

A Retrospective Analysis of Alcohol Intake and Management on the Medical Assessment Unit

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Abstract

A retrospective case note analysis of 100 consecutive admissions to a Medical Assessment Unit to (a) review the current impact of alcohol, and (b) assess the quality of clinical management and adherence to local and national guidelines.

Keywords

Alcohol, impact, withdrawal, documentation, Medical Assessment Unit (MAU), guidelines.

Introduction

Alcohol consumption has become increasingly important over the last few decades in terms of impact on health and society. National guidelines in the Royal College of Physicians Working Party report: 'Alcohol – Can the NHS afford it?'¹ contain little data specifically relating to Medical Assessment Units (MAUs). We decided to assess the current impact of alcohol in our unit. A retrospective analysis of 100 consecutive new admissions was completed and management was compared to our local guidelines² and recommendations by the Working Party. Alcohol abuse is an important health issue. This report highlights the impact of alcohol on medical admissions and suggests we can do better when compared with current guidelines.

Methods

The records of 100 consecutive new admissions to MAU were retrospectively analysed. Data were collected from the initial clerking proforma and drug prescription charts. The study collated basic demographic details and assessed which method was used (if any) to detect alcohol misuse – e.g. documentation of quantity and / or CAGE³ questionnaire. Examination findings were noted, as per the Alcohol Clinical Index⁴ (a description of symptoms and signs of alcohol dependence). Other potential indicators of alcohol abuse were reviewed, i.e. laboratory markers (GGT, ALT and MCV) and evidence of physical health hazards (e.g. gastritis, hypertension) associated with alcohol abuse.⁵ Data included whether admission was for primary detoxification or another reason. Use of the CIWA-Ar score⁶ (which allows symptom-based

Alcohol Intake (units/week) (*Hazardous at risk drinkers)	
Sensible drinker	<21 men & <14 women
Heavy drinker*	>50 men & >35 women
Binges*	>10/session men & >7 women

Box 1. Definitions of hazardous drinking.

Harmful Drinking	Alcohol Dependence Syndrome
Clear evidence that alcohol is responsible for or substantially contributes to physical or psychological harm (ICD 10):	Narrowing of drinking repertoire Increased importance of drinking Increased alcohol tolerance Repeated withdrawal symptoms Drinking to avoid withdrawal symptoms
Includes poor judgement and behavioural disturbance Causing disability Adverse consequences with interpersonal relationships	Subjective compulsion to drink Reinstatement after abstinence

Box 2. Harmful drinking vs alcohol dependence syndrome.

quantification of severity of alcohol withdrawal) was reviewed, in addition to appropriate prescription of chlordiazepoxide, or alternative sedatives, and vitamins. The documentation of counselling regarding DVLA regulations,⁷ evidence of any brief intervention (which 'consists of an assessment of alcohol intake, information on hazardous or harmful drinking, and clear advice for that individual, often with booklets and details of local services')⁸ and subsequent plans for referral or follow-up were noted.

Results

The retrospective analysis found 20 hazardous drinkers – that is one in five consecutive admissions to the MAU (see Boxes 1 and 2 for definitions). The heaviest drinkers were middle aged, more specifically 40–59 year old females. There was a small but significant number of hazardous younger drinkers with a male preponderance. Abstinence was greatest in both sexes over 60, and in women of child bearing age (see Figure 1).

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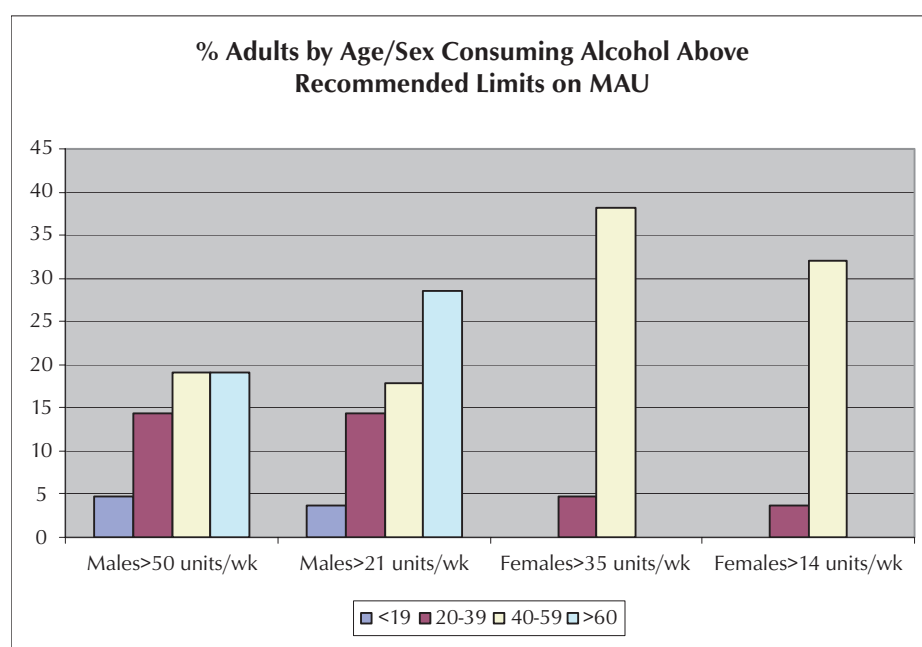


Figure 1.

Total		100
Sex	Male	51/100
	Female	49/100
Occupation	Employed	12/100
	Unemployed	18/100
	Retired	28/100
	Not documented	32/100
Alcohol intake	Documented	85/100
	Number of units per week stated	70/100
	Non-specific phrasing (e.g. "minimal")	15/100
Drinker Type	Hazardous	Heavy 18/100
		Binge 2/100
	Moderate	7/100
	Sensible	6/100
	Abstinent	37/100
	Intake (in units per week) not stated	30/100
	CAGE questionnaire completed	3/20
Further assessment of the hazardous drinkers	Smokers	15/20
	Substance misuse	3/20
	Co-morbidity associated with alcohol	13/20
	Primary detoxification	4/20
	Admitted with another illness [Figure 2]	16/20
	Follow Up	In-patient referral 6/19*
		GP 0/19
		Leeds Addiction Unit 1/19
		Psychiatric Services 0
		Nil 12/19

*[One binge drinker had withdrawal but the other had not consumed prior to admission. No guidelines on prescription in the latter scenario exist, hence exclusion from further analysis.]

Table 1. Analysis of 100 consecutive admissions to MAU.

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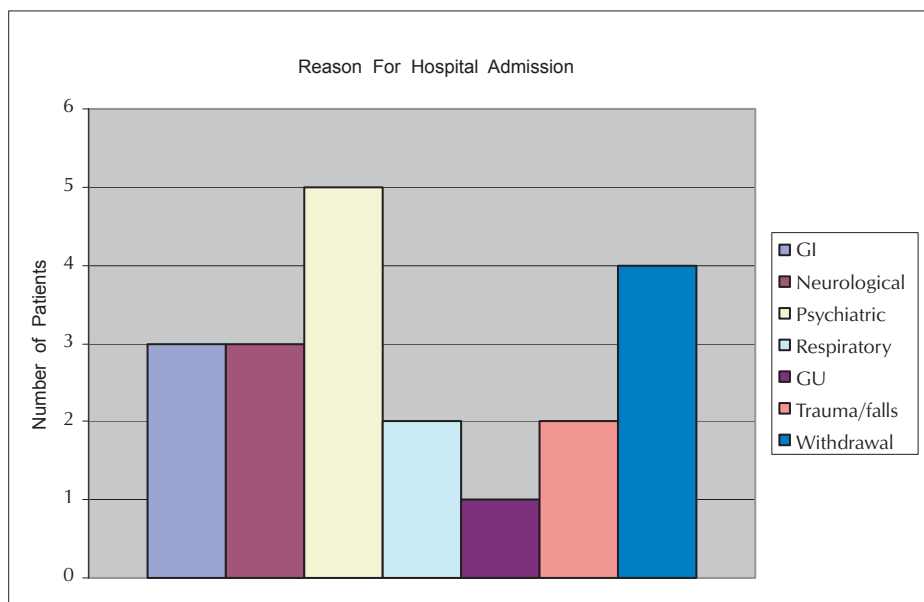


Figure 2. Reason for hospital admission in hazardous drinkers.

Of the hazardous drinkers identified, clinical withdrawal symptoms or signs were documented in 9/19* patients, with laboratory features suggestive of heavy consumption in 17/19. Figure 2 shows the reason for hospital admission in hazardous drinkers. The recommended CIWA-Ar score was completed in only 1/19. It is time consuming to perform which probably leads to its lack of use.

Prescribing of vitamins was in concordance with policy in 7/19 and correct use of sedatives in 6/19. An as required chlordiazepoxide dose was available in only 12/19 patients. Typical prescription errors consisted of non-symptom triggered chlordiazepoxide dosing, too much Pabrinex and incorrect doses of oral vitamins. 1/19 was given an alternative sedative – haloperidol (which lowers the seizure threshold and is not recommended). Evidence of a brief intervention was documented in the notes of only 1/19, and no patient received driving advice. People with alcohol dependence cannot drive until abstinent for 12 months (see Box 3).

Discussion

Alcohol misuse causes a visible burden to the National Health Service in both primary and secondary care. Out of 100 consecutive admissions to MAU we found 1 in 5 documented hazardous drinkers. This could be an *underestimate* due to poor documentation in 30/100 cases. These figures are significantly greater than in published national and regional data, perhaps reflecting our inner city location. The General Household Survey 2006 (GHS) indicated 31% males and 20% females drank over the recommended 21 and 14 units per week respectively, with those in Yorkshire and northern counties consuming greater levels than other regions (see Table 2).⁹⁻¹⁰

Previous data has shown that young adults drink more than older adults, particularly in binges.¹¹ During our analysis period, the heaviest drinkers on MAU were middle aged, and not binge drinkers. This may reflect the type of patient that gets admitted to hospital.

DVLA guidelines for Group 1 Vehicles

'Alcohol Misuse' ICD 10

Persistent alcohol misuse, confirmed by medical enquiry and/or by evidence of otherwise unexplained abnormal blood markers, requires licence revocation or refusal until a minimum six month period of controlled drinking or abstinence has been attained, with normalisation of blood parameters.

Patient to seek advice from medical or other sources during the period off the road.

'Alcohol Dependency'

Alcohol dependency, confirmed by medical enquiry, requires licence revocation or refusal until a one year period free from alcohol problems has been attained. Abstinence will normally be required, with normalisation of blood parameters, if relevant.

Licence Restoration

Will require satisfactory medical reports from own doctor(s) and may require independent medical examination and blood tests, arranged by DVLA.

Consultant support/referral may be necessary.

Box 3. DVLA guidelines.

Several previous papers¹²⁻¹⁴ have looked at alcohol as a reason for attendance in Emergency Departments, either leading to admission or being a contributory cause. Once admitted to hospital, alcohol excess influences the course of illness (increased complications, longer length of hospital stay).¹⁵ These factors all result in a financial burden to the NHS, accounting for up to 12% of hospital expenditure.¹⁶

This burden consists of (a) direct causes which includes conditions exclusively caused by alcohol (e.g. alcoholic liver disease, acute intoxication, seizures, acute pancreatitis, injuries to self or others); (b) alcohol as a contributory factor (pulmonary tuberculosis, self-poisoning); and (c) effect on course and outcome of admission. McKnight *et al*,¹⁷ reported that alcohol contributed to 41% of the male and 24% female MAU admissions. This is reflected

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	Average Weekly Consumption (units)	
	Yorkshire	Great Britain
Males	21.4	18.7
Females	11.2	9.0
Total	16.0	13.5

Table 2.

by this retrospective analysis whereby 4/20 hazardous drinkers were admitted for primary detoxification. This is a significant proportion of the 'acute take' volume. 16/20 patients underwent secondary withdrawal, and 13/20 (65%) demonstrated co-morbidity associated with alcohol.

From previous studies, we know that approximately 20% of patients admitted for illnesses *unrelated* to alcohol consume levels potentially hazardous to health. This represents a hidden hazard, and we can intervene. Therefore it is necessary to identify and manage hazardous drinkers to prevent increasing the visible burden further. The RCP Working Party report has identified several components critical to a successful hospital alcohol strategy.

What to do!

At a national level, the Government-led National Alcohol Strategy aimed to reduce intake through taxation, controlled advertising and licensing laws.^{18–19}

One study demonstrated up to 40% of house officers do not recognise alcohol misusers, as they are 'too busy' to estimate consumption which they viewed as 'not important'. Therefore medical and nursing undergraduate curricula could be targeted.²⁰ It has also been suggested that hospital culture can be changed from treating the presenting complaint to wider health promotion.²¹ Finally, Mental Health Services support can be improved, as there is evidence that counselling received from 'alcohol health workers' significantly reduces consumption.²²

Conclusions

Alcohol is important and Medical Assessment Units can do better. The burden caused by alcohol misuse on the MAU is significant, and probably underestimated due to poor documentation and inadequate assessment. Screening strategies can be used to detect harmful and coincidental hazardous drinkers. Adherence to guidelines can be improved. Further research in Medical Assessment Units is required if we are to tackle the extra clinical workload and financial strain alcohol abuse places on Acute Medicine and the NHS as a whole.

Local level	
- Screening strategies (e.g. questionnaires) - For early detection of harmful and coincidental hazardous drinkers - Early assessment of severity dependence - Must be performed by appropriately trained staff - Coincidental hazardous drinkers should receive a "brief intervention" - Good links to committed psychiatric services for management of complex withdrawal & knowledge of local services - Widely available protocols for detoxification pharmacotherapy	
Pharmacotherapy suggested - vitamins	
(WE = Wernicke's Encephalopathy)	
Healthy uncomplicated heavy drinkers (low risk)	Oral thiamine 100mg tds + vitamin B co strong 2 tabs tds
High risk patients (for prophylaxis against WE)	Pabrinex IV 1 pair od for 3–5 days
Treatment of WE if ≥1 signs are present (acute confusion, ataxia or ophthalmoplegia)	Pabrinex IV 2 pair tds for 2 days Then 1 pair bd until improvement ceases
Pharmacotherapy suggested - sedation	
Utilise the CIWA-Ar Score for accurate symptom-based chlordiazepoxide dosing. Avoid haloperidol	
Mild (score <10)	Supportive care only
Moderate (score 10–20)	Need pharmacology only if complicated by a medical condition Chlordiazepoxide 10–20mg qds (reducing gradually over 5 days to 0)
Severe (score >20)	Chlordiazepoxide 20–40mg qds Take previous response into account Additional as required doses available for breakthrough symptoms Ideally re-assess prior to each administered dose

Table 3. summary of alcohol guidelines.^{1,2}

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