Violence in England and Wales in 2011
An Accident and Emergency Perspective

V Sivarajasingam, JP Wells, S Moore, P Morgan, JP Shepherd
Violence and Society Research Group, Cardiff University, Heath Park, Cardiff, CF14 4XY
Correspondence to Professor Jonathan Shepherd
Tel: 02920 744215 (office); 0777 9490022 (mobile)
Email: shepherdjp@cardiff.ac.uk

Executive Summary

- A structured sample of 42 Emergency Departments (EDs) and Minor Injury Units (MIUs) 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 prospective data relating to age, gender and attendance date of those treated for violence-related injuries were collected from these EDs and MIUs.
- Overall, an estimated 307,998 people attended EDs and MIUs in England and Wales for treatment following violence in 2011 – 10,879 fewer than in 2010.
- Overall in England and Wales, serious violence decreased by 4% in 2011 compared to the previous year. Apart from a 7% increase in 2008, levels of serious violence have fallen every year since 2001 according to this measure.
- Violent injury of males and females declined by 5.3% and 1% respectively in 2011 compared to 2010.
- Serious violence affecting those aged 0 to 10 years decreased (14%) reversing the increases seen in the previous two years. Violence affecting those aged 11 to 50 also declined.
- Serious violence in Wales decreased faster than in England between 1995 and 2009, eliminating the disparity between violence rates in the two countries which existed in 1995-9.
- Those at highest 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 peaked in April, July and October.

[*] The methods used here and findings in previous years have all been subject to peer review and have been published in the Journal of Public Health and in the journal Injury.[4]

Introduction

Levels and trends in community violence in England and Wales have traditionally been measured using the two official Home Office sources of data, the British Crime Survey (BCS) and police records.[1] Instead of providing clarity on violence trends, the official statistics have often been contradictory; for example since 2001, the number of BCS violent incidents resulting in injury has fallen by 29%; whereas police recorded violence increased over the first half of the decade (between 2002 and 2005). Although the BCS has used the same methodology for measuring violence since it was instituted in 1985 (recall of violence by door step face-to-face interview), police records have been and remain sensitive to changes in reporting and recording practices. For example, following the introduction of the National Crime Recording Standards (NCRS) in April 2002, police recorded violence against the person increased for three consecutive years in contrast to opposite BCS trends.[2] Since 2006 however, violence trends according to BCS and police records have been similar.[3]

Over the last decade, injury records from Emergency Departments (EDs) have been studied as part of the work of National Violence Surveillance Network (NVSN) and now provide information about local, regional and national violence levels and trends in England and Wales.[4] This harm-based violence measure depends on the presence of injury deemed to require hospital treatment; it has been shown to be a reliable and objective measure and less prone to reporting and recording biases than police records. The network has brought clarity to national trends in violence by triangulating measurement. According to NVSN there was no significant national trends in the period 1995 to 2000, and year on year overall decreases in violence from 2001 to 2010, except in 2008 when a 7% increase was identified.[3,5] Measuring violence from injury records is not without its limitations, however. Violence leading to hospital treatment represents the most serious violence and does not include violence which leads to no injury or injury deemed not to require hospital treatment. According to the BCS estimates 45% of all violent incidents result in no physical injury.[1]

The aim of this report is to identify overall gender and age-specific violence-related injury rates and violence trends in England and Wales for the period ending 31st December 2011.

Methods

All certified members of the NVSN were contacted by email and telephone in January 2012. Inclusion criteria for EDs were the same as in previous years: the availability of electronic data on violence-related attendances for 2011 and agreement from the ED clinical directors to share these anonymised data. Violence data relating to date of ED attendance, age and gender of patients reporting injury in violence and total attendance to the ED in the year ending 31st December 2011 were requested. Due to reported increased staff and financial pressures within the NSVN hospitals in 2011 data retrieval for the purposes of this report was more challenging. Hundreds of telephone and email communications followed and on occasions data requests were made under the auspices of the Freedom of Information Act. Injury data were collected from a sample of 42 Types 1, 3 and 4 EDs ((Type 1 = Consultant led 24 hour service with full resuscitation facilities; Type 3 = other types of ED/minor injury units; Type 4 = NHS walk-in centres) distributed in the ten Government Office Regions in England and in Wales (Table 1). All 42 EDs had implemented and continue to comply with the provisions of the 1998 Data Protection Act and Caldicott guidance and access to ED computer systems was restricted to a limited number of ED staff. For patients reporting injury in violence, the first point of contact was usually with the receptionist. Reason for attendance, for example, violence-related injury, is entered by the receptionist onto the ED software. For every new incident a new record is created and at all times during data retrieval patient confidentiality was maintained.

Data analyses were similar to those published in previous NSVN reports on violence trends, and attendances were categorised by gender and age groups: 0-10, 11-17, 18-30, 31-50 and 51+ years. The potential bias in selecting this sample of EDs, reflecting the non-randomised study design, was controlled by assigning appropriate weights to the sample ED populations so that comparisons could be made with national violence-related injury rates from previous years. This method for calculating appropriate weights has been peer reviewed and published.[4]

Annual violence injury rates (number of injured individuals per 1,000 resident population) were computed separately for both genders and for the five age groups. Annual injury rates for 2011 were compared with injury rates from previous years. In computing national injury rates it was assumed that coverage ratio (total annual attendance at EDs in the sample compared to total annual attendance at all EDs in England and Wales) was the same for both genders and all age groups.

Long term trends in violence-related injury in England and Wales between 1995 and 2009 were compared using archived injury data from 15 years

Results

Violence-related ED attendances

In total, there were 37,292 violence-related attendances recorded in the 42 EDs over the 12 month period ending 31st December 2011. Age and gender distributions are shown in Table 2, and are similar to distributions in previous years. Just over a quarter of attendances were of females (10,368, 27.8%). Those aged 18-30 years made up approximately half of all attendances (18,491, 49.5%). This was followed in decreasing order by those aged 31-50 years, 11-17 years, 51 years and over, and those aged 10 years and under.

Violence injury rates

The estimated violence-related injury rate in England and Wales in 2011 was 5.59 per 1,000 resident population; this equates to 307,998 people who attended EDs following violence (Table 2). Male to female ratio was approximately three to one with eight per 1,000 male residents (222,447) and three per 1,000 female residents (85,565) attending an ED for treatment following violence. Age group analyses showed that, for both genders, those aged 18-30 years had the highest injury rates (15.9 per 1,000 residents) followed by those aged 11-17 years (8.3 per 1,000 residents), those aged 31-50 years (6 per 1,000 residents), those aged 51 years and over (1.1 per 1,000 residents) and those aged 10 years and younger (0.4 per 1,000 residents).

Trends in serious violence

Serious violence affecting males and females in England and Wales decreased by 4% in 2011 compared to 2010; this equates to 10,879 fewer violence-related attendances in 2011 (Table 3, Figure 1). Decreases for males (5.3%) were larger than for females

(1%). The largest decreases were among those aged 0-10 years (14.3%), followed by those aged 11-17 years (11.1%), 18-30 years (3.8%) and 31-50 years (1.5%). Violence affecting those aged 51 years and over, however, showed an increase (3.6%) over the same period. Violence was seasonal with peaks in April, July and October and most frequent on Saturday and Sunday (Figures 2a and 2b).

Serious violence in England and Wales compared

Rates of serious violence in England were significantly lower than in Wales between 1995 and 2009, and showed less fluctuation (Figure 3). Annual violent injury rate in England ranged from 4.5 per 1,000 residents in 2009 to 5.6 per 1,000 residents in 2006 whereas the annual rate in Wales ranged from 5.7 per 1,000 residents in 2008 to 10.1 per 1,000 residents in 1997. Over the 15 year period the average annual violent injury rates for males and females were lower in England (7.6 and 2.6 per 1,000 residents respectively) than they were in Wales (12.6 and 4.3 per 1,000 residents respectively). Trend analysis showed that the annual violence-related injury rate in England remained relatively consistent over the period 1995-2009, with the suggestion of a repetitive five year cycle (Figure 3). However, the annual violent injury rate for Wales decreased substantially after 2001; from 2001 to 2009 this fell by 4.3 per 1,000 residents. This marked decline all but eliminated the disparity between the two countries; in 1997 the rate difference was 5.2 per 1,000 residents and in 2008 it was 0.4 per 1,000 residents.

Discussion

This national study, based on a sample of 42 EDs in England and Wales, demonstrates decreases in violence-related attendances of both males and females; an estimated 307,998 people reported injury in violence in 2011, down by 10,879 (4%) compared to 2010. Following a plateau in the late 1990s, overall violence leading to emergency hospital care has fallen consistently in England and Wales in the period 2000-2010. This overall decrease equates to 106,000 fewer violence-related ED attendances in 2011 compared to 2001. This finding is consistent with decreases in hospital admissions for deliberate harm in England, represented by ICD codes X85 to Y09 (codes for deliberate external causes), and contain records of different types of assaults including assault by bodily force and assault by blunt and sharp objects. Apart from an isolated increase in 2006/2007, overall, the number of admissions

following assault by blunt and sharp objects decreased by 11% between 2005 and 2009.

BCS data for the year to September 2011 showed no statistically significant change in levels of overall violence compared to the previous.[1] Following the adoptation of NCRS counting rules by police forces numbers of violent offences against the person recorded by police decreased by 22% between 2005/06 and 2010/11. Long term trends in violence in England and Wales over the last five years according to the three national sources (BCS, police and EDs) are similar (Figure 1).

As in previous years, violent injury rates were higher for males compared to females. Overall, those aged 18 to 30 years were most at risk of sustaining injury compared to other age groups. In this study all age groups except those aged 51 years and over experienced decreases in violence-related ED attendances in 2011 compared to the previous year. The greatest annual decrease in violence-related harm was among children aged 0 to 10 years (14%); this reverses the increase in violence affecting this age group identified in the two preceding years (8% and 22% increases in 2009 and 2010 respectively). The relatively small number of cases in this age group (367 and 616 in 2011 and 2010 respectively) makes interpretation of trends difficult as injury rate calculations are susceptible to exaggerated fluctuations between years. However, falls in serious youth and young adult violence (affecting those aged 11 to 30 years) are particularly encouraging and continue the trends identified in 2010. Reasons for these decreases in youth violence are unclear, but may be multi-factorial and complex – short term trend changes are less likely to be due to changes in structural factors such as unemployment rate, poverty, inequality and more likely to be related to policing, community partnerships and public health interventions. Inconsistent with these downward trends was the 3.6% increase in violent injury among those aged 51 years and over.

Separate analyses for England and Wales showed that although serious violence rates have historically been higher in Wales, the substantial decline in violence in Wales over the previous 15 years has narrowed this gap. Reasons for differences in trends between the two countries are unclear, but are likely to be complex and multifaceted. For example, north-south divides in health and prosperity are well documented, for example in relation to mortality for both sexes and among all age groups.[6] Other factors such as educational, environmental and lifestyle influences which may act over the whole life course, and possibly over generations

may also be responsible. It is also possible that community level violence prevention has been more effective in Wales than in England and over a longer period, reflecting the development, for example, of anonymised information sharing between EDs and other community partners which began in Wales and which was implemented across the country by the Welsh Government before it became a UK coalition commitment.[7] It is possible that such measures have masked underlying socio-economic drivers of violence to different extents across both countries

References

1. Crime in England and Wales: Quarterly Update to September 2011. Home Office Statistical Bulletin 01/12 London: Home Office, 2012.
2. Flatley Y, Kershaw C, Smith K, Chaplin R, Moon D. Crime in England and Wales 2009/2010. Home Office Statistical Bulletin 12/10 London: Home Office, 2010.
3. *www.vrg.cf.ac.uk/nvit/NVIT_2010.pdf*
4. Sivarajasingam V, Morgan P, Matthews K, Shepherd JP, Walker R. Trends in violence in England and Wales 2000-2004: An Accident and Emergency Perspective. Injury 2009;40:820-825.
5. Sivarajasingam V, Shepherd JP, Matthews K, Jones S. Trends in violence in England and Wales 1995-2000: an accident and emergency perspective. J Pub Health Med 2002;24(3):219-226.
6. *http://www.dh.gov.uk/en/MediaCentre/Statements/DH_124381*
7. Florence C, Shepherd JP, Brennan I, Simon T. Effectiveness of anonymised information sharing and use in health service, police, and local government partnership for preventing violence related injury: experimental study and time series analysis. BMJ2011;342:d3313.

Table 1 – NVSN hospitals (n=42)

Accrington Victoria MIU	**Morriston (Swansea)**
Bideford MIU	**North Devon District (Barnstaple)**
Birmingham Heartlands	**North Manchester General**
Broomfield (Chelmsford)	**Northern General (Sheffield)**
Burnley Urgent Care Centre	**Pilgrim (Boston)**
Calderdale Royal, Halifax	**Princess of Wales (Grimsby)**
Chesterfield Royal	**Princess Royal (Farnborough)**
Ealing	**Queen Elizabeth (Woolwich)**
Eastbourne District General	**Rochdale Infirmary**
Fairfield General	**Royal Blackburn**
Glan Clwyd (Rhyl)	**Royal Blackburn UCC**
Good Hope (Sutton Coldfield)	**Royal Bournemouth**
Grantham	**Royal Devon and Exeter**
Gwynedd (Bangor)	**Royal Oldham**
Hillingdon	**Royal Sussex County**
Hinchingbrooke (Huntingdon)	**Skegness and District General**
Huddersfield Royal	**Solihull**
Ilfracombe MIU	**St Marys (Newport, Isle of Wight)**
Ipswich	**Stepping Hill (Stockport)**
Kingston	**University Hospital of Wales (Cardiff)**
Lincoln County	**Wrexham Maelor**

Table 2: Violence injury rates by age and gender 2011: patients who attended 42 EDs and MIUs in England and Wales for treatment following violence-related injury.

Gender	N	%
Male	26,925	72.2
Female	10,368	27.8
Total	37,292	100

Age group (years)	N	%
0 to 10	367	0.98
11 to 17	4,775	12.8
18 to 30	18,491	49.5
31 to 50	11,123	29.8
50+	2,537	6.8
Total	37,292	100

	Annual violence injury rate (per 1000 residents)
Males	8.14
Females	3.08
Total	5.59
0 to 10	0.42
11 to 17	8.33
18 to 30	15.91
31 to 50	6.01
50+	1.14

Table 3: Percentage change in serious violence in England and Wales (ED/MIU data).

	Males	Females	Total
2000 – 2001	0	3.5	1
2001 – 2002	0	-7.7	-4.5
2002 – 2003	0.5	-2.3	-0.8
2003 – 2004	-9.6	-4.6	-8.8
2004 – 2005	-6.8	-11	-6.9
2005 – 2006	2	-8	-2
2006 – 2007	-13	-11	-12
2007 – 2008	4.3	9.6	6.6
2008 – 2009	-0.3	-1.8	-1.3
2009 – 2010	-9.5	-5.7	-9
2010 – 2011	-5.3	-1	-4

Figure 1

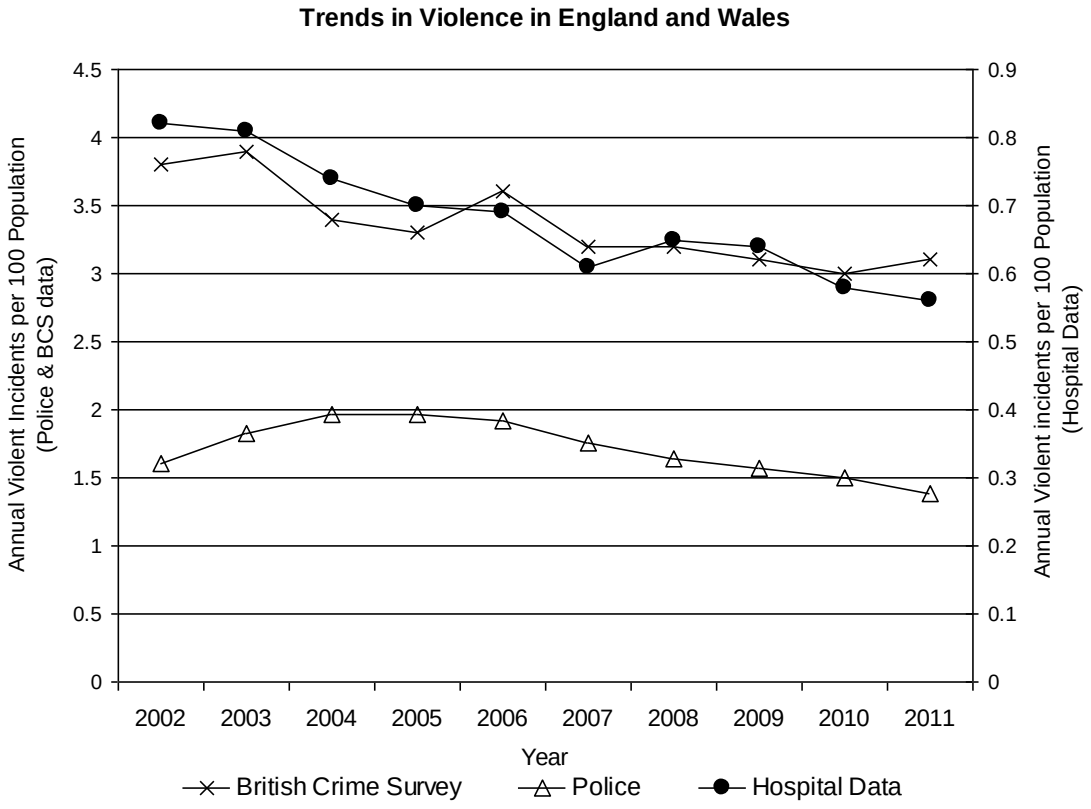
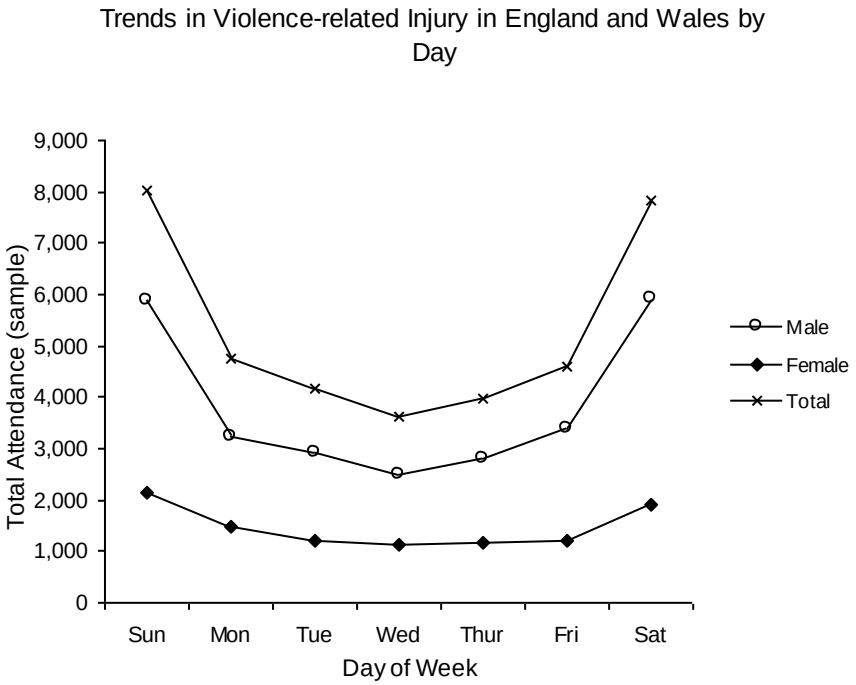

Trends in Violence in England and Wales
Annual Violent Incidents per 100 Population (Police & BCS data)
Annual Violent incidents per 100 Population (Hospital Data)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Year
British Crime Survey
Police
Hospital Data

Figure 2a and 2b

2a



2b

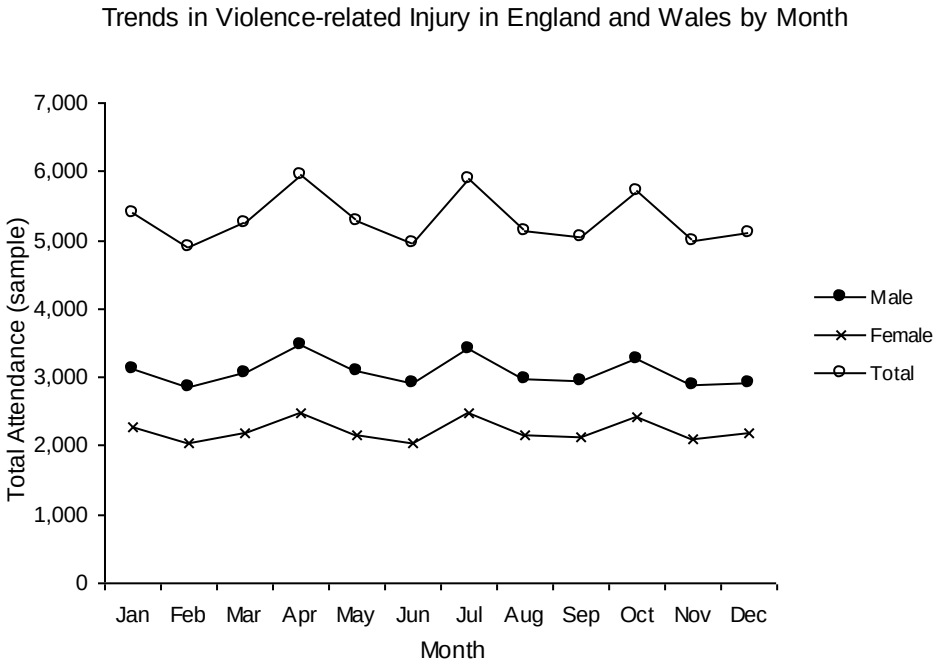


Figure 3

Comparison between trends in serious violence in England and Wales (Hospital data)