

**Submission
No 52**

MEASURES TO REDUCE ALCOHOL AND DRUG- RELATED VIOLENCE

Organisation: Royal Prince Alfred Hospital
Name: Dr Michael Dinh
Date Received: 14/08/2014



**The GEORGE INSTITUTE FOR
GLOBAL HEALTH Injury Division**

**ROYAL PRINCE ALFRED HOSPITAL
Department of Trauma Services**

The Hon George Souris MP
Committee Chair
The Law and Safety Committee
Parliament of New South Wales
Macquarie Street
SYDNEY NSW 2000

August 14th 2014

RE: NSW Legislative Assembly Inquiry into measures to reduce alcohol and drug
related violence

Dear Mr Souris,

Thank you for the opportunity to contribute to this important Inquiry.

Royal Prince Alfred Hospital is a major tertiary referral hospital and a Major Trauma Centre under the current NSW State Trauma Plan. It is located 5km from the Central Business District within the growing Inner Sydney and Inner West entertainment precincts, including Surry Hills, Pyrmont, Newtown and Alexandria. Along with St Vincent's hospital, this hospital assesses and treats patients presenting after incidents in the Central Business District (CBD), and inner Sydney.

The Trauma Service at Royal Prince Alfred Hospital represents a multidisciplinary group of front line clinicians, committed to providing the best evidence-based clinical care for injured patients in NSW. As part of clinical care provision and quality improvement, the trauma service has collected complete clinical and outcomes data on all severely injured patients presenting to the hospital since 1992. The George Institute for Global Health is a major international research organisation, affiliated



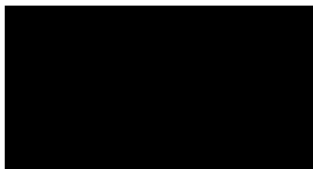
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with The University of Sydney and has been collaborating with Trauma Services at Royal Prince Alfred Hospital for a number of years.

Acute and chronic alcohol misuse exacts a devastating toll on individuals, families and society. The financial impact of alcohol abuse on Australia in terms of injury and rehabilitation, medical complications, lost productivity and other intangible losses is reported to be around \$36 billion per year¹.

The following submission is designed to contribute to the overall evaluation of recent policy measures by the NSW State Government to reduce alcohol and drug related violence. Please feel free to contact me on (02) 9515 6111, if there are any further questions regarding this submission.

Sincerely,



Clinical Associate Professor **Michael Dinh**, FACEM
Chair, Royal Prince Alfred Hospital Trauma Committee, Royal Prince Alfred Hospital
Injury Division, The George Institute for Global Health, The University of Sydney,
Sydney Medical School



Emergency Department, Royal Prince Alfred Hospital
Missenden Road, Camperdown NSW 2050

And,

Professor **Rebecca Ivers**, PhD
Director, Injury Division, The George Institute for Global Health
The University of Sydney, School of Public Health
321 Kent St Sydney NSW 2000



SUBMISSION

INTRODUCTION

There is substantial evidence in the scientific literature supporting the association between alcohol intoxication and a range of related harms, including assaults². The purpose of this submission is to provide an up to date perspective of trends in alcohol and injury related presentations to this hospital, and summarise recent research activity undertaken in this field by the Department of Trauma Services here.

BACKGROUND

The Liquor Amendment Bill (2014) was introduced in NSW in late February 2014 in an effort to reduce alcohol fuelled violence occurring around the inner Sydney entertainment precincts. The policy saw the introduction of 0130AM “lockouts” and 0300AM last drinks in licensed venues in the Sydney CBD and entertainment precincts. Although initial reductions in violent incidents were reported, there was some concern reported about shifting alcohol fuelled violence to neighbouring areas that fall within this hospital’s direct catchment area.

RESULTS

The Trauma Service has now reviewed data on all in-patient admissions for acute intoxication or assault, and all assault presentations with serious injuries presenting five months prior (October 2013 to February 28th 2014), five months post “lockout law” introduction (March 2014 to July 30th 2014) and five months in 2013 (March 2013 to July 2013) as a historical control.

Table one summarises the rate of hospital in-patient admissions for assault or alcohol intoxication (ICD10 codes X91-Y09, and F100, T51) per 1000 Emergency Department (ED) presentations in the three time periods of interest. The rate of ED presentations for assault halved during the post intervention period compared to the 5 months previous, and reduced by 33% compared to a similar time period in 2013.



	March-July 2013	Oct 2013-Feb 2014	March-July 2014
<i>Total ED presentations</i>	30,226	25,170	30,171
<i>Assault or acute intoxication (Rate)</i>	198 (6.55)	278 (11.04)	134 (4.37)
<i>Assault only (Rate)</i>	144 (4.76)	166 (6.60)	96 (3.18)

Table one – Rate of in-patient admissions for assault or alcohol intoxication per 1000 Emergency Department Presentations based on episode of care ICD10 coding (Courtesy of Mr Charles Farah, Performance Monitoring, Systems Improvement & Innovation Sydney Local Health District)

A total of 35 seriously injured assault presentations were identified in the 10 month period from October 1st 2013 to July 30th 2014. These were defined as patients who met all the following criteria: Sustained a blunt force assault, transported to hospital by the NSW Ambulance Service (excluding transfers from other hospitals), met validated criteria for immediate trauma team assessment in the emergency department (ED) and were subsequently admitted to hospital. Of note was the median age of 36 years (inter-quartile range 28, 47 years), with males comprising 91% of the study group. Twenty six percent of all assaults in this group had evidence of intoxication, recorded as a positive blood ethanol level on arrival to the emergency department. Incident location was recorded as a hotel/licensed venue in 3 out of 35 (9%) cases and street in 15 out of 35 (43%) cases. No deaths were recorded in the period examined.

23 cases were identified in the pre-lockout phase (Incidence 23/25,170 = 0.09% of all ED presentations) compared with **12 cases** in the post lockout phase (incidence 12/30,171 or 0.04% of all ED presentations). This represents an odds **reduction of around 60%** (Odds ratio 0.43 95%CI 0.22, 0.87 p=0.02), indicating a highly significant reduction in ED presentations following introduction of the 'lockout' laws. There was no difference patient age, Intensive Care Unit admission (3/23 versus 2/12 p=0.77) or Injury Severity Score (p=0.74). Over the same period in 2013 (March to July 2013), there were **18 cases** of seriously injured assault presentations identified. (18/30,226 or 0.06% of all ED presentations). The dates examined represents a relatively brief time-frame with small sample sizes, potentially



confounded by seasonality of alcohol related violence, and therefore further analysis is required to determine if trends reported here are sustained.

A published study³ of around 2400 patients admitted to this hospital after an assault between 1999 and 2009, found that the presence of co-existing intoxication found on arrival to ED (around 15% of patients) was associated with an almost three times increase in the adjusted odds of severe head injury (Head Abbreviated Injury Score ≥ 3) (OR 2.7 95%CI 1.9-3.9 $p < 0.001$).

A recent audit of injured patients admitted to the Royal Prince Alfred Hospital found that up to 90% of patients found to be intoxicated on arrival to ED, had evidence of long term alcohol misuse as defined by current Australian National Health and Medical Research Council guidelines^{4,5}.

SUMMARY

The following observations based on our data analysis can be made;

- 1. To date, there has been a significant reduction in total assaults requiring admission and assaults resulting in serious injury** presenting within the direct catchment area of this hospital, since the introduction of lockout laws in Sydney.
- 2. Concurrent intoxication increases the risk of severe head injury** after a blunt force assault
- 3. Evidence of intoxication after trauma is associated with long term at risk or harmful alcohol intake.**

It is the opinion of the Trauma Committee at Royal Prince Alfred Hospital that recent measures undertaken to reduce alcohol related harms should be supported, and evaluated by rigorous and ongoing data analysis. Consideration should be given to other evidence based policies such as alcohol taxation reform⁶. Health policy evaluation tools such as hospital based injury registries and emergency department data surveillance systems should be strengthened to support ongoing critical analysis.



Submission prepared by:

Clin A/Prof Michael Dinh

On behalf of RPAH Trauma Committee Members:

Dr Christopher Byrne, Co-Director Trauma, Colorectal Surgeon

Dr Jeffrey Petchell, Co-Director Trauma, Orthopaedic Surgeon

Ms Elizabeth Leonard, Trauma Program Coordinator

Mr Kevin Cornwall, District Trauma Clinical Nurse Consultant

Ms Susan Roncal, Trauma Data Manager

Dr Timothy C Green, Emergency Department Director

Mr Terence Johnson, Emergency Department Nurse Manager

Ms Nerida Bell, Emergency Clinical Nurse Consultant

Dr Richard Waugh, Director of Radiology

Ms Fiona David, Chief Radiographer

Ms Catherine Hollow Senior Radiographer

Dr Jeffrey Brennan, Neurosurgeon

Dr Michael Byrom, Cardiothoracic Surgeon

Dr Timothy McCulloch, Anaesthetist

Dr Heike Koezlow, Intensivist

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