

# North West Violence Profiles

## Bolton



**This profile provides a snapshot of violence in your area based on health service data. It is designed to support local community safety and public health professionals in tackling violence at a local level.**

The use of data to understand the extent and nature of violence to inform, monitor and evaluate interventions is key to the public health approach to violence prevention. Existing violence prevention initiatives are primarily based on information derived from police-recorded crimes. However, evidence suggests that less than half of violence is reported to the police<sup>1</sup>. Those that result in injury can often require health treatment such as through an emergency department (ED)<sup>1</sup>. In 2010/11, it is estimated that there were over 40,000 hospital admissions related to assault in England and Wales<sup>2</sup> and 300,000 assault attendances to an ED in 2010<sup>3</sup>. Thus, health data can be a vital source of information of violence leading to injury.

### Bolton summary

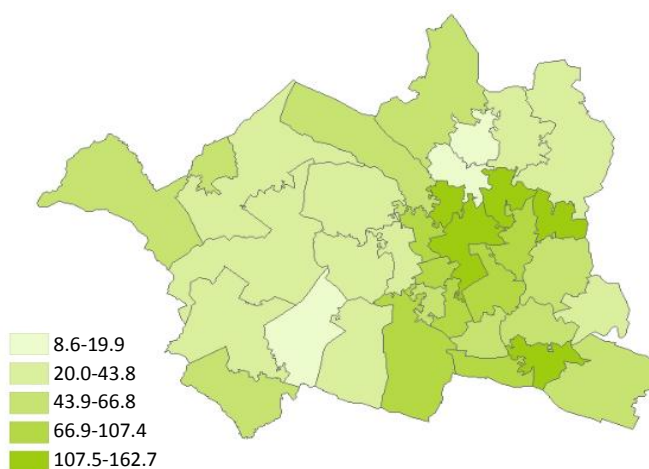
- Violence (measured by hospital admissions) in Bolton is lower than the North West average and the lowest in Greater Manchester.
- Admissions for violence have increased in recent years whilst ambulance call outs and attendances have decreased.
- Males, those aged 18 to 35 years, and those who live in the most deprived areas, are most at risk of violence leading to health treatment<sup>4</sup>.
- Further work is required to collect and share detailed data on assault patients attending local EDs, for violence prevention activity.

### Emergency hospital admissions for assaults

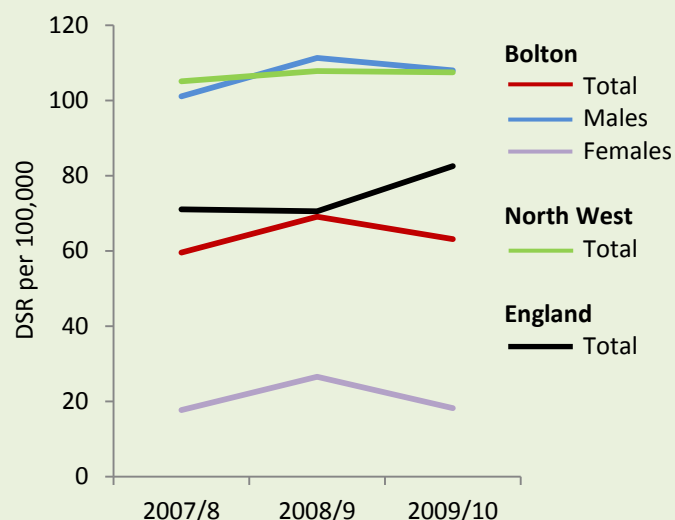
Between 2007/08 and 2009/10:

- There were 476 emergency hospital admissions for assaults by Bolton residents (Directly Standardised Rate [DSR]: 64.0 per 100,000 population<sup>↓</sup> [see Notes]), an average of 159 per year. Males accounted for 83.6% of all admissions (DSRs: males 106.9<sup>↓</sup>, females 20.8<sup>↓</sup>).
- The three MSOAs with the highest overall DSRs were E02000999 (162.7), E02000993 (141.0) and E02000994 (132.6).
- Figure 1 shows the rate of emergency hospital admissions for assaults across the local authority.
- The rate of admissions increased by 6.0% (Figure 2).
- Around two thirds (64.9%) of all admissions resided in the most deprived areas (quintile 5); a decrease from 71.1% in 2007/08 to 63.9% in 2009/10.

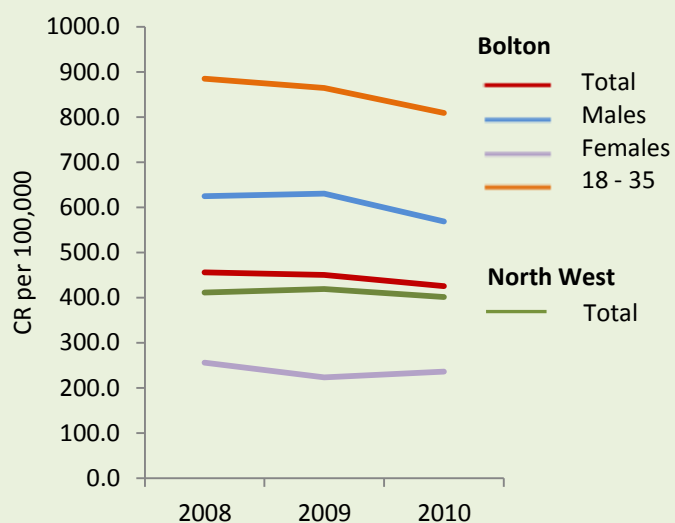
**Figure 1. DSR of emergency hospital admissions for assault per 100,000 population by MSOA of residence, 2007/08-2009/10 combined**



**Figure 2. DSR of emergency hospital admissions for assault per 100,000 population, 2007/08-2009/10**



**Figure 3. CR of ambulance call outs for assaults per 100,000 population, 2008-2010**

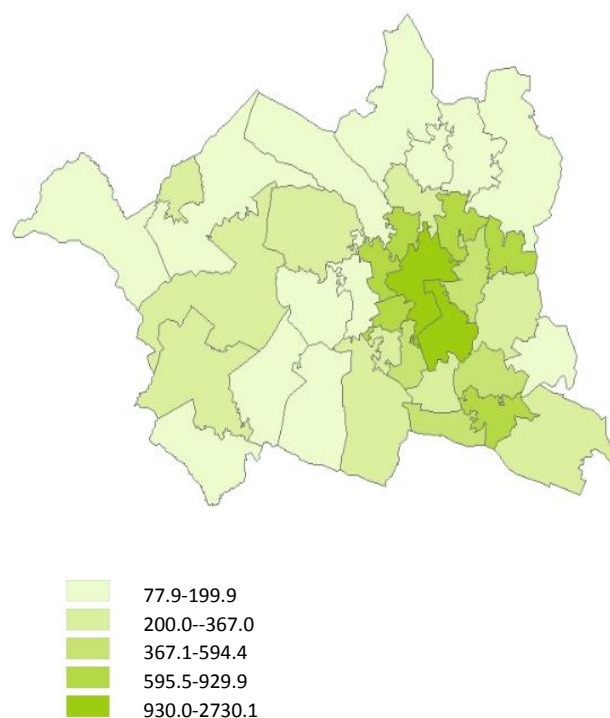


## Ambulance call outs for assaults

Between January 2008 and December 2010:

- There were 3,517 ambulance call outs to assault incidents across Bolton Local Authority (Crude rate [CR]: 444.2 per 100,000 population<sup>↑</sup>), an average of 1,172 per year. Where gender was recorded, males accounted for 71.2% of all call outs (CRs: males 608.2<sup>↑</sup>, females 238.7<sup>↔</sup>). Where recorded, 56.7% of call outs were for patients aged 18-35 years (CR: 852.9<sup>↑</sup>).
- The three MSOAs with the highest overall CRs were E02000999 (2730.1), E02001005 (2016.2) and E02001015 (929.9).
- The rate of ambulance call outs for assaults decreased 6.7% (Figure 3).
- Just under three quarters (74.3%) of ambulance call outs for assault were to the most deprived areas (quintile 5); a decrease from 75.0% in 2008 to 74.6% in 2010.
- Figure 4 shows the rate of assault-related ambulance call outs across the local authority.

**Figure 4. CR of ambulance call outs for assault per 100,000 population by MSOA of call out location, 2008-2010 combined**



## Emergency department (ED) attendances for assaults

Between January 2009 and December 2010:

- There were 2,723 assault attendances by Bolton residents to Royal Bolton ED. Males accounted for 74.1% of all attendances. Where age was recorded, 55.1% of assault attendees were aged 18 to 35 years.
- There was a 19.0% decrease in the number of assault attendances.
- Where the location of the assault was recorded, 24.3% occurred in a public place whilst 47.5% occurred in the home.
- Assault attendances were highest for residents of the following MSOAs: E02001016 (n=160), E02000999 (n=150) and E02000998 (n=139).
- Over six in ten (61.0%) of attendances for assault were from the most deprived areas (quintile 5) compared to 4.0% from the least deprived (quintile 1).

### ED data on assaults

At a national level the UK Government are encouraging all EDs to share their assault patient data with local partners to inform local violence prevention activity such as targeted policing and licensing enforcement. The College of Emergency Medicine have defined a minimum dataset for all EDs to collect and share including: assault location (e.g. street name); incident time/date; and the weapon used<sup>5</sup>.

In Bolton, the **Royal Bolton** ED share their routine electronic patient data (January 2009 to August 2011) with partners via TIIG. Due to IT issues, detailed data on assault attendances is not currently collected. A summary of ED assault attendances across Greater Manchester is available at [www.tiig.info](http://www.tiig.info).

### Violence prevention – the evidence ([www.cph.org.uk/showPublication.aspx?pubid=577](http://www.cph.org.uk/showPublication.aspx?pubid=577))

International evidence has shown a range of interventions can help prevent violence and associated harms. Interventions showing evidence of effectiveness include those that aim to:

- Develop safe, stable and nurturing relationships between children and their parents and caregivers (e.g. nurse home visitation);
- Develop life skills in children and adolescents (e.g. preschool enrichment);
- Reduce the availability and harmful use of alcohol (e.g. interventions for problem drinkers/improving drinking environments);
- Reduce access to guns and knives (e.g. through legislation);
- Promote gender equality to prevent violence against women (e.g. school-based programmes to address gender norms and attitudes);
- Change cultural and social norms that support violence (e.g. through social marketing); and
- Identify victims and provide care and support programmes (e.g. advocacy support programmes).

Summaries of what works to prevent specific types of violence, including youth violence, are available at: [www.cph.org.uk/epidemiology](http://www.cph.org.uk/epidemiology).

## Useful websites and resources

**Trauma and Injury Intelligence Group:** [www.tiig.info](http://www.tiig.info)

**Violence Indicator Profiles for the English Regions:** [www.preventviolence.info/viper](http://www.preventviolence.info/viper)

**Prevent violence:** [www.preventviolence.info](http://www.preventviolence.info)

**North West Public Health Observatory:** [www.nwpho.org.uk](http://www.nwpho.org.uk)

**Injury Observatory for Britain and Ireland:** [www.injuryobservatory.net](http://www.injuryobservatory.net)

**WHO Violence and Injury Prevention and Disability:** [www.who.int/violence\\_injury\\_prevention/en/](http://www.who.int/violence_injury_prevention/en/)

**Prevent violence – the evidence base:** [www.cph.org.uk/showPublication.aspx?pubid=577](http://www.cph.org.uk/showPublication.aspx?pubid=577)

**North West violence and injury profiles:** [www.cph.org.uk/showPublication.aspx?pubid=710](http://www.cph.org.uk/showPublication.aspx?pubid=710)

**Violence and injury prevention summary documents:** [www.cph.org.uk/epidemiology](http://www.cph.org.uk/epidemiology)

**College of Emergency Medicine data sharing guidance:**

[www.collemergencymed.ac.uk/asp/document.asp?ID=4881](http://www.collemergencymed.ac.uk/asp/document.asp?ID=4881)

## Notes

**Methods:** Emergency hospital admissions for assault (external causes: ICD-10 codes X85-Y09) for residents of the North West were accessed from the national Hospital Episode Statistics (HES, The Health and Social Care Information Centre) database for the financial years 2007/08, 2008/09 and 2009/10. Ambulance call outs to assault incidents (using the 'Nature' field options of 'Assault', 'Assault/Rape' and 'Assault/sexual assault') across the North West were accessed from the North West Ambulance Service for the years 2008, 2009 and 2010. Emergency department (ED) attendances for assaults were accessed from the Trauma and Injury Intelligence Group Injury Surveillance System for available years.

Directly standardised rates (DSR) (HES data) and crude rates (CR) (ambulance call out data) were generated for each local authority (LA) and middle super output area (MSOAs are constructed from census output areas and have a minimum population of 5,000 and an average of 7,200) using population data accessed from the Office for National Statistics for mid-2007, mid-2008 and mid-2009. Low numbers of emergency hospital admissions prevented any analysis on age groups at LA or MSOA level. For all datasets (excluding ED data) upper and lower confidence intervals, which provide an estimate of the range of the observed values, were calculated for each rate. Confidence intervals were used to determine if the rate was different to that of the North West average where possible; where confidence intervals do not overlap the difference is STATISTICALLY significant. The following symbols have been used to display significant differences:

- ↑ Significantly higher than the North West average;
- ↓ Significantly lower;
- ↔ Not significantly different.

## References:

1. Chaplin R et al. Crime in England and Wales 2010/11: findings from the British Crime Survey and police recorded crime. Home Office: London, 2011.
2. <http://www.ic.nhs.uk/news-and-events/news/fall-in-assault-hospital-admissions-for-england-says-new-report-which-highlights-north-south-differences>
3. Sivarajasingam V et al. Violence in England and Wales in 2010: an accident and emergency perspective. Violence and Society Research Group: Cardiff, 2010.
4. <http://www.communities.gov.uk/communities/research/indicesdeprivation/deprivation10/>
5. <http://www.collemergencymed.ac.uk/asp/document.asp?ID=4881>

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