Violence in England and Wales in 2015

An Accident and Emergency Perspective

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Executive Summary

- A sample of 91 Emergency Departments (EDs), Minor Injury Units (MIUs) and Walk-in Centres in England and Wales which are certified members of the National Violence Surveillance Network (NVSN) were included in this national study of trends in serious violence.
- Anonymous data relating to age, gender and attendance date of those treated for violence-related injuries were collected.
- Overall, an estimated 210,215 people attended EDs in England and Wales for treatment following violence in 2015, 1,299 fewer than in 2014. Against the background of successive annual falls in overall violence, this is the first year since 2008 that rates of violence-related injury leading to hospital treatment in England and Wales showed no significant change.
- There were an estimated 102,818 fewer ED violence-related attendances in England and Wales in 2015 compared to 2010.
- In 2015, males (5.3 per 1,000 residents) were two and a half times more likely than females (2.1 per 1,000 residents) to receive ED treatment following injury in violence.
- Serious violence affecting children (0-10 years) and young adults (18-30 years) decreased by 9% and 4% respectively in 2015 compared to 2014. Violent injury affecting those aged 51 years and over increased by 8% in 2015 compared to the previous year.
- As in previous years, those most at risk of violence-related injury were males and those aged 18 to 30. Violence-related ED attendance was most frequent on Saturday and Sunday and during the months of May, August and December.

* The methods used here and findings in previous years have all been subject to peer review and have been published[1].

Introduction

Now in its 16th year, the National Violence Surveillance Network (NVSN) of over 100 emergency departments (EDs), minor injury units (MIUs) and walk-in centres in England and Wales, has collected and synthesised violence-related ED attendances; reported rates of serious violence; and clarified national violence trends. ED data are an objective measure of violence which results in injury serious enough to result in medical treatment and provide the only comprehensive perspective of violence across the life course [2, 3].

In 2014, the UK Statistics Authority withdrew the gold standard "national statistics" status from police records because of accumulating evidence that the underlying data on crimes recorded by the police may be unreliable[4]. Importantly, police records reflect the extent to which incidents are reported. Fear of reprisals, inability to identify assailants, lack of apparent benefit for the injured and an unwillingness to have one's conduct scrutinised are reasons why many incidents are not reported to the police. Violence-related injury is an established category in most ED software packages and a new record is created for each individual attendance. Information relating to the time, date and location of the incident, as well as information on weapon use and assailant, is also recorded.

The importance of this injury-based measure of violence has been recognised by the Office for National Statistics (ONS) and the UK government. Furthermore, successive UK government crime reduction strategies have included a commitment to reduce violence through the use of anonymised information collected in EDs[5]. Collection of these data is now a mandatory requirement for all Type 1 EDs in England (consultant led 24 hour service with resuscitation capabilities) following the publication of the new Information Standard to Tackle Violence (ISTV) [6]. Types 2, 3 and 4 EDs (type 2 = mono speciality hospitals; type 3 = other ED/minor injury unit; type 4 = National Health Service walk-in centres) are not yet bound by the same standards.

This report describes the investigation of overall, gender and age-specific violence-related injury rates and violence trends using data from EDs, MIUs and Walk-in Centres in England and Wales for the twelve month period ending 31st December 2015.

Methods

Attendance date, age and gender of patients who reported injury in violence were requested from Type 1, 3 and 4 EDs in all nine regions in England (Eastern, East Midlands, London, North East, North West, South East, South West, West Midlands,

Yorkshire and Humberside) and in Wales for a 12 month period ending 31st December 2015 (table 1). All 91 EDs were certified members of the NVSN and were recruited on the basis that they were willing to share anonymised electronic data and complied with the provisions of the 1998 Data Protection Act and Caldicott guidance[7].

Data were requested by gender and five age categories, 0-10 years, 11-17 years, 18-30 years, 31-50 years and 51 years and over, the categories reported in previous NVSN publications[2, 3]. Since approximately two-thirds of EDs in England and Wales are not members of the NVSN, a weight termed the coverage ratio (CR) was calculated and applied to the sampled attendances in order to account for sample bias. The coverage ratio was the representation size of the EDs sampled in England and Wales in 2015 and was given by:

$$CR = B/A,$$

Here, B is the total annual all-cause ED attendances sampled and A is the total annual all-cause ED attendance for all EDs (including those sampled) in England and Wales. Thus, a CR equal to one indicates full national coverage and a CR equal to zero indicates no coverage. ED activity statistics, containing provider level all-cause ED attendances for England, are freely available and were accessed from the NHS England website. Once collected, monthly attendance figures were summed to give an annual, national total. For Wales, monthly all-cause ED attendances were accessed from the Welsh Government website as part of its monthly report on ED waiting times in Wales.

National violence statistics were obtained by multiplying the number of persons injured in violence by 1/CR. A measure of the likelihood of being injured in violence (V) was given by;

$$V = ((1/CR) \times n) / N \times 1000$$

Where, V is the likelihood of being injured in violence, n is the number of injured persons attending EDs in the sample in England and Wales, and N is the total resident population of England and Wales. Violence injury rates (number of injured per 1,000 resident population) were computed. This calculation was carried out for both genders and for the five age categories. The methods used for deriving appropriate weights have been published in peer reviewed journals[2, 3].

Results

Violence-related ED attendances

Data on assault-related attendances by gender and age from 91 hospitals were included in this study. A further 36 hospitals provided data that could only be used in aggregate form (i.e. total ED attendance and number of assault-related attendances). Six hospitals provided data that were unusable.

In total, 56,107 violence-related attendances were recorded in the 91 EDs, MIUs and Walk-in Centres across England and Wales between 1st January and 31st December 2015 (Table 2). Disaggregation by gender and age group showed that the sample was predominantly male (n= 40,002, 71%) and aged between 18 and 30 years (n= 26,942, 48%, table 2).

Violence injury rates

Overall in England and Wales, 3.7 per 1,000 residents attended EDs, MIUs and Walk-in Centres for treatment of violence-related injuries in 2015 (n = 91 EDs). Males (5.3 per 1,000 residents) were two and a half times more likely than females (2.1 per 1,000 residents) to have required treatment following injury in violence (Table 2). Disaggregation by age group showed higher rates of violence-related injury for males across all five age groups studied: those aged 18-30 years experienced the highest injury rates per 1,000 residents (males 14.9; females 5.4), followed by those aged 31-50 years (males 5.9; females 2.6), 11-17 years (males 5.9; females 2.5), 51 years and over (males 1.4; females 0.6) and those under the age of 11 years (males 0.3; females 0.1); rankings similar to those reported by the NVSN in the previous 10 years.

Trends in serious violence

Overall, according to this measure, levels of serious violence did not change significantly in 2015 compared to 2014 (tables 3 and 4, figure 1). Proportionately, violence affecting males and females decreased and increased by approximately 2% respectively. Similarly, violence trends among age groups showed increases and decreases. The largest decreases were among children aged 0-10 years (9%, figure 2), followed by those aged 18-30 years (4%). The only real increase was among those aged 51 years and over (8%). Violence affecting those aged 31-50 years did not change in 2015 compared to the previous year. Overall, violence-related ED attendance was greatest on Saturdays and Sundays,

reflecting violence late on Fridays and Saturdays. Violence peaked in May, August and December (figures 3a and 3b respectively).

Discussion

This national study, based on a sample of 91 EDs, MIUs and Walk-in Centres in England and Wales, showed no significant change in overall violence in the 12 months ending 31st December 2015, compared to the previous year. After successive annual falls in overall levels of violence in England and Wales, this is the first year since 2008 that violence serious enough to result in hospital treatment showed no real change. This finding is consistent with the latest report from the Crime Survey for England and Wales (CSEW) which showed that rates of violent incidents in England and Wales were no different in the year ending September 2015, compared to the previous 12 months[8]. The CSEW sub-category of "violence with injury" also showed no significant change when compared with the previous year. However, in contrast, violence against the person recorded by the police increased by 27% in the year ending September 2015 compared to the previous twelve months (up from 699,774 to 885,440 offences); including a 16% increase in "violence with injury"[8]. As in previous years, while NVSN and CSEW violence trends are similar, those derived from police records, which are greatly influenced both by trends in reporting and by changing recording practices, differ.

A further example of the unreliability of police records as a measure of violence comes from evaluation of the effectiveness of public space closed-circuit television (CCTV) cameras for crime reduction purposes. Installation of CCTV cameras led to an 11% increase in police recording of violence in intervention cities, but a 3% decrease in violence-related ED attendances[9].

It is clear that police records should not be used to measure trends in violence[10].

An estimated 210,215 people attending EDs in England and Wales reported violent injury in 2015, a similar number to those reporting injury in 2014 (211,514 people). Violence has fallen by an estimated 102,818 ED attendances since 2010, a steady five year decline of 33%, which, according to NVSN data came to an end in 2015. Whether or not this represents steady state or is prelude to rises or continued falls in future years is of course not known.

Around four in every 1,000 residents in England and Wales attended emergency units for treatment of injuries sustained in violence in the year ending 31st December 2015, compared to around six in every 1,000 residents in 2010.

Likelihood of sustaining injury in violence varied by gender and age group; rates were consistently higher for males and young adults (18-30 year olds). Reasons for the higher prevalence of violence among these groups include violence as a means to establish a strong masculine identity and higher levels of alcohol consumption among young men. It is known that intoxication increases the risk of injury by rendering people less physically capable, less likely to make sensible decisions in high-risk environments and more likely to walk home alone late at night[11]. Demographic comparisons with police recorded incidents of violence are not possible as police records fail to disaggregate offenders or victims by age or gender.

Since 2011 the rate of decrease in violence has fallen steadily (figure 1a) to the point when there was no further overall decrease in 2015. Potential explanations for this trajectory include disinvestment by local authorities and police forces in real time CCTV monitoring and in crime analysis - often considered to be a "back room function". As CSEW data also show the same plateauing in violence for the year ending September 2015, it is possible that the long steady decline in violence in England and Wales has come to an end[8].

Public health practitioners and policy makers responsible for tackling community violence in England and Wales need to take note, and consider refreshing current violence prevention initiatives, especially if trends in 2016 are similar. The modern crime prevention strategy, published in March 2016, is welcome from this perspective[12].

Although serious violence affecting males and females showed no substantial change since 2014, there were variations in violent injury rates among other age groups. Violence affecting children aged 0-10 years decreased by 9%, continuing the substantial 18% decrease reported in 2014. NVSN provides the only national measure of violence in which children aged 0-10 years are injured. But, due to the limited number of children aged 0-10 years in this study (n=423), these apparently substantial fluctuations in violent injury in this age group need to be interpreted with caution. CSEW now collects data on violence against children aged 10-15 years and estimates that there were around 399,000 incidents of violence in the year ending September 2015; a 22%, but non-significant increase compared to the previous twelve months, reversing the falling trend reported since 2010[8]. Injury among those aged 18-30 years, for whom violent injury is most likely, showed an annual decrease in violent injury of almost 4% in 2015 according to the 2015 NVSN study. These decreases were offset by the 8% increases in violence affecting those

aged 51 years and over, among whom violence-related injury decreased (by 4%) in 2014[13].

Variation in violence-related ED attendance by day was similar to previous years – there was more serious violence during weekends compared to weekdays. Lowest assault-related attendance occurred in February with the peak in attendance in May, August and December.

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Table 1 – National Violence Surveillance Network (NVSN) hospitals (n = 91)

Andover War Memorial	Poole
Basingstoke and North Hampshire	Prince Charles (Merthyr Tydfil)
Birmingham City	Prince Philip (Llanelli)
Bristol Royal	Princess Royal (Haywards Heath)
Bronglais General (Aberystwyth)	Princess Royal (Huddersfield)
Broomfield (Chelsmford)	Queen Alexandra (Portsmouth)
Calderdale Royal	Queens Medical Centre (Barnstaple)
Royal Berkshire	Royal Bolton
Cardigan	Royal Glamorgan
Castle Hill (Cottingham)	Royal Hampshire County
Central Middlesex	Royal Liverpool University
Cheltenham General	Royal Preston
Chesterfield Royal	Royal Shrewsbury
Chorley & South Ribble	Royal Sussex County
Colchester General	Royal Victoria (Newcastle)
Dewsbury & District	Salford Royal
Fairfield General (Bury)	Salisbury District
Glan Clwyd (Rhyl)	Sandwell General
Glangwili General (Carmarthen)	South Pembrookshire
Gloucestershire Royal	Southampton General
Harrogate	St. Mary's Hospital (Isle of White)
Hexham General	Stepping Hill (Stockport)
Hillingdon	Sunderland Royal
Hinchingbrooke	Tenby Cottage
Hospital of St Cross (Rugby)	The County Hospital (Hereford)
Huddersfield Royal	The Friarage (Northallerton)
Hull Royal	The James Cook University (Townsville)
Ipswich	The Queen Elizabeth (Kings Lynn)
James Paget (Great Yarmouth)	The Royal Oldham
John Radcliffe (Oxford)	The Royal Surrey County (Guildford)
Kingston	Tunbridge Wells
Leicester Royal	University College London
Lewisham	University Hospital (Coventry)
Llandovery	University Hospital (Southampton)
Maidstone	University hospital of South Manchester
Medway Maritime (Gillingham)	University Hospital of Wales
Milton Keynes	Walsall Manor
Norfolk and Norwich University	Wansbeck General
North Manchester General	West Suffolk (Bury St Edmunds)
North Middlesex University	Weston Park

North Tyneside General	Withybush General
Northampton General	Wrexham Maelor
Northwick Park (Harrow)	Ysbyty Cwm Cynon (Mountain Ash)
Nottingham City	Ysbyty Cwm Rhondda
Pinderfield (Wakefield)	Ysbyty Gwynedd (Bangor)
Pontefract	

Table 2: [1]Violence-related attendances and injury rates by age and gender 2015: patients who attended NVSN EDs in England and Wales for treatment following violence-related injury.

Gender	N	%
Male	40,002	71
Female	16,105	29
Total	56,107	100

Age group (years)	N	%
0 to 10	423	0.8
11 to 17	5,576	10
18 to 30	29,942	48
31 to 50	18,109	32.2
50+	5,057	9
Total	56,107	100

	Annual violence injury rate (per 1,000 residents)
Males	5.33
Females	2.1
Total	3.74
0 to 10	0.21
11 to 17	4.27
18 to 30	10.19
31 to 50	4.29
50+	1.01

[1] Violence-related ED attendances by age and gender were provided by 91 EDs.

Table 3: Percentage change in serious violence in England and Wales. Emergency Department (ED) and Minor Injury Unit (MIU) data).

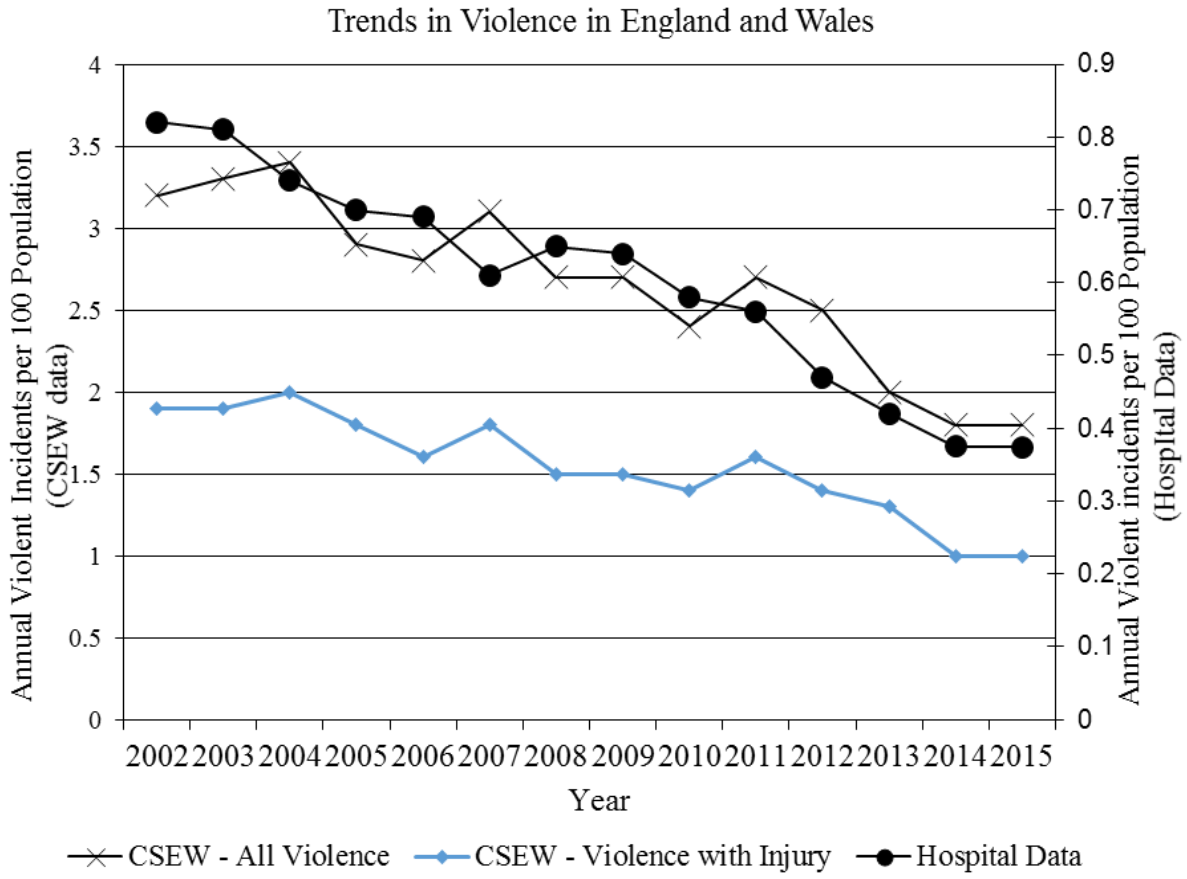
	Males	Females	Total
2007 - 2008	5	10	6
2008 – 2009	-0.3	-1.8	-1.3
2009 – 2010	-9.5	-5.7	-9
2010 – 2011	-5.3	-1	-4
2011 – 2012	-14	-14	-14
2012 – 2013	-12	-12	-12
2013 – 2014	-9.9	-9.5	-9.9
2014 – 2015	-2	1.5	0

Table 4: [2]Estimated violence related ED attendances by age and gender in England and Wales.

Age Groups	2014		2015	
	Males	**Females**	**Males**	**Females**
0 to 10	1,236	510	1,053	516
11 to 17	14,401	6,152	14,767	6,128
18 to 30	77,509	26,797	74,286	26,661
31 to 50	47,108	20,575	46,954	20,911
50+	12,055	5,156	12,799	6,165

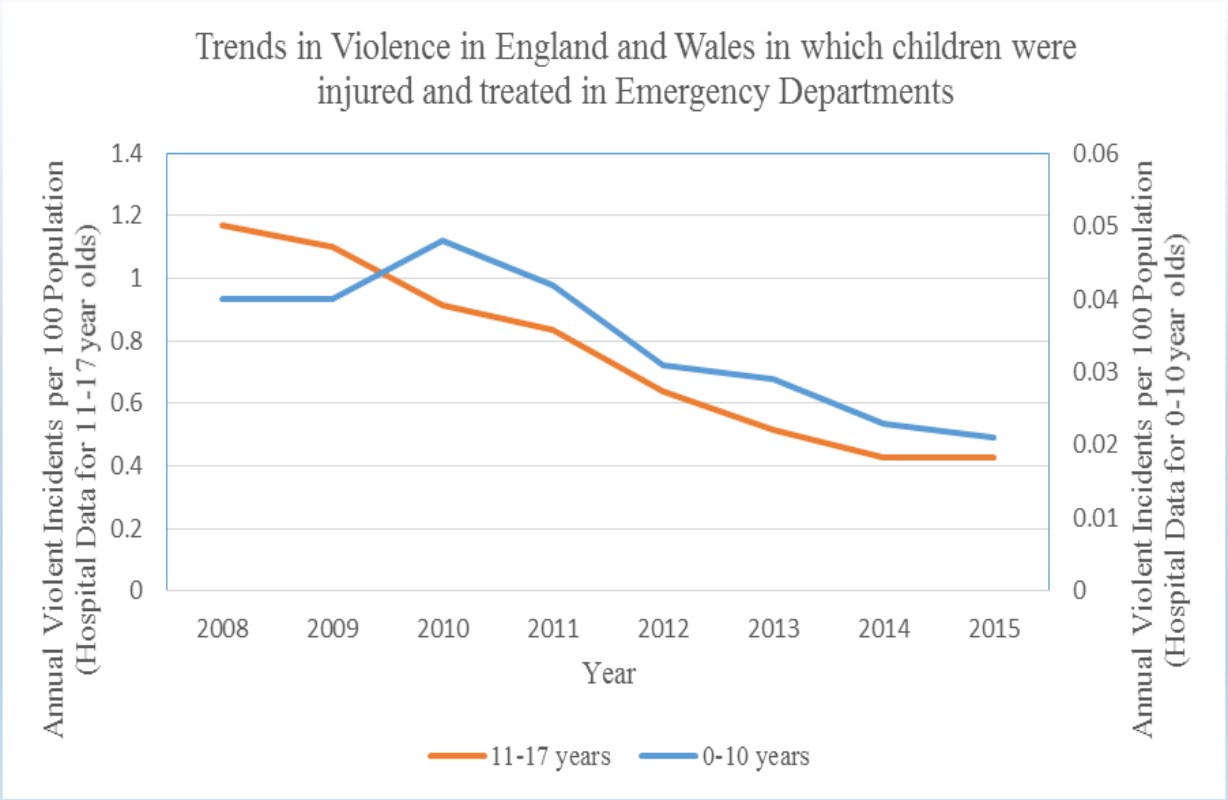
[2] Violence-related ED attendances by age and gender were provided by 117 and 91 EDs in 2014 and 2015 respectively.

Figure 1a



Note: CSEW violence data for 2013, 2014 and 2015 are for twelve month periods ending 30th September. Before 2013, CSEW violence data are for twelve month periods ending 31st March.

Figure 2[3]

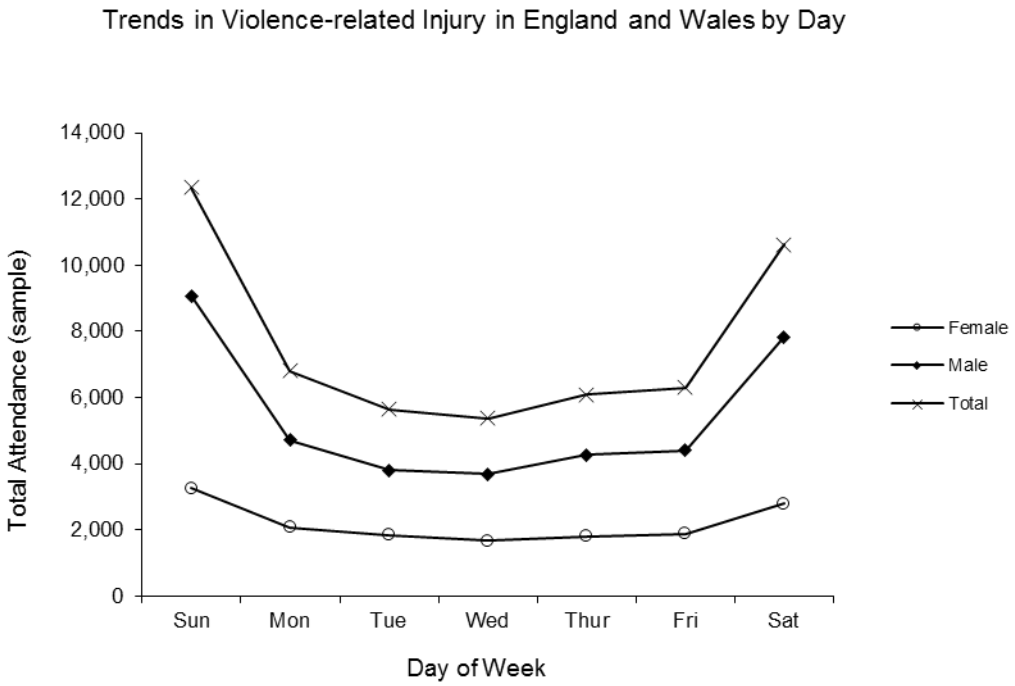


[3] Violence-related ED attendances by age and gender were provided by 91 EDs.

Figure 3a and 3b

(Year ending 31st December 2015)

3a



3b