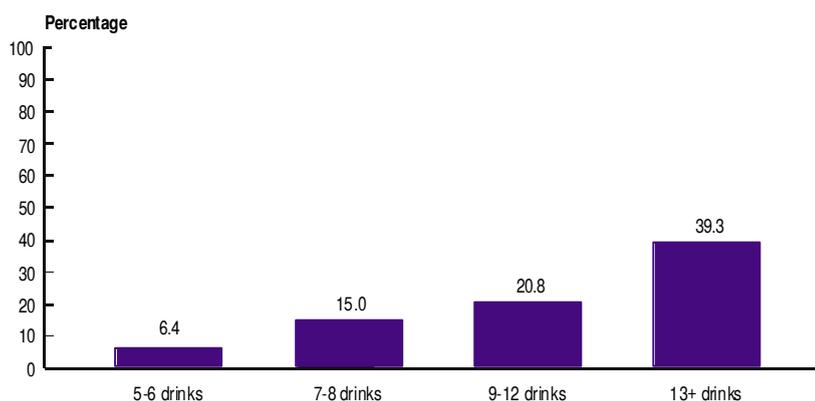
**Figure 12a: Percentage reporting any of the 5 signs of intoxication by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



**Figure 12b: Percentage reporting 2+ signs of intoxication by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



**Figure 12c: Percentage reporting 3+ signs of intoxication by number of drinks consumed (n=412 respondents drinking at acute-risk levels at licensed premises)**



were in evidence. For any of the five signs of intoxication (see Figure 12a) the rates consistently increased from 37 per cent of those who consumed 5-6 drinks through to 77 per cent of those who consumed 13 or more drinks. For two or more signs, the relationship was again strongly linear in nature, ranging from 13 per cent of those who consumed 5-6 drinks through to 55 per cent of those who consumed 13 or more drinks. For three or more signs the rates ranged from 6 per cent of those who consumed 5-6 drinks through to 39 per cent of those who consumed 13 or more drinks. These effects were statistically significant for any sign of intoxication, two or more signs and three or more signs respectively.<sup>8</sup>

**REACTIONS OF LICENSED PREMISES STAFF TO RESPONDENTS SHOWING SIGNS OF INTOXICATION**

Respondents who reported at least one sign of intoxication were then asked how the licensed premises staff had reacted while they were showing these signs. Multiple response options were possible. Table 1 documents the frequencies and percentages for each response category. Of the 230 respondents who reported showing at least one sign of intoxication, 126 (54.8%) reported that they were continued to be served alcoholic drinks. Only five (2.2%) respondents reported that they were refused any more alcoholic drinks, while eight (3.5%) reported that they were asked to leave the premises. Eleven (4.8%) respondents reported that the staff had advised them on or organised public transport home, while eight (3.5%) reported that the staff had suggested they stop drinking. Other responsible service options were generally of low frequency. Overall, 24 (10.4%) of these 'intoxicated' patrons experienced at least one of the seven RSA initiatives. There were a further 85 (37%) respondents who reported that they did not experience any of the responsible service initiatives listed but also were not continued to be served alcohol (i.e. they nominated the 'none of the above' category). While it is possible that these respondents had someone else buying their drinks for them, it would appear more likely that

**Table 1: Reactions of licensed premises staff to respondents who reported at least one sign of intoxication (n=230)**

Staff reaction when showing any signs of intoxication	N	%
Refused to serve me any more alcoholic drinks	5	2.2
Asked me to leave the premises	8	3.5
They called the police	1	0.4
Advised me on or organised transport home	11	4.8
Suggested I buy low or non-alcoholic drinks	5	2.2
Suggested I buy some food	4	1.7
Suggested that I stop drinking	8	3.5
They continued to serve me alcoholic drinks	126	54.8
None of the above	85	37.0
Respondent refused to answer question	2	0.9

this group had stopped drinking of their own accord since on average they reported showing less signs of intoxication.<sup>9</sup>

Table 2 and Table 3 show the reactions of licensed premises staff to those subgroups of respondents who had reported either two or more signs or three or more signs of intoxication respectively. Although these tables confirm the pattern for the overall group, there was a tendency for those reporting more signs of intoxication to report somewhat higher rates of continuing to be served alcoholic drinks.

Given the high rates of 'intoxicated' respondents also reporting that they were continued to be served alcohol, it is worth examining the likelihood of continued service according to the type and number of signs of intoxication patrons displayed. Figure 13 shows the percentage reporting that they were continued to be served alcohol by each individual sign of intoxication. Between 57 per cent and 62 per cent of respondents reporting each of these signs, also reported that they were continued to be served alcohol. Furthermore, there appeared to be no apparent decrease in the percentage of respondents who were continued to be served alcohol as the number of reported signs of intoxication increased. In fact, there was evidence of the opposite relationship. Figure 14 shows that, while 55 per cent of those reporting any sign of intoxication stated that they were continued to be served alcohol, 60 per cent of those reporting two or more signs were also continued to be served. For those reporting three or more signs of intoxication, however, 65 per cent reported that they were continued to be served alcohol.

From Figure 14 it appears that those reporting three or more signs of intoxication were more likely to report that they were continued to be served alcohol. In order to test the significance of this effect, an analysis was conducted comparing respondents who reported showing three or more signs of intoxication with those showing less than three signs. This analysis found that there was a significantly greater likelihood that those showing three or more signs of intoxication would report

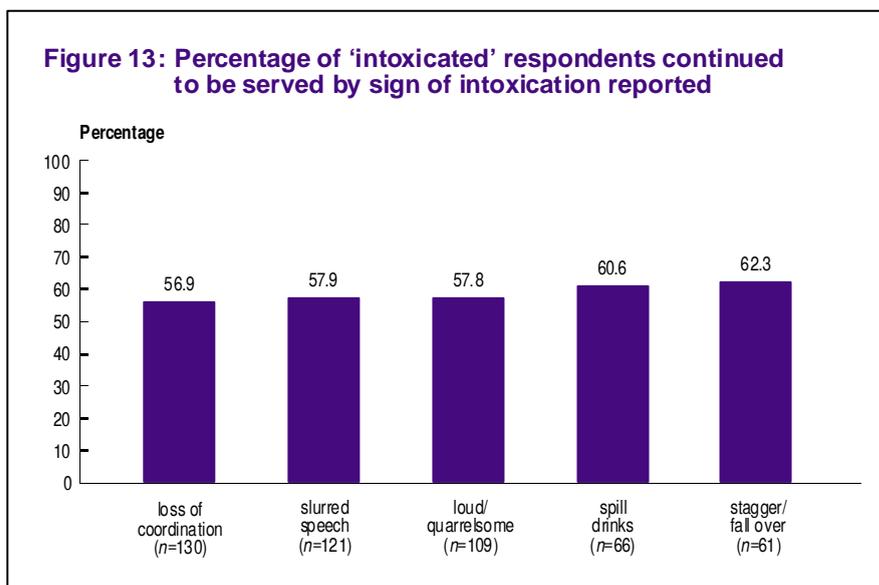
**Table 2: Reactions of licensed premises staff to respondents who reported two or more signs of intoxication (n=127)**

<i>Staff reaction when showing 2 or more signs of intoxication</i>	<i>N</i>	<i>%</i>
Refused to serve me any more alcoholic drinks	3	2.4
Asked me to leave the premises	7	5.5
They called the police	1	0.8
Advised me on or organised transport home	8	6.3
Suggested I buy low or non-alcoholic drinks	3	2.4
Suggested I buy some food	3	2.4
Suggested that I stop drinking	5	3.9
They continued to serve me alcoholic drinks	76	59.8
None of the above	40	31.5
Respondent refused to answer question	0	0.0

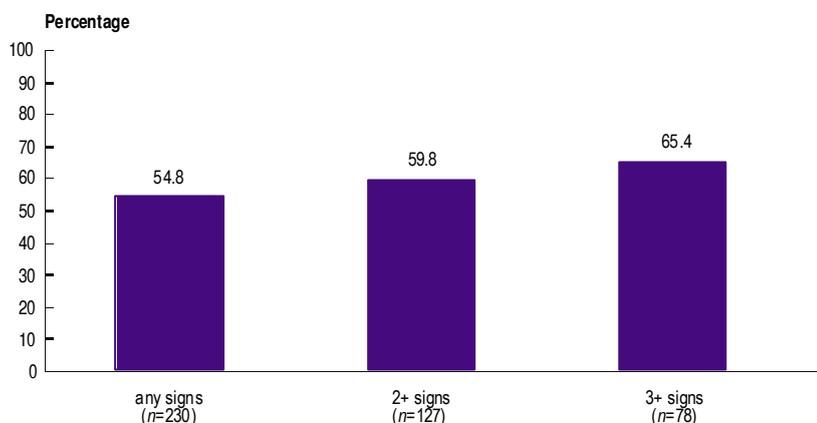
**Table 3: Reactions of licensed premises staff to respondents who reported three or more signs of intoxication (n=78)**

<i>Staff reaction when showing 3 or more signs of intoxication</i>	<i>N</i>	<i>%</i>
Refused to serve me any more alcoholic drinks	3	3.8
Asked me to leave the premises	5	6.4
They called the police	1	1.3
Advised me on or organised transport home	5	6.4
Suggested I buy low or non-alcoholic drinks	2	2.6
Suggested I buy some food	2	2.6
Suggested that I stop drinking	3	3.8
They continued to serve me alcoholic drinks	51	65.4
None of the above	21	26.9
Respondent refused to answer question	0	0.0

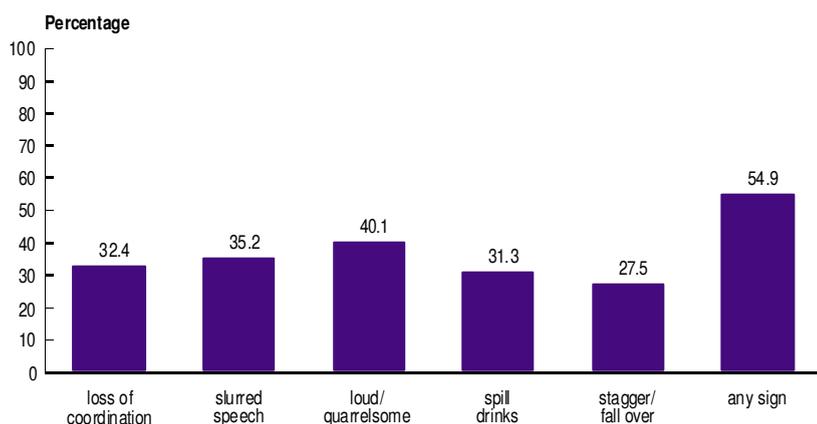
**Figure 13: Percentage of 'intoxicated' respondents continued to be served by sign of intoxication reported**



**Figure 14: Percentage of 'intoxicated' respondents continued to be served by number of intoxication signs reported**



**Figure 15: Percentage of 'non-intoxicated' respondents by signs of intoxication observed in others (n=182)**



that they were continued to be served alcohol (65.4% v. 49.3%;  $\chi^2 = 5.4$ ,  $df = 1$ ,  $p = 0.02$ ).

**PERCEPTIONS OF OTHERS EXHIBITING SIGNS OF INTOXICATION AT LICENSED PREMISES**

Of the 412 respondents who reported drinking at licensed premises on their last acute-risk drinking occasion, 182 (44.2%) reported that they did not show any of the five signs of intoxication. This group were then asked whether they were aware of any other people at the licensed premises who were exhibiting signs of intoxication. Responses for each of the five signs, as well as for any sign, are shown in Figure 15. Of these 182 respondents, 32 per cent observed 'loss of coordination' in other patrons; 35 per cent observed 'slurred speech'; 40 per cent observed 'loud or quarrelsome behaviour'; 31 per cent observed other patrons 'spilling drinks'; and 28 per cent observed others 'staggering or falling over'. In total, 55 per cent of these 182 respondents observed at least one of the five signs of intoxication in other patrons.

Furthermore, 19 per cent of these respondents observed all five signs of intoxication exhibited by other patrons while at the licensed premises. It should be pointed out, however, that these 'non-intoxicated' respondents could be reporting that they observed all five signs in individual patrons, or alternatively all five signs distributed across a number of different patrons.

**Table 4: Reactions of licensed premises staff to patrons who were observed by others to be intoxicated (n=100)**

Staff reaction to others showing signs of intoxication	N	%
Refused to serve them any more alcoholic drinks	31	31.0
Asked them to leave the premises	24	24.0
They called the police	3	3.0
Advised them on or organised transport home	6	6.0
Suggested they buy low or non-alcoholic drinks	7	7.0
Suggested they buy some food	3	3.0
Suggested that they stop drinking	18	18.0
They continued to serve them alcoholic drinks	26	26.0
None of the above	29	29.0
Respondent refused to answer question	0	0.0

**REACTIONS OF LICENSED PREMISES STAFF TO SIGNS OF INTOXICATION IN OTHER PATRONS**

The 100 respondents who did not report any of the five signs of intoxication in themselves but who did observe at least one of the five signs in other patrons, were then asked how the licensed premises staff had reacted to these other 'intoxicated' patrons. The frequencies and percentages of each of the individual reactions are shown in Table 4.

Of these 100 respondents, 31 per cent observed other patrons being refused service; 24 per cent observed others

being asked to leave the premises; 18 per cent observed staff suggest that other patrons stop drinking; seven per cent observed staff suggest to other patrons that they buy low or non-alcoholic drinks; six per cent observed staff advise or organise transport home for other patrons; three per cent observed staff suggest other patrons have some food; and three per cent observed staff call the police to deal with other patrons. In all, 50 per cent of these respondents observed at least one of these staff responses to other 'intoxicated' patrons. However, 26 per cent of the respondents who observed other patrons exhibiting at least one sign of intoxication reported that these patrons were served more alcohol. A further 29 per cent of these respondents reported that they did not observe any of the responsible service initiatives but also did not observe the continual service of alcohol to these 'intoxicated' patrons.

## DISCUSSION

The survey findings confirm that licensed premises are an important setting for at-risk levels of alcohol consumption. Over half of the 18 to 39 year olds who reported drinking at acute-risk levels stated that the last such drinking occasion occurred at licensed premises. Many of these young adults reported showing overt signs of intoxication on this occasion. Over half reported showing at least one of the five signs of intoxication investigated, while almost one in three of these young adults reported showing two or more signs and almost one in five reported showing three or more signs. The veracity of these reports of intoxication is supported by the close relationship they bear to the number of drinks respondents report having consumed.

Despite this, we found only limited evidence of staff intervention to prevent the serving of alcohol to these people. Few of those who said they had showed signs of intoxication reported any attempt by the licensed premises staff to stop them consuming more alcohol. Of those who said they exhibited at least one sign of intoxication, less than three per cent were refused service and less than four per cent were asked to leave the premises. For those who reported

showing three or more signs of intoxication, less than four per cent were refused service and only about six per cent were asked to leave the premises. The most common response of licensed premises staff was to continue serving alcohol. Indeed, a higher percentage of those who reported showing three or more signs of intoxication said that they were continued to be served alcohol than those who reported showing less signs of intoxication.

The most encouraging evidence concerning the responsible serving of alcohol came from respondents who said that they showed no signs of intoxication on the last occasion they drank at acute-risk levels at licensed premises. Of those 'non-intoxicated' patrons who observed other 'intoxicated' patrons at the licensed premises, almost one in three reported that they witnessed the refusal of service to these 'intoxicated' patrons and one in four witnessed 'intoxicated' patrons being asked to leave. In total, over half of this group reported seeing at least one of the RSA responses from licensed premises staff to other 'intoxicated' patrons. This encouraging result is tempered somewhat by the concomitant finding that one in four of these 'non-intoxicated' patrons still reported that they witnessed the continual service of alcohol to other 'intoxicated' patrons.

These findings must be viewed with concern, given the clear prohibition under NSW liquor laws against serving alcohol to intoxicated people and the strong link between alcohol intoxication, violence and public disorder. They suggest that the policy of server intervention, which is pivotal to the prevention of alcohol-related crime and disorder, is not being enforced as vigorously as it should.<sup>10</sup> It is true that the survey findings on this issue can be generalised only to young adults aged 18 to 39 years of age who drink at licensed premises. On the other hand, this is precisely the group of drinkers which responsible service initiatives need to impact on, if they are to help reduce alcohol-related crime, violence, disorder and accidental injury.

What cannot be determined from this study is whether the problem arises (a) because bar staff have difficulty refusing service to intoxicated patrons (b) because

bar staff have difficulty identifying those who have consumed alcohol to the point of intoxication (c) because the owners or managers of licensed premises deliberately flout the law or (d) some combination of each of these.

Difficulties in recognising intoxication may stem either from a lack of training on the part of bar staff or a lack of adequate surveillance of patrons by bar/security staff. In either case the problem should be relatively easy for management to remedy. The signs of intoxication explored in this study are all potentially identifiable and, as already noted, they are all good indicators of the quantity of alcohol consumed. Effective monitoring of patrons may be more difficult at licensed premises with a very large clientele or which enjoy extended trading hours. Given that such premises pose greater risks for public safety (Briscoe & Donnelly 2001b), however, higher levels of investment in the monitoring of alcohol consumption by patrons would seem entirely appropriate.

Licensed premises which encounter difficulty with intoxicated patrons when refusing service may benefit from fostering a closer and more effective working relationship between those they employ to serve alcohol and those they employ to ensure (amongst other things) that intoxicated people do not continue to be served alcohol. Police have an important support role to play in this process and not just by promptly removing intoxicated patrons who threaten or abuse bar staff. Jeffs and Saunders (1983) research (discussed in the introduction to this report) suggests that regular visits by police to licensed premises *before* any sign of trouble can help emphasise to both staff and to patrons the importance of responsible service of alcohol.

Given the competitive commercial environment in which licensed premises operate, and past research showing that a small proportion of licensed premises account for a large proportion of all violence on licensed premises (for example Briscoe & Donnelly 2001b; Homel & Clark 1994; Stockwell 1997), it would be wrong to dismiss the possibility that some licensed premises may be deliberately flouting the liquor laws. It is, of course, the responsibility of the

relevant enforcement agencies to identify and prosecute licensed premises which do this. As with all enforcement, however, the deterrent value of prosecution depends critically on whether those who breach these laws expect to be prosecuted for doing so and whether they fear the consequences of conviction if they are found to be in breach of it.

These issues will be explored in the next phase of the collaborative research being undertaken by the Bureau and NDRI on this topic. For now it suffices to observe that, once Government and the relevant industry bodies have had a chance to address the findings in this report, replication of the survey described here would provide a very useful means of judging progress toward more responsible serving of alcohol in NSW.

## ACKNOWLEDGEMENTS

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## NOTES

- 1 An omnibus survey is one which includes research questions from a variety of different organisations.
- 2 Due to the Christmas/New Year holiday break AC Neilsen did not conduct a survey on the weekend of the 28/12/01-30/12/01.
- 3 Of the 36,193 randomly generated telephone numbers that were dialled over the five waves of the omnibus, contact was made with 21,217 (59%) households. The vast majority (92%) of the 14,976 numbers where no contact was made were either engaged, disconnected or not answered, while eight per cent were to non-residential numbers. Of those 21,217 residential numbers where contact was made, 4,413 (21%) were deemed ineligible due to either the respondent not speaking sufficient English, or there being no one in that household in the correct age range to participate in the omnibus survey. Of the remaining 16,804 contacts, 7,194 (43%) persons agreed to participate in the omnibus survey, while 1,685 (10%) were unavailable due to time constraints and a further 7,925 (47%) refused to proceed with the omnibus survey. Of the 7,194 persons who agreed to participate in the omnibus, 4,570 (64%) were not asked any further questions due to their particular age-gender quota having already been filled for that wave of the omnibus. Of the 2,624 remaining persons who were eligible in terms of the current quota requirement, 2,427 (92%) completed the omnibus interview and 1,090 of these respondents who were in the 18-39 year age range were administered the responsible service of alcohol survey items.
- 4 Comparisons were made using the 1998 National Drug Strategy Household Survey (NDSHS) data for respondents aged 18-39 years from NSW only. An issue which arose when comparing these two data sources, was the much higher rates of missing data in the NDSHS compared with the current RSA survey for the items relating to the definition of acute-risk drinking prevalence (6.0% versus 0.5%). This relatively high degree of item specific missing data in the NDSHS means that including these missing values in the denominator will result in lower prevalence estimates of acute-risk drinking while excluding them from the denominator could bias the estimates to be higher than they actually are. A sensitivity analysis was therefore adopted both including and excluding the missings from the denominator when comparing the data sources. Regardless of the approach adopted, it was clear that compared to the household based self-completion questionnaire used in NDSHS, the telephone-based survey did not appear to have under-estimated alcohol use. In the current survey, 75% of males and 64% of females reported that they had consumed alcohol at acute-risk levels at least once in the previous 12 months. By comparison, the 1998 NSW NDSHS estimates were 68% and 56% respectively when including the missings in the denominator and 72% and 60% respectively when excluding the missings from the denominator.
- 5 Ten of the 412 respondents whose last acute-risk drinking occasion occurred at licensed premises did not provide data on how many standard drinks they had consumed on that occasion.
- 6 'Loss of coordination' ( $\chi^2=39$ ,  $df=3$ ,  $p<0.001$ ); 'slurred speech' ( $\chi^2=40$ ,  $df=3$ ,  $p<0.001$ ); 'loud or quarrelsome behaviour' ( $\chi^2=21$ ,  $df=3$ ,  $p<0.001$ ); 'spilling drinks' ( $\chi^2=10$ ,  $df=3$ ,  $p=0.02$ ); 'staggering or falling over' ( $\chi^2=17$ ,  $df=3$ ,  $p=0.001$ ).
- 7 See note 5.
- 8 Any sign of intoxication ( $\chi^2=35$ ,  $df=3$ ,  $p<0.001$ ); two or more signs ( $\chi^2=42$ ,  $df=3$ ,  $p<0.001$ ); three or more signs ( $\chi^2=35$ ,  $df=3$ ,  $p<0.001$ ).
- 9 The median number of intoxication signs reported by the 'none of the above' group was 1, while the median number of intoxication signs reported by the remaining respondents was 2. A non-parametric analysis showed this difference to be statistically significant (Mann-Whitney Test,  $z=-2.4$ ,  $p=0.015$ ).
- 10 It should be remembered in this context that the NSW liquor laws not only prohibit the service of alcohol to intoxicated persons but also stipulate that intoxicated persons are not allowed on the premises. If an intoxicated person is on the premises the licensee or their staff are required to remove them from the licensed premises or call the police for assistance. If staff are unable to determine whether patrons presenting at the bar to buy another drink are intoxicated, then it may rest with staff working in other areas of licensed premises, such as bar security or glass collectors, to identify obviously drunk patrons and intervene in an appropriate way. This is also true for the 'intoxicated' patron who may have been drinking alcohol at a number of locations prior to being at that particular licensed premises.

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## APPENDIX A

### ALCOHOL QUESTIONNAIRE

The next few questions are about alcohol...

#### Q.1a (asked only of male respondents).

In the last 12 months how often did you drink more than 6 standard alcoholic drinks in one day? By a standard drink, I mean the equivalent of a middy of full strength beer, a schooner of light beer, a small glass of wine, a glass of port or a nip of spirits.

##### Response options:

- Every day
- 4 to 6 days a week
- 2 to 3 days a week
- About 1 day a week
- 2 to 3 days a month
- About 1 day a month
- Less often
- Never
- Refused.

#### Q.1b (asked only of female respondents).

In the last 12 months how often did you drink more than 4 standard alcoholic drinks in one day? By a standard drink, I mean the equivalent of a middy of full strength beer, a schooner of light beer, a small glass of wine, a glass of port or a nip of spirits.

##### Response options:

- Every day
- 4 to 6 days a week
- 2 to 3 days a week
- About 1 day a week
- 2 to 3 days a month
- About 1 day a month
- Less often
- Never
- Refused.

#### Q.2a (asked only of male respondents who had drunk more than 6 standard drinks at least once in the last 12 months).

On the last occasion you drank more than 6 standard drinks in one day, how many standard drinks did you actually have?

##### Response options:

- 7 to 8
- 9 to 12
- 13+
- Refused.

#### Q.2b (asked only of female respondents who had drunk more than 4 standard drinks at least once in the last 12 months).

On the last occasion you drank more than 4 standard drinks in one day, how many standard drinks did you actually have?

##### Response options:

- 5 to 6
- 7 to 8
- 9 to 12
- 13+
- Refused.

#### Q.3

On this occasion where was the last place you were drinking?

##### Response options:

- Pub/hotel/tavern
- Registered club
- Licensed restaurant
- Nightclub
- Other licensed premises (specify)
- Not on a licensed premises (specify).

#### Q.4 (asked only of respondents whose last place of drinking was a licensed premises).

Still thinking about this last occasion, can you tell me whether you were showing any of the following signs of intoxication?

##### Response options:

- Loss of coordination (yes or no)
- Slurred speech (yes or no)
- Staggering or falling over (yes or no)
- Spilling drinks (yes or no)
- Loud or quarrelsome behaviour (yes or no)
- None of the above
- Refused.

#### Q.5 (asked only of respondents answering 'yes' to at least 1 response option in Q.4. Response options 1-7 rotated).

On this occasion, when you were showing these signs of intoxication, which of the following ways, if any, did the staff of the licensed premises react?

##### Response options:

- They refused to serve me any more alcoholic drinks (yes or no)
- They asked me to leave the premises (yes or no)

- They advised me on or organised transport home (yes or no)
- They suggested I buy low- or non-alcoholic drinks (yes or no)
- They suggested that I buy some food (yes or no)
- They suggested that I stop drinking (yes or no)
- They called the police (yes or no)
- They continued to serve me alcoholic drinks (yes or no)
- None of the above
- Refused.

#### Q.6 (asked only of respondents answering 'no' to all response options in Q.4).

Were you aware of any other people on the licensed premises who were showing the following signs of intoxication?

##### Response options:

- Loss of coordination (yes or no)
- Slurred speech (yes or no)
- Staggering or falling over (yes or no)
- Spilling drinks (yes or no)
- Loud or quarrelsome behaviour (yes or no)
- None of the above
- Refused.

#### Q.7 (asked only of respondents answering 'yes' to at least 1 response option in Q.6. Response options 1-7 rotated).

Were you aware of the staff of the licensed premises reacting to these people in any of the following ways?

##### Response options:

- They refused to serve them any more alcoholic drinks (yes or no)
- They asked them to leave the premises (yes or no)
- They advised them on or organised transport home (yes or no)
- They suggested they buy low- or non-alcoholic drinks (yes or no)
- They suggested that they buy some food (yes or no)
- They suggested that they stop drinking (yes or no)
- They called the police (yes or no)
- They continued to serve them alcoholic drinks (yes or no)
- None of the above
- Refused.