



# Effects of the Alcohol Misuse Enforcement Campaigns and the Licensing Act 2003 on Violence

## A preliminary assessment of Accident and Emergency attendances in Wirral

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### Key Messages

- Changes in the distribution of assault attendances at Accident and Emergency (A&E) are temporally consistent with implementation of the Alcohol Misuse Enforcement Campaigns (AMECs) and the Licensing Act 2003.
- The AMECs during 2005/06 and the implementation of the Licensing Act 2003 were associated with a significant reduction in the number of assault attendances to A&E compared to previous years.
- The time periods covered by AMECs in 2005/06 and the implementation of the Licensing Act 2003 overlap considerably and consequently it is not possible to distinguish the effects of the two interventions.
- Analysis of each intervention separately, however, showed a 15% reduction in assault A&E attendances during intervention periods. With a full year's implementation, this would equate to an estimated reduction of 160 assault presentations per year at Arrowe Park A&E department alone.
- A&E data are a vital element in assessing interventions aimed at reducing violence. It is important that continued monitoring of a range of data is used to measure campaigns such as AMEC and the implementation of the Licensing Act 2003.
- The positive effects noted in this study, even if sustained and applicable to the nation as a whole, would nevertheless have only a small impact on the growing social and economic burden of alcohol-related problems. Thus such interventions should be seen only as part of a wider programme of action, which must also tackle the root causes of risky drinking and violence.

## Introduction

Globally violence accounts for over a million deaths each year and consequently has been declared an international public health priority. The UK is no exception to this global epidemic and experiences an estimated two and a half million incidents of violence each year; in many of these (44%) the offender was believed to have been drinking<sup>1</sup>. Across the UK, a large proportion of alcohol-related violence occurs in nightlife settings. More than a fifth of all violence in England and Wales takes place in or around pubs and clubs and here 80% of incidents involve alcohol<sup>2</sup>. Such violence has devastating impacts on the health of victims, yet also places huge burdens on wider society and public services, particularly criminal justice and health services<sup>3,4</sup>. The costs of alcohol-related violence to public services, the economy and individuals are astounding with, for example, the national costs of alcohol-related crime and disorder estimated at £7.8bn a year<sup>5</sup>.

In recent years, the capacity of licensed premises in many town and city centres in the UK has increased substantially. Combined with growing levels of alcohol consumption among young people, this has meant popular nightlife areas have experienced increasing problems with alcohol-related violence<sup>6</sup>. In response, a range of initiatives have been developed and implemented both locally and nationally. At a national level, the Home Office Alcohol Misuse Enforcement Campaign (AMEC) and the subsequent AMECs supported through the Tackling Violent Crime Programme, specifically target underage drinking and alcohol-related violence in areas of high volume violent crime and at times when violence is known to increase (e.g. Christmas and summer holidays). Here, police forces in target areas are provided with additional funding to increase enforcement and awareness raising activity during campaign periods (Box 1). In addition, and affecting all of England and Wales, the Licensing Act 2003 introduced new measures aimed at reducing alcohol-related crime and disorder, particularly in and around licensed premises. A key element of the Act was the introduction of flexible licensing hours for pubs and clubs to help reduce the levels of alcohol-related violence associated with fixed closing times in nightlife areas. The Licensing Act came into force on 24th November 2005.

So far, measuring the effect of the AMECs, and identifying early indications of the impact of the Licensing Act, on alcohol-related crime and disorder have largely been accomplished through monitoring police data and the outcomes of test purchasing<sup>7,8</sup>. However, such data are prone to operational tactics where, for instance, increased police activity can lead to changes in levels of arrests regardless of any changes in underlying patterns of violent behaviour. Furthermore, not all assaults are brought to police attention<sup>9</sup> with the British Crime Survey consistently estimating levels of violence far higher than recorded crime<sup>1</sup>. Correspondingly, Accident and Emergency (A&E) department data have shown 49% of assault patients do not intend to inform the police of their assault<sup>10</sup>, meaning health data can provide important additional information on the extent and characteristics of violence.

This paper uses A&E data to measure the effects of the AMECs and the initial impact of the Licensing Act on violent injuries as measured by assault attendance at an A&E department in the North West of England.

## Methodology

Wirral is a peninsula with a resident population of 313,846, which includes some of the wealthiest (e.g. Heswall; deprivation index = 8.11) and poorest (e.g. Birkenhead; deprivation index = 70.20) wards in England (Figure 1). Importantly for this study, Wirral's population is serviced by one local A&E department (at Arrowe Park Hospital) and although residents can potentially access other A&E departments, the vast majority of emergencies are received at Arrowe Park. Data on all assault attendances presenting at Arrowe Park A&E department over a period of four financial years were collected (1st April 2002–31st March 2003, 1st April 2003–31st March 2004, 1st April 2004–31st March 2005, 1st April 2005–31st March 2006; n=10,565)<sup>11</sup>. Key variables included patient demographics, time and date of A&E attendance and injury type.

For Wirral, AMECs were active in 2004/05 and 2005/06 (Box 1). Nationally, the Licensing Act was introduced on 24th November 2005. Between 24th November 2005 and 31st March 2006, 44 pubs/bars/clubs in Wirral extended their licensing hours: 15% of all pubs/bars/clubs<sup>12</sup>. In order to explore the impact of the Licensing Act, the year 2005/06 was categorised into two sections (pre and post Licensing Act: weeks 14 to 46 and weeks 47 to 13 respectively; see Figure 2) and for comparison the same calendar periods were identified in previous years. A similar process was repeated for AMECs. However, since AMECs occurred in different periods during 2004/05 and 2005/06, categorisations compared AMEC 2005/06 weeks (here considered as weeks 29 to 40, 46 to 1 and 3 to 13; see Figure 2) to the same weeks in 2003/04 and 2002/03 only, and AMEC 2004/05 weeks (here considered as weeks 28 to 35, and 51 to 1; see Figure 2) to equivalent weeks in 2003/04 and 2002/03.

Two types of statistical comparisons were undertaken on 10,565 A&E assault attendances. The first examined whether interventions had changed the distribution of violence during the year. Here, statistical comparisons used Chi Squared to compare the distribution of the numbers of assaults across the intervention (i.e. Licensing Act or AMEC) periods and non-intervention periods between intervention years and non-intervention years. Secondly, the mean number of assaults per day was compared across years separately for intervention and non-intervention periods using Analysis of Variance. All statistics were carried out using SPSS. As AMEC and Licensing Act periods have been defined by calendar weeks, graphs present weekly rates for assault attendances per 100,000 population.

## Box I: Alcohol Misuse Enforcement Campaigns

### Home Office Alcohol Misuse Enforcement Campaign (AMEC)

The AMEC is a multi-agency campaign targeting alcohol-related crime and disorder, and underage drinking through the promotion of partnership working, dissemination of good practice and increased enforcement including:

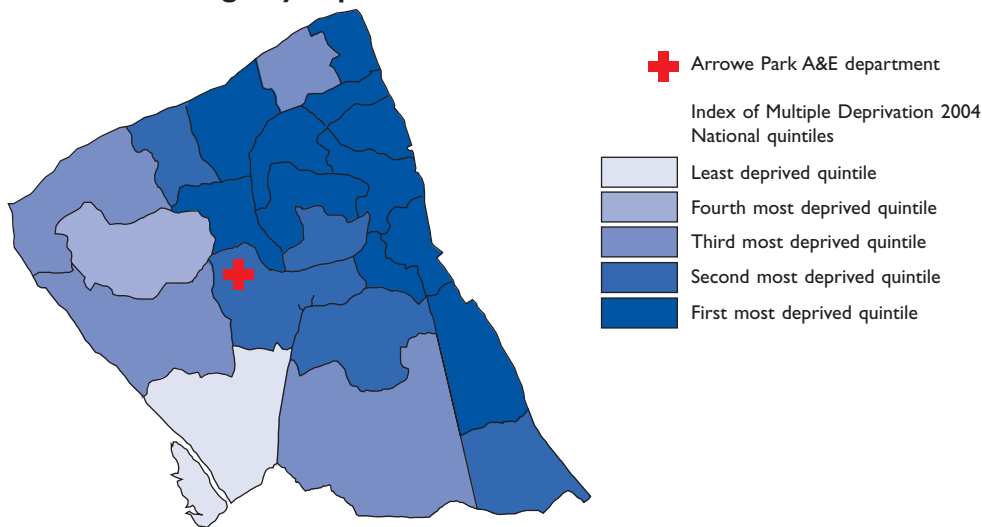
- Test purchasing in bars, clubs, off licences and supermarkets using under 18s
- Increasing enforcement, such as through use of fixed penalty notices for incidents of drunk and disorderly, and closing disruptive premises for 24 hours

AMECs were implemented across the Wirral between 8th July to 30th August 2004, 17th December 2004 to 3rd January 2005, and 14th November 2005 to 4th January 2006.

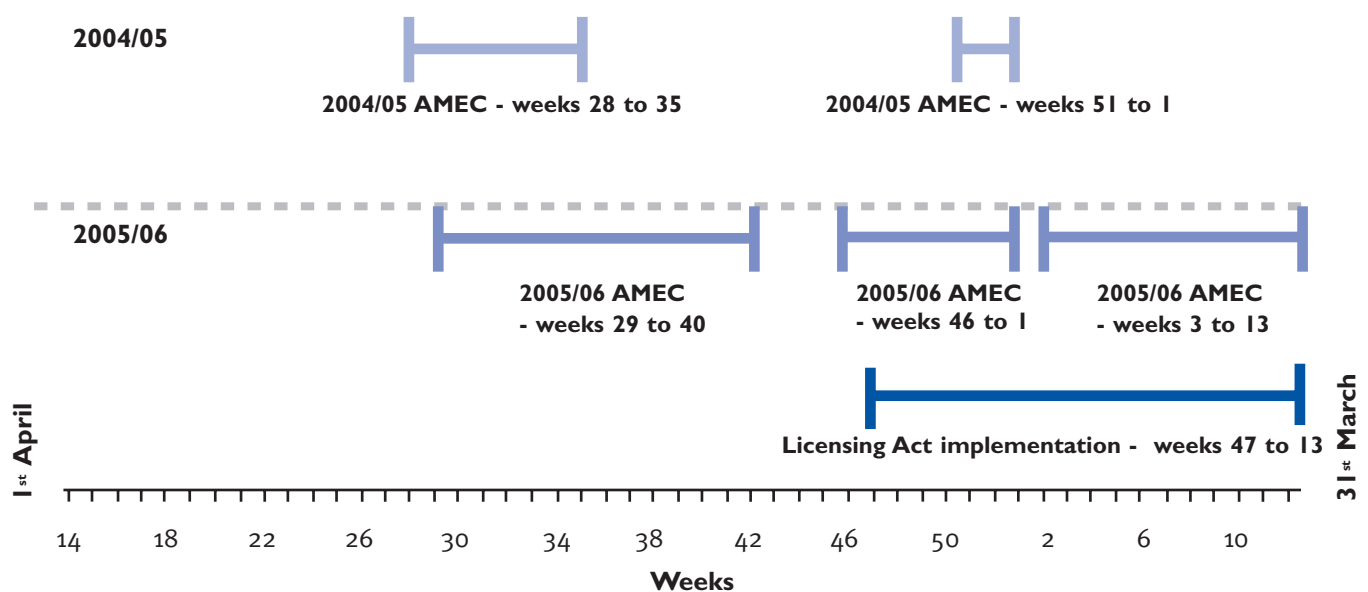
### Tackling Violent Crime Programme (TVCP)

The TVCP focuses on alcohol-related and domestic violence and is targeted at high volume violent crime areas. A number of AMECs have been implemented as part of the TVCP. Specific to the Wirral, these were implemented between 17th July to 30th September 2005 and 17th January to 31st March 2006 and involved increased test purchasing, enforcement and awareness raising.

**Figure 1: Index of Multiple Deprivation (IMD) 2004 across the Wirral and location of Arrowe Park Accident and Emergency department**



**Figure 2: Licensing Act implementation and Alcohol Misuse Enforcement Campaign weeks in 2004/05 and 2005/06**



## Results

There was a significant reduction in the number of assault attendances per day during Licensing Act implementation weeks in 2005/06 compared with the same period in all other years ( $F=4.756$ ,  $P<0.05$ ), yet there was no significant change in the number of assault attendances during non-Licensing Act weeks in 2005/06 compared with all other years ( $F=2.033$ ,  $P=0.108$ ). Correspondingly, the year 2005/06 saw a significant reduction in the proportion of assault attendances occurring in the period following the introduction of the Licensing Act (Figure 3), both when 2005/06 was compared with all other years combined ( $\chi^2=7.874$ ,  $P<0.01$ ) and with all years individually ( $\chi^2=9.749$ ,  $P<0.05$ ).

As with the Licensing Act, the number of assault attendances per day during AMEC weeks in 2005/06 showed a significant reduction compared with all other years in the same period ( $F=5.804$ ,  $P<0.05$ ). However, there was no significant change in the number of assault attendances during non-AMEC weeks in 2005/06 compared with other years ( $F=2.082$ ,  $P=0.126$ ). Thus, during 2005/06 the AMEC period also saw a significant reduction in the proportion of assault attendances falling in the period including the AMEC intervention (2005/06 with all other years combined excluding 2004/05,  $\chi^2=5.350$ ,  $P<0.05$ ; all years compared individually, excluding 2004/05,  $\chi^2=6.702$ ,  $P<0.05$ ; see Figure 4).

Comparisons between periods in and out of AMEC 2004/05 with the corresponding calendar periods in previous years showed no significant difference in proportions of assault attendances falling in either period between 2004/05 and previous years (all years individually,  $\chi^2=4.308$ ,  $P=0.116$ ; all years before 2004/05 combined,  $\chi^2=0.653$ ,  $P=0.419$ ; see Figure 5). Furthermore, there was no significant difference in the number of assault attendances during AMEC weeks in 2004/05 compared with previous years ( $F=1.957$ ,  $P=0.143$ ). Conversely, there was a small difference in the number of assault attendances during non-AMEC weeks in 2004/05 compared with all other years ( $F=4.145$ ,  $P=0.016$ ).

Without taking into account the considerable overlap between the periods including implementation of the Licensing Act 2003 and the AMECs in 2005/06, analysis of the two intervention periods separately both showed a reduction of 15% in assault attendances in intervention periods (compared with non-intervention periods in previous years; for AMEC excluding the year 2004/05). With a full year's implementation, this would equate to an estimated reduction of 160 assault presentations at Arrowe Park A&E per year.

## Discussion

Violence is a major public health issue, affecting individuals, public services, wider society and the economy. The UK Government has invested in significant police resources and legislative change in order to stem a rising tide of alcohol-related violence largely associated with the night time economy, including through changes to licensing legislation and implementation of the AMECs. Currently, indications of the impacts of the Licensing Act have largely been based on police statistics and assessment of the effects of the AMECs on the outcome of test purchasing. Police data have shown no indication of a rise in levels of violent offences as a result of the change in licensing legislation<sup>7</sup>. However, such assessments are inherently related to police activity and therefore cannot be considered an independent measure of intervention and legislative change on levels of violence. A&E department presentations for assault can provide a relatively independent measure of changes in nightlife violence and consequently have been used here in a preliminary analysis of the AMEC and changes in licensing laws.

Our results show a reduction in assaults presenting to A&E consistent with the introduction of the Licensing Act. This reduction is not simply a yearly trend as it is only apparent in the weeks covered by the Licensing Act. The same effect in 2005/06 was seen for the period covering AMEC activity. When assessed separately, both interventions show a 15% decrease, equivalent to 160 fewer assault attendances per year to A&E. However, AMEC periods and changes in the Licensing Act overlap considerably with 18 weeks (in our study period) since the introduction of the Licensing Act also being covered by AMEC. This leaves too small a period covered exclusively by only AMEC or licensing changes and consequently it is not possible to distinguish effects of the two interventions in 2005/06 or if the 15% decrease is a result of their combined influence. AMECs during 2004/05 however did not lead to a reduction in assault attendances to A&E. This may be as a result of the AMEC being more effective when combined with the new licensing regime introduced in November 2005. However, improved police response to violence in 2005/06 and/or increased awareness among licensees of the AMEC may also have impacted on the success of the AMEC during 2005/06 shown here.

Research indicates extended licensing can lead to an increase in alcohol-related violence and disorder<sup>13-15</sup>. However, analyses here would suggest that this has not happened and at least in this study area the opposite has occurred. What is not clear (and will not be for some time) is whether the AMEC, licensing changes or a combination of these and other factors are responsible for such reductions. The distinction is however important, as if the Licensing Act is responsible the changes are likely to be sustained. However, if the reduction is related to AMEC activity, the changes will be more reliant on additional funds being delivered to police and other agencies (e.g. Trading Standards) and when these stop, levels of alcohol-related violence may once again rise to previous levels<sup>16</sup>. Regardless, the positive effects noted in this study, even if sustained and applicable to the nation as a whole, would have only a small impact on the growing social and economic burden of alcohol-related problems. The rapid growth of alcohol-based night time economies in recent years has resulted in significant additional costs falling on the public sector, principally through the necessity of increased expenditure by the criminal justice (e.g. through AMEC) and health care systems (e.g. A&E attendances) in addressing the consequences of rapidly increasing alcohol consumption. Thus changes in policing and licensing hours should be considered as only part of a wider programme of action, which must also tackle the root causes of risky drinking and violence.

Figure 3: Assault attendances per week, rates per 100,000 population, pre and post Licensing Act implementation, April 2002 to March 2006, Arrowe Park Accident and Emergency department

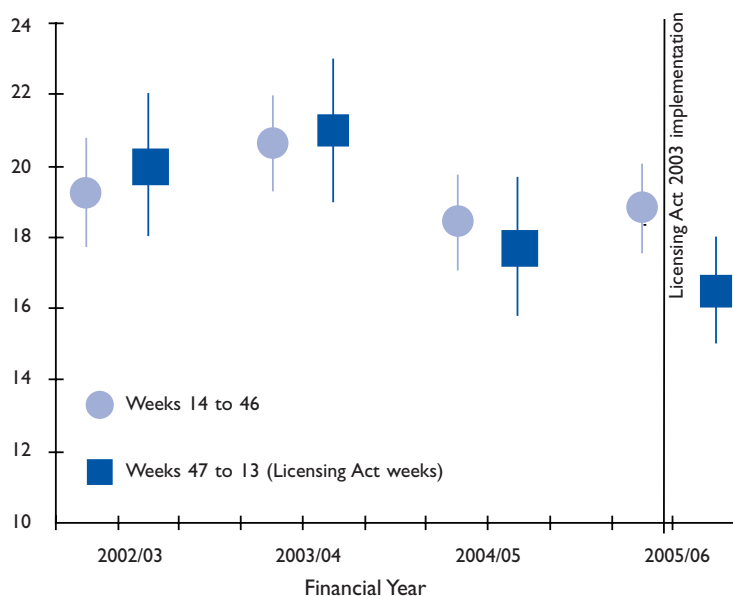


Figure 4: Assault attendances per week, rates per 100,000 population, Alcohol Misuse Enforcement Campaign and non-Alcohol Misuse Enforcement Campaign weeks, April 2002 to March 2006, Arrowe Park Accident and Emergency department

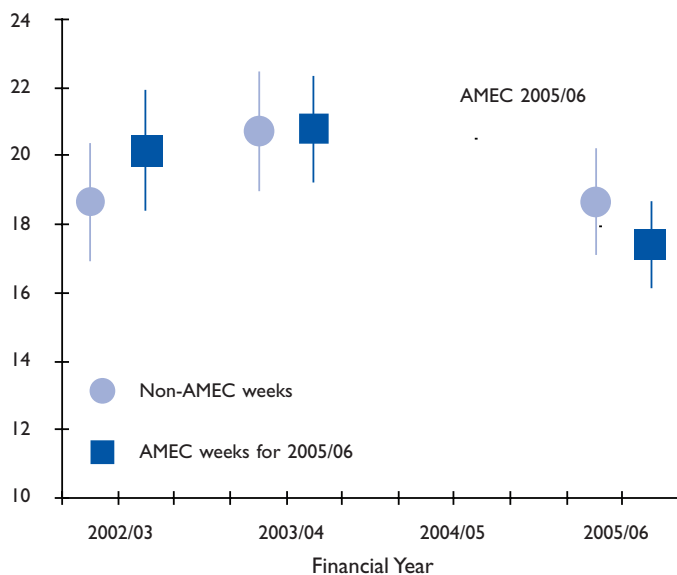
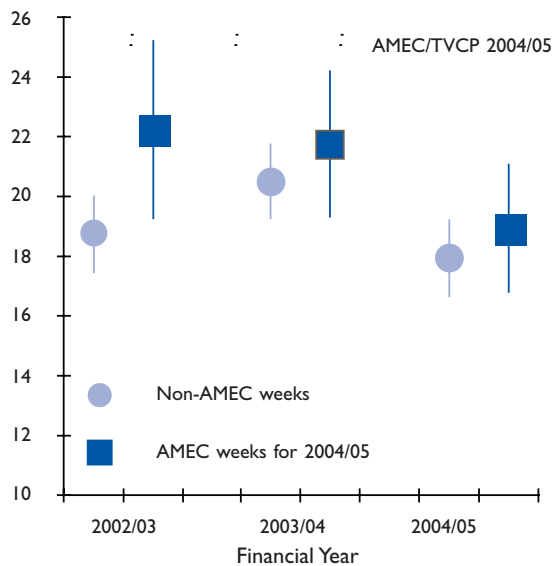


Figure 5: Assault attendances per week, rates per 100,000 population, Alcohol Misuse Enforcement Campaign and non-Alcohol Misuse Enforcement Campaign weeks, April 2002 to March 2005, Arrowe Park Accident and Emergency department



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