

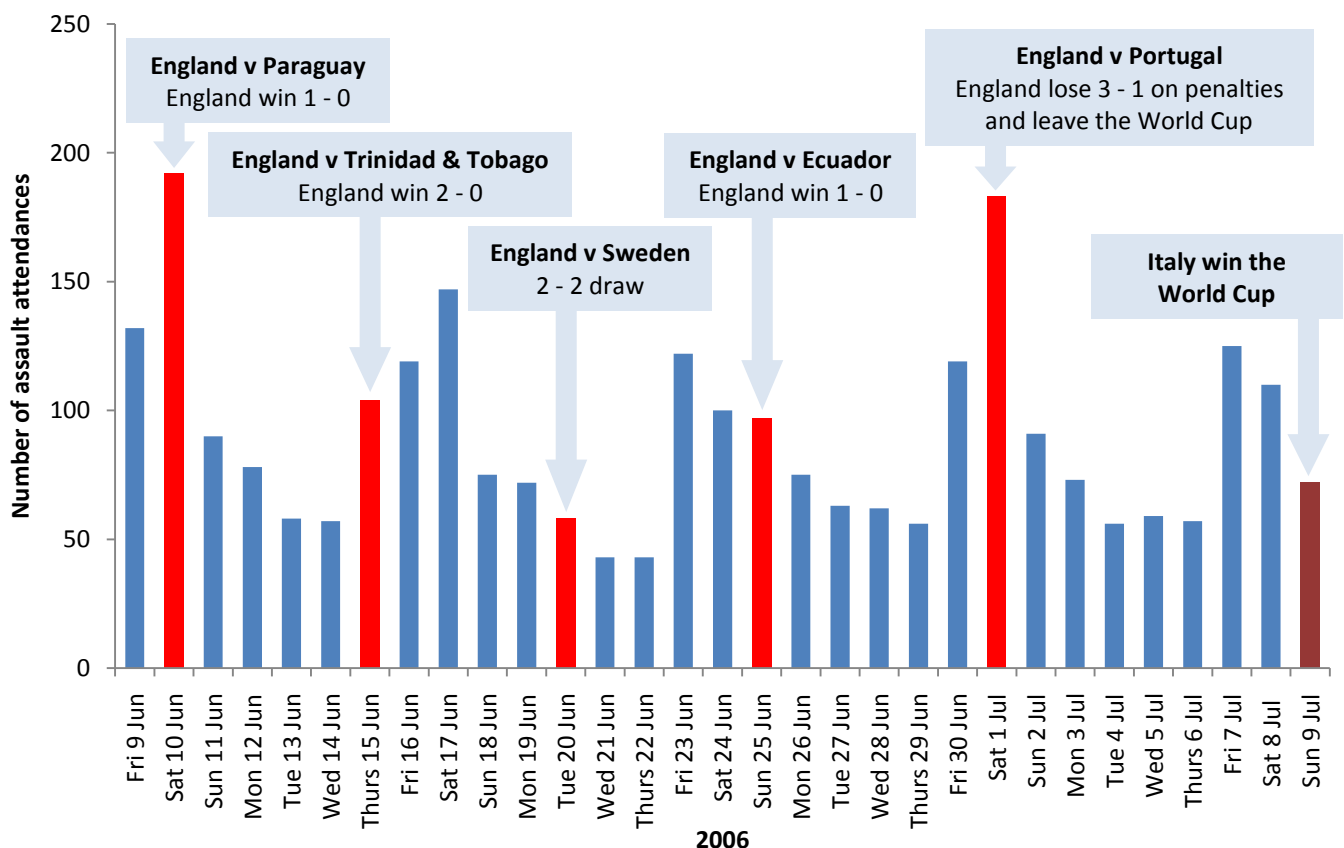
The impact of the 2006 World Cup on Emergency Department assault attendances in Cumbria, Lancashire and Merseyside

- This briefing identifies changes in assault attendances to the 17 Emergency Departments (EDs) in Cumbria, Lancashire and Merseyside during the 2006 World Cup.
- Analyses found that assault attendances increased by an average of 33% on England match days.
- The increase in assault attendances varied by day. Attendances increased by more than 50% when England played on Saturdays and a Thursday, but the Sunday fixture showed a smaller increase (13%) with no apparent increase in assaults when England played on a Tuesday.
- Once the effects of England games had been accounted for, there was no additional increase in assault attendances associated with the World Cup period in general.
- Increases in assaults on England match days were clearly seen for EDs in Cumbria and Lancashire, yet were less apparent in Merseyside. This may be due to the greater influence of local football team fixtures in some areas.

1. Assault attendances to EDs during the 2006 World Cup

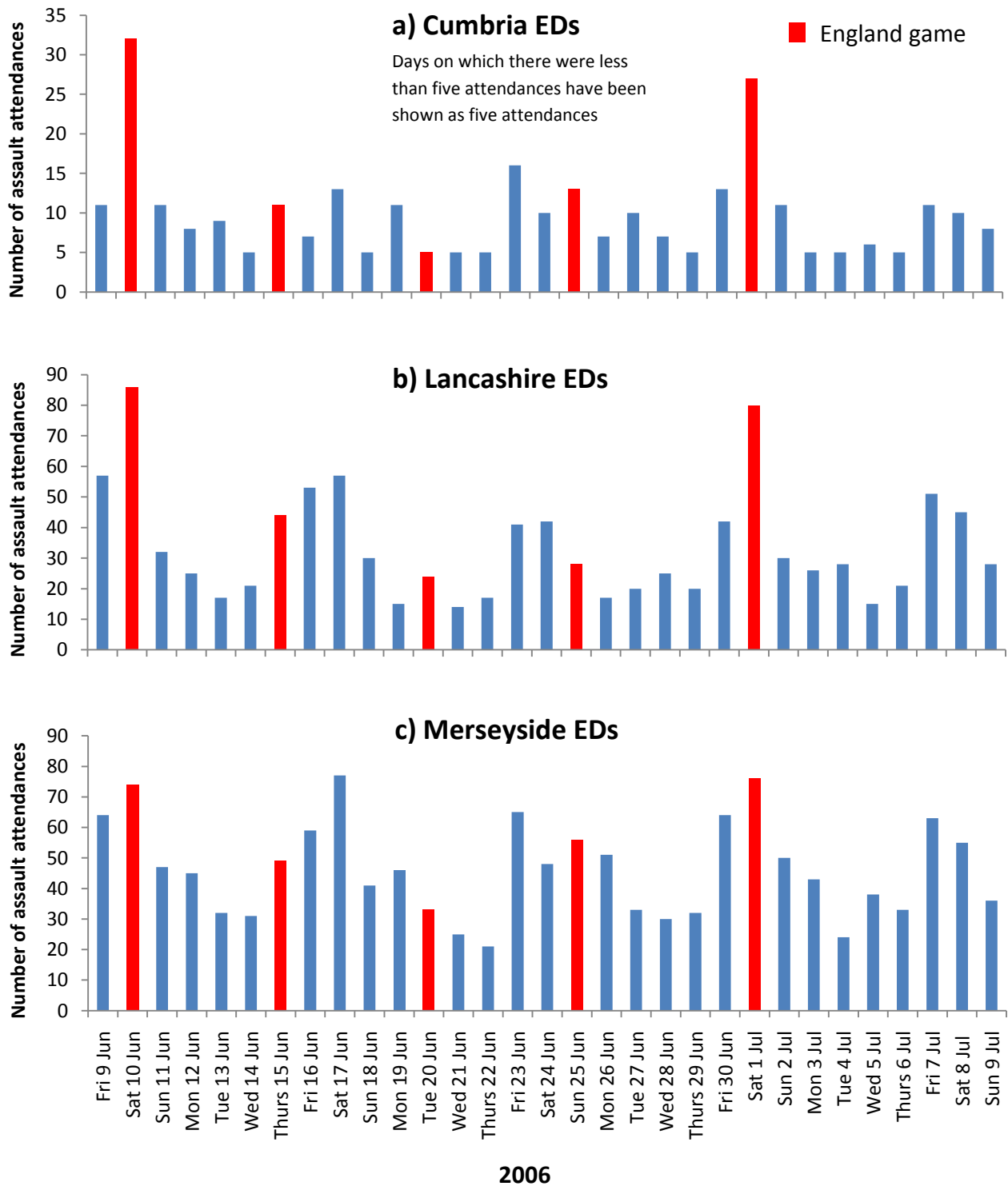
Figure 1 shows the number of assault attendances at all EDs in Cumbria, Lancashire and Merseyside over the duration of the 2006 World Cup. Clear peaks can be seen on the day/night* of the first England match and on the day/night of England's final match in the tournament. Both of these matches occurred on Saturdays, which are peak days for assaults in general. There was no apparent increase in assaults on the third England match, which took place on a Tuesday and saw England qualify for the second round (see section 3). These patterns are repeated for EDs in Cumbria and Lancashire, yet are less obvious in Merseyside EDs (Figure 2).

Figure 1: Assault attendances to Cumbria, Lancashire and Merseyside EDs during the 2006 World Cup*



* Days cover the period from 7am on the morning of each day to 6.59am the following day. This means that assaults that occur at 2am on Saturday 10th June (i.e. Friday night) will be coded as Friday 9th June.

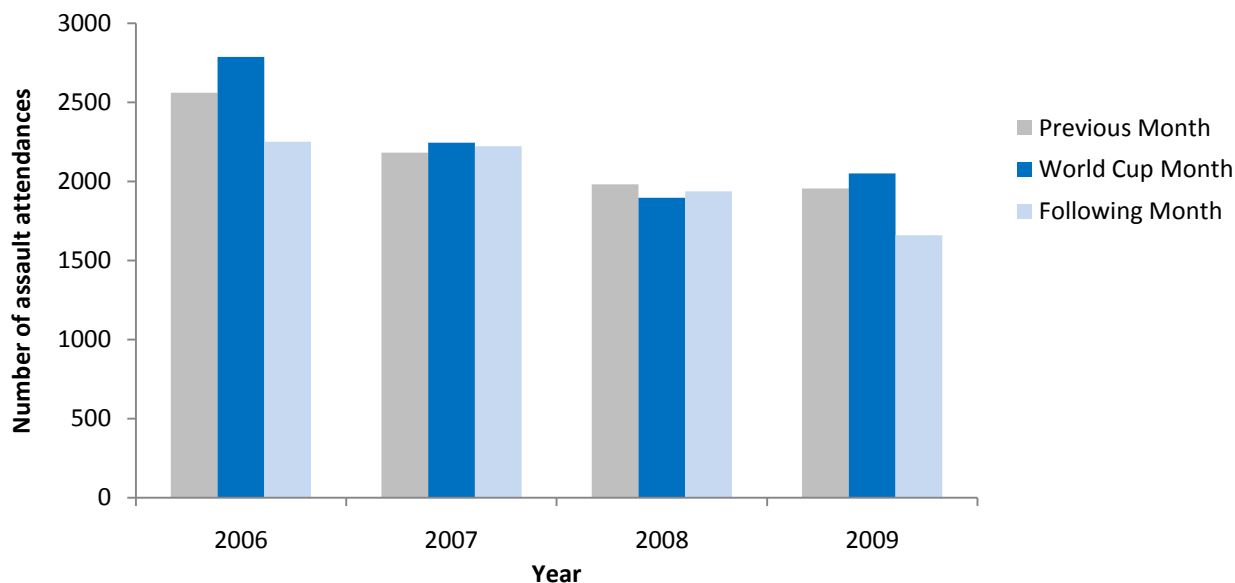
Figure 2: Assault attendances at EDs in a) Cumbria, b) Lancashire and c) Merseyside during the 2006 World Cup



2. Comparisons to surrounding periods and later years

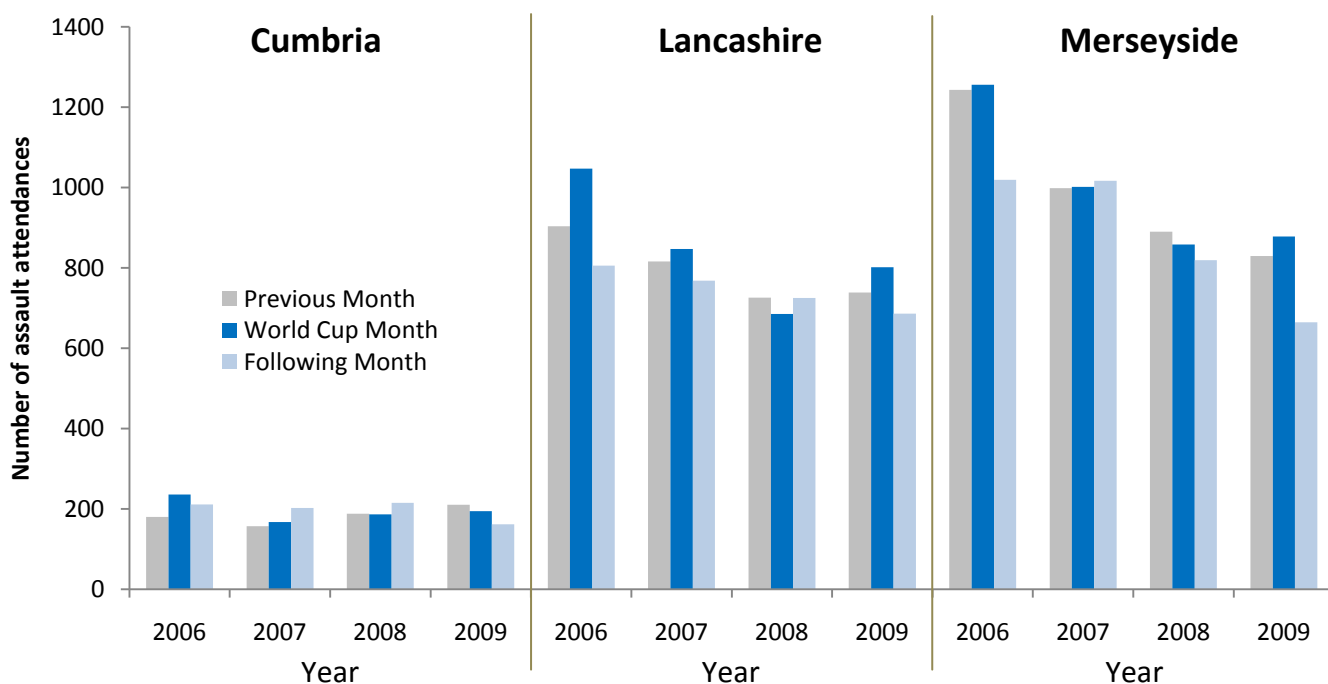
Figure 3 shows the total number of assault attendances to EDs in Cumbria, Lancashire and Merseyside during the month (31 days; see notes) prior to, during and after the World Cup 2006 and equivalent periods in 2007, 2008 and 2009. The World Cup month in 2006 shows the highest number of assault attendances across all years and months. However, a general downward trend in assault attendances was seen over the 2006 to 2009 period, with 2006 having higher numbers of assault attendances than later years for the months surrounding the World Cup also. This prevents clear interpretation of these data (TIIG does not hold data for 2005 for all EDs included in this analysis and consequently analysis of 2005 data is not possible).

Figure 3: Assault attendances to all EDs in Cumbria, Lancashire and Merseyside in the month during, prior to and after the World Cup 2006, and equivalent periods in 2007, 2008 and 2009



Breaking analyses down by the county of residence of assault attendances (Figure 4) shows that patterns for residents for Cumbria and Lancashire follow those for the three areas combined. For Merseyside residents, however, attendances in the World Cup month are more or less similar to those seen in the previous month period in 2006. There are two major premieriership football teams in Merseyside (Liverpool and Everton) and consequently the World Cup may have less obvious effects on assaults here. For example, on Saturday 13th May 2006 (which falls in the month prior to the World Cup), Liverpool Football Club won the FA Cup on penalties against West Ham United. On this day alone, 104 Merseyside residents were treated for assault injuries at EDs, around double the number seen on other Saturday periods that month and more than on any day during the 2006 World Cup.

Figure 4: Assault attendances to EDs by residents of Cumbria, Lancashire and Merseyside in the month during, prior to, and after the World Cup 2006, and equivalent periods in 2007, 2008 and 2009



3. Independent effects of the World Cup 2006

To understand the independent effects of different factors (e.g. day of week, year, etc) and World Cup activity on level of ED assault attendance we used GLM¹. The full list of potential effects on assault attendances we examined included: year, day of the week, month (i.e. month of world cup and +/- one month in years 2006-2009), whether the World Cup 2006 was underway and specifically whether there was an England game on that day. The model also included the period that the 2008 UEFA European Football Championship took place (a similar period to the World Cup but in 2008). This acted as an additional control as a major football tournament but one for which England failed to qualify. It was not possible to control for the result of each England match or their relevance to progression through the World Cup.

Results show that assault attendances at EDs increased on the days on which England played ($P < 0.005$) but, other than on these days, the overall period containing the World Cup 2006 had no independent effects on assault attendance ($P = 0.842$). On average, assault attendances at EDs increased by 33% on England World Cup match days. However, this varied depending on the day of the week on which the match was held. Thus, percentage increases in assault attendances at EDs range from practically nothing on the Tuesday, through 13% on the Sunday to over 50% for the matches played on Thursday and Saturdays. Across all the EDs included in this study this represents an average of 23 additional assault attendances on days when England play in the World Cup, but with more than 50 additional attendances if the match falls on a Saturday. Such attendances are only the tip of all assaults as they represent only those for which immediate medical treatment was sought from an ED.

Other significant factors relating to assault attendances were day of the week (assaults were higher on Friday and Saturday night/day periods regardless of football matches), month, and year (assault attendances decreased year on year). Interestingly, the period during which the UEFA European Football Championship was held in 2008 was associated with lower levels of assaults ($P < 0.05$). Analyses by gender found that males accounted for around four out of five of all the additional assault attendances seen on England match days.

Notes

Data cover all EDs in Cumbria, Lancashire and Merseyside:

Arrowe Park Hospital, University Hospital Aintree, Royal Liverpool University Hospital, Alder Hey Children's Hospital, Whiston Hospital, Southport and Formby District General Hospital, Ormskirk and District General Hospital, Royal Lancaster Infirmary, Blackpool Victoria Hospital, Royal Blackburn Hospital, Burnley General Hospital, Royal Preston Hospital, Chorley and South Ribble Hospital, Westmorland General Hospital, Furness General Hospital, Cumberland Infirmary, and West Cumberland Hospital.

The 2006 World Cup ran from 9th June to 9th July 2006. Periods used for comparison (previous month, following month) cover the same number of days (31) and include equal numbers of Fridays and Saturdays (peak days for assaults). Comparison periods in following years cover the same periods based on days rather than dates, and consequently also include equal numbers of Fridays and Saturdays (peak days for assaults) and equivalent numbers of days (31).

Prepared by Karen Hughes, Dan Hungerford, Zara Quigg, Ian Jarman and Mark A Bellis

June 2010

Centre for Public Health
WHO Collaborating Centre for Violence Prevention
Liverpool John Moores University
5th Floor, Kingsway House, Hatton Garden, Liverpool L3 2AJ, UK
Tel: +44 (0)151 231 8728
Email: tiig@ljmu.ac.uk
www.tiig.info
www.cph.org.uk



¹ General Linear Modelling using analysis of variance