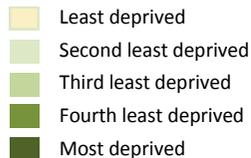# Violence profile: Hammersmith and Fulham
## Use of NHS data in local violence prevention

This profile utilises three sources of NHS data to present a picture of violence in Hammersmith and Fulham local authority (LA). The profile aims to provide health and other professionals involved in violence prevention with an understanding of NHS data sources and their potential for informing local violence prevention initiatives. The profiles examine the extent of violence, trends, at-risk groups and communities, and circumstances of assault. The profile focuses on NHS data and does not therefore provide a full picture of violence within the LA.

Figure 1: Hammersmith and Fulham LA by Lower Super Output Area (LSOA*) showing variation in deprivation.

Least deprived
Second least deprived
Third least deprived
Fourth least deprived
Most deprived

Charing Cross Hospital

* LSOAs are a set of geographical areas across England and Wales that are defined by population size (average population is 1,500).
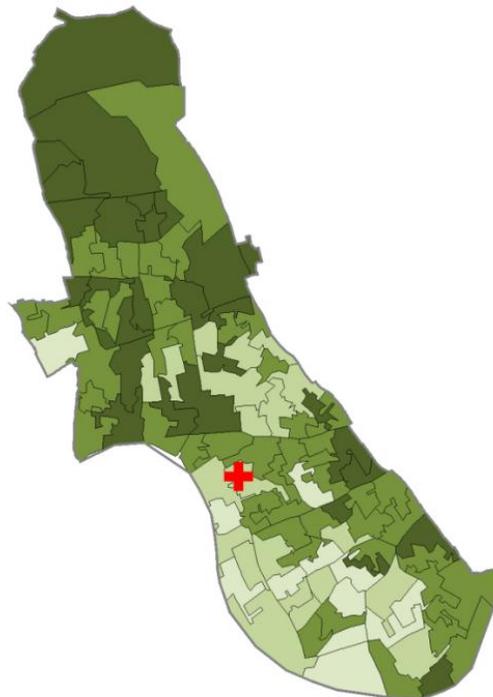
Box 1: Key findings

- Levels of violence, as measured by both NHS and police sources, has decreased in Hammersmith and Fulham LA over recent years. However, the rate of assaults was higher than the England average for a number of indicators.
- While trends differ between data sources, there was a general rise in assault levels between the months of April and September (ambulance, A&E and hospital admissions data).
- Violence was most likely to occur on Saturdays and Sundays between the hours of 2pm and 4am, largely reflecting Friday and Saturday nights (ambulance and A&E data).
- Around 7% of ambulance call-outs for assault reported a sharp object or a gun in the incident notes.
- The majority of people treated for assault-related injuries were male (~70%) and aged 20-49 (~32% were aged 20-29, ~22% aged 30-39 and ~17% aged 40-49) (ambulance, A&E and hospital admissions data).
- There was a concentration of assaults occurring within Hammersmith and towards Shepherd's Bush (ambulance data).
- Areas of Hammersmith and Fulham with higher deprivation levels also had significantly higher rates of A&E presentations for assault and hospital admissions for assault.

The NHS data sources used are: 1) ambulance service call-outs; 2) Hospital Episode Statistics (HES) experimental Accident and Emergency Department (A&E) data; and 3) HES hospital admissions. Data is also available from the Trauma Audit and Research Network (TARN; clinical reports of severe trauma). However, numbers of severe assaults recorded via TARN at Charing Cross Hospital over the last three years were too low to be meaningfully analysed and have not been included. For more information about the data sources used, see Table 2.

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Summary of violence

A summary of violence is presented in Table 1. Mortality data and police data have been presented alongside the NHS data sources to provide a rounded picture of violence. For more information about the data sources see page 7.

Table 1: Indicators of violence for Hammersmith and Fulham local authority.

|	Number	Rate per 1,000 pop	England rate per 1,000 pop	% Change from previous 2 years	Direction of change
Ambulance call-outs for assault-related incidents (2012/13)[1]	883	4.91	na	-38.77	⬇
A&E attendances for assault (2010/11)[2]	771	**4.54**	3.60	na	na
Emergency hospital admissions for assault (2011/12)[3]	165	**0.91**	0.64	-4.62	⬇
Deaths from assault (2011)[4]	<5*	nc	0.01	nc	nc
Police-recorded violent crime (2011/12)[5]	4345	**25.60**	13.60	-7.91	⬇
Police-recorded sexual crime (2011/12)[5]	203	**1.20**	0.96	-6.88	⬇

1. Data from the London Ambulance Service (LAS). Crude rate per 1,000 population (mid 2012 estimates, ONS), 2012/13.
2. Data based on Hospital Episode Statistics (HES) A&E experimental dataset; experimental data created by the former North West Public Health Observatory (www.eviper.org). First attendances for assault by residents of Hammersmith and Fulham local authority, 2010/11. Crude rate per 1,000 population (mid 2010 estimates, ONS). Percent change has not been calculated since the adjusted data is only available for the one year.
3. Data from HES admitted patient care. Emergency hospital admissions for assault (ICD-10 codes X85-Y09) by residents of Hammersmith and Fulham local authority, 2011/12. Directly Standardised Rate per 1,000 population (mid 2011 estimates, ONS).
4. Data from ONS mortality database. Deaths from assault, 2011. Percent change has not been calculated due to very low numbers.
5. Data from police-recorded crimes, crude rate per 1,000 population (mid 2011 estimates, ONS), 2011/12.

Data in **red text** indicate that the value is significantly higher (statistically) than the England average; * low numbers have been suppressed; na = not available; nc = not calculated.

When is violence most likely to occur?

Figure 2 shows the percentage of assault-related incidents that fell within each month by data source. While trends differ between sources, there was a general rise in assault levels between April and September.

Figure 2: Percentage of assault-related incidents by data source, by month (three years combined data [see Table 2]).
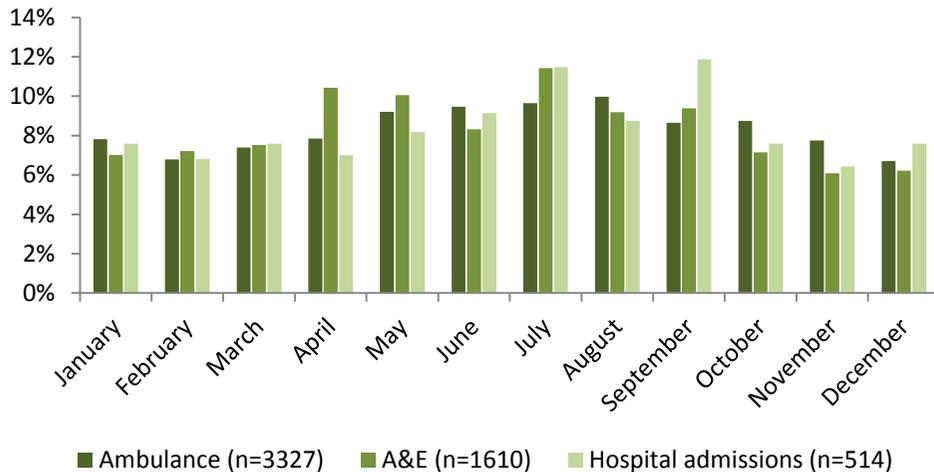
Information on assault timings can be generated from calls to ambulance services. However, the time of presentation to the A&E can also be a proxy for assault time. The College of Emergency Medicine (CEM) recommend collecting information on assault time and date at A&E presentation (see Box 2), which would allow a more accurate understanding of the timings of assault. However, at the time of analysis CEM-recommended assault data was not collected by Charing Cross Hospital A&E. The available data sources show that assaults took place most frequently between the hours of 2pm and 4am (Figure 3). Assaults occured most frequently on Saturdays and Sundays (Figure 4), which reflects Friday and Saturday nights.

Figure 3: Percentage of assault-related call-outs/attendances by data source, by hour (three years combined data [see Table 2]).
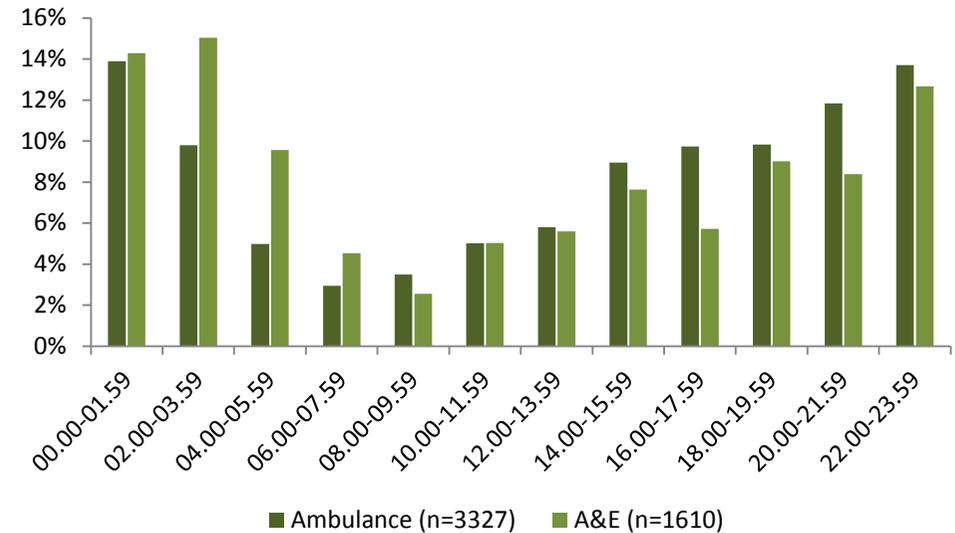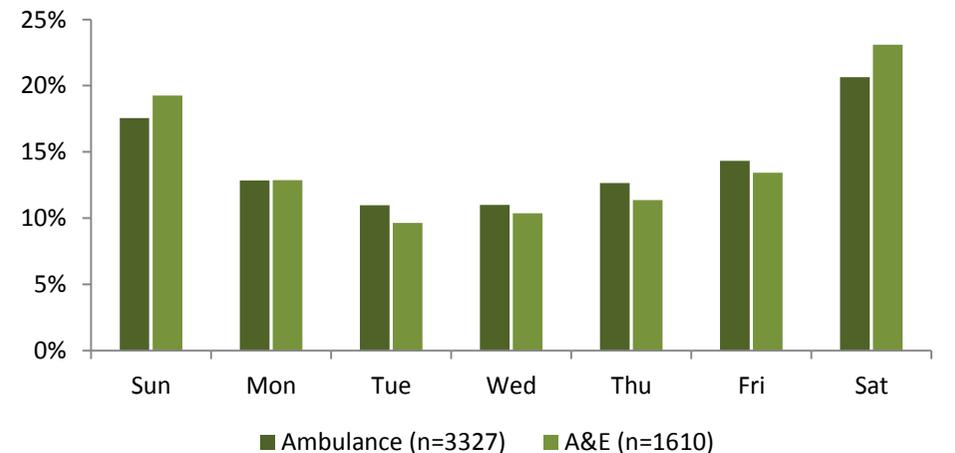

Figure 4: Percentage of assault-related call-outs/attendances by data source, by day (three years combined data [see Table 2]).

3

Circumstances around violence

Information on the circumstances of violence can be obtained through ambulance service data; around 7% of ambulance call-outs for assault reported involvement of a sharp object/gun within the incident notes. Information on the location of assault (e.g. public area, home) and the mechanism of assault (e.g. blow to the body, fall) is collected through TARN. However, only nine cases of severe assault were recorded through TARN at Charing Cross Hospital between 2010 and 2012. These data have not therefore been included. Whilst the CEM has recommended collecting data on incident location and weapon use at A&E presentation (Box 2), at the time of analysis these fields were not currently collected at Charing Cross A&E.

> **Box 2: CEM-recommendations for A&E data collection**
>
> In 2009, the College of Emergency Medicine (CEM) published guidance for information sharing to reduce violence. This document recommends that:
> 1. A&Es should routinely collect data on assault victims at patient registration (by A&E receptionists), including: the **date and time** of assault, the assault **location** (e.g. name of pub, school), and the **weapon used** (e.g. fist).
> 2. There is no need for a formal information sharing agreement between the A&E and the Community Safety Partnership (CSP).
> 3. The data should be shared with the CSP and crime analysts in an anonymous and aggregate form.
> 4. Senior emergency physicians should be supported to participate in CSP meetings.
>
> In September 2014, the Health and Social Care Information Centre developed an information standard on A&E information sharing to tackle violence[1], including the CEM-recommended questions, along with the time and date of the A&E attendance. Collection of these data fields would help identify when and where violent incidents are most likely to take place.

[1]Available from: http://www.isb.nhs.uk/documents/isb-1594/amd-31-2012/1594312012spec.pdf

Health data can be used alongside police data on victims and offenders (Box 3) to better understand which groups of the community are most affected by violence. Figure 5 shows that the majority of people treated for assault-related injuries were male. The majority of assault victims were aged between 20 and 49 years of age, with the highest frequency of cases seen in the 20-29 age group (Figure 6).

Figure 5: Percentage of assault-related incidents by data source, by sex (three years combined data [see Table 2]).
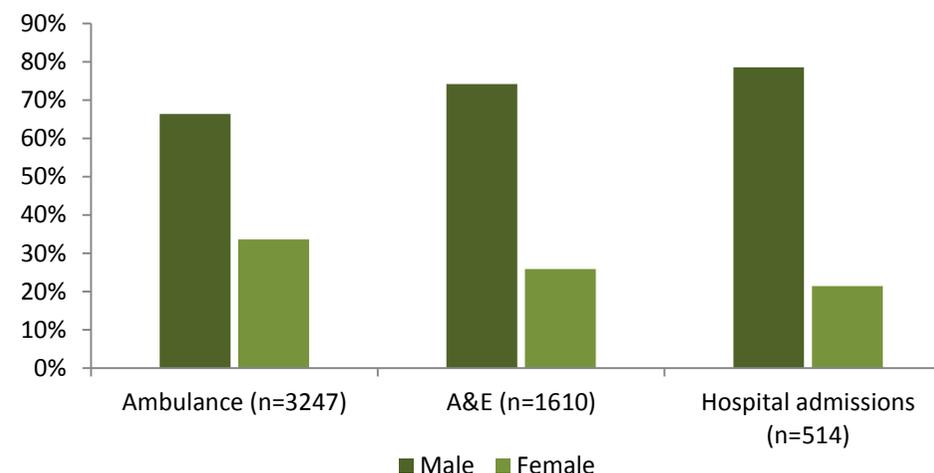

> **Box 3: Police data for perpetrators and victims**
>
> Data from London Metropolitan Police show that the majority of assault perpetrators and victims were aged 10-39 years (72% and 69% of cases respectively). For both perpetrators and victims, the most frequent age category was 20-29 years (31% of cases for both groups). Although the ethnicity of victims was unknown in about 65% of cases, the ethnicity of offenders is largely complete (92%). Here, half of perpetrators were White (British, 33%; other White Background, 17%), 32% were Black/Black British (14% Caribbean, 10% African, 8% other Black background), 7% were mixed ethnicity, 6% were Asian (2% Indian, 1% Pakistani, 4% other Asian Background), and 5% were of another ethnic group.

4

Hospital admission data suggested that 58% of victims with a known ethnicity (92%) were White (38% British; 20% other White background), 18% were Black/Black British (7% Caribbean, 5% African, 6% other Black background), 3% were Asian/Asian British, 3% were mixed ethnicity and 18% are of another ethnic group.

Figure 6: Percentage of assault-related incidents by data source, by age-group (three years combined data [see Table 2]).

Ambulance callouts (n=3038) ■ A&E (n=1608) ■ Hospital admissions (n=514)
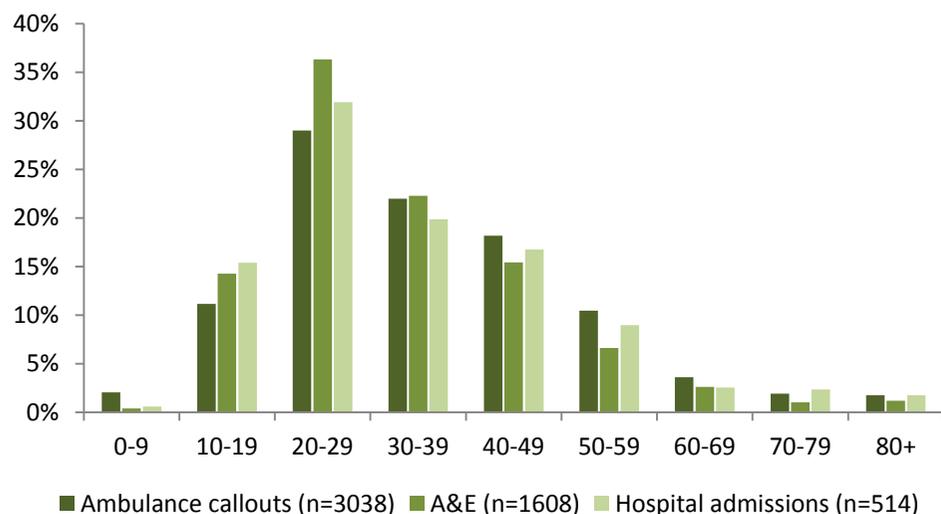
At-risk locations and communities

Health data can be used to identify where assaults take place and which communities are most at risk. Data from the ambulance service records the location of call-outs for assault-related incidents. A map of these locations for 2012/13 is presented in Figure 7 and show a spread of assaults across the authority but a concentration occurring within Hammersmith and towards Shepherd's Bush. Figures 8 and 9 show the rate of A&E presentations for assault and the rate of hospital admissions for assault by Lower Super Output Area (LSOA)

of residence. These maps can help identify geographical areas to target violence prevention initiatives. Areas of Hammersmith and Fulham with higher deprivation levels (Figure 1) also had significantly higher* rates of A&E presentations for assault and hospital admissions for assault.

Figure 7: Location of ambulance call-outs for assault related incidents within Hammersmith and Fulham LA. 2012/13.
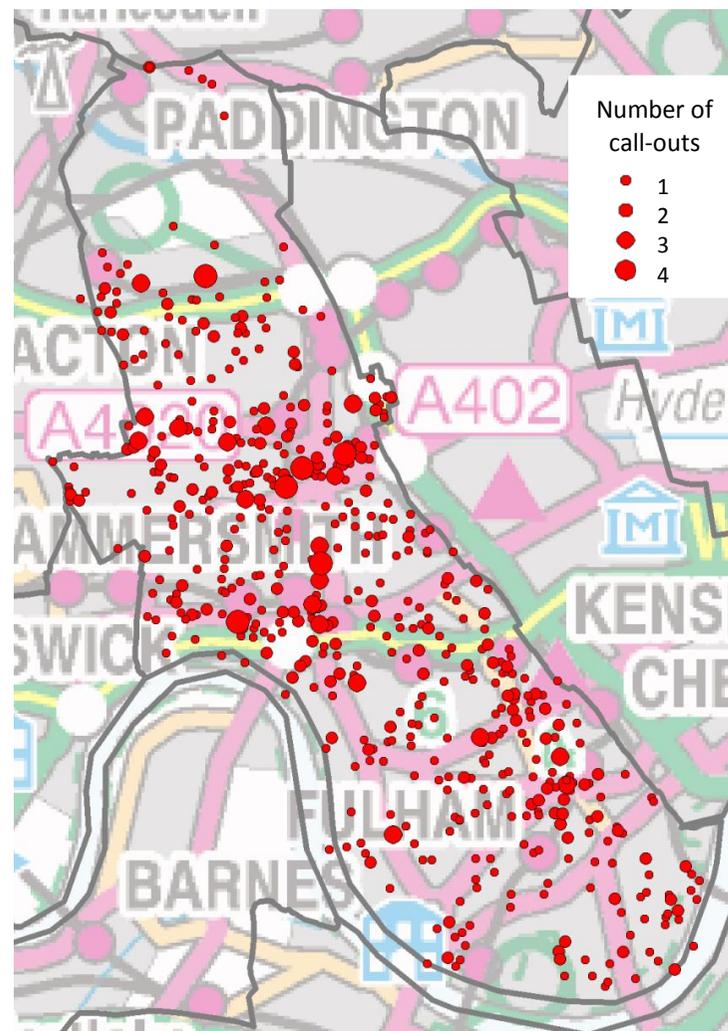
* Using Analysis of Variance (ANOVA). F=40.06 (p<0.01) for A&E presentations and F=32.19 (p<0.01) for hospital admissions.

Figure 8: Crude rate of A&E attendances for assault by LSOA of patient residence within Hammersmith and Fulham LA, 2009/10-2011/12.
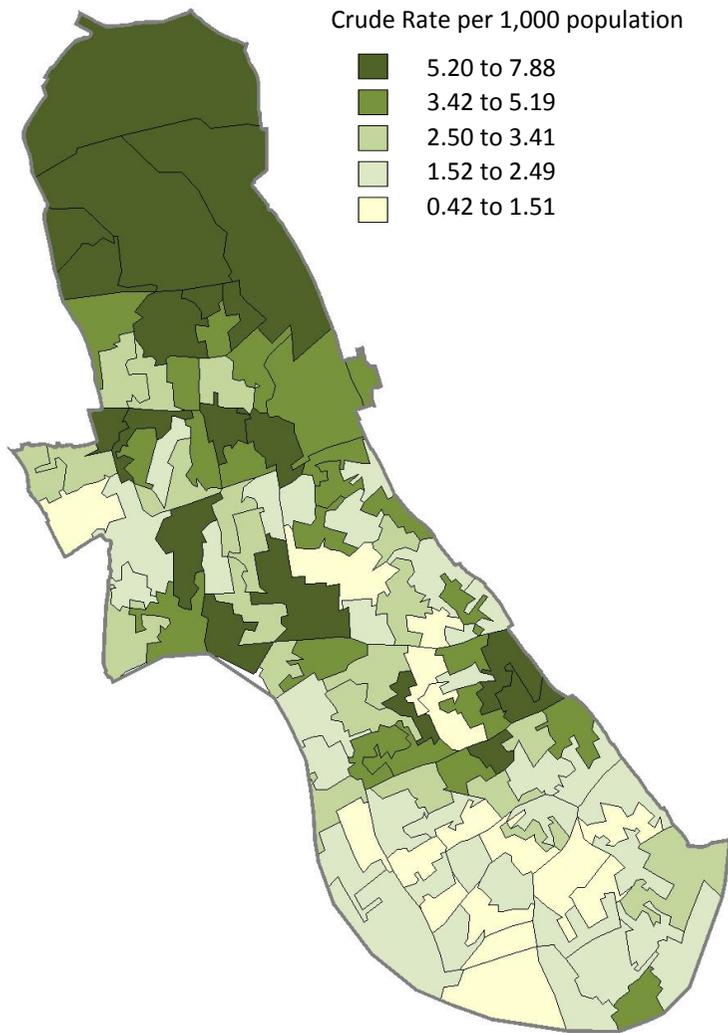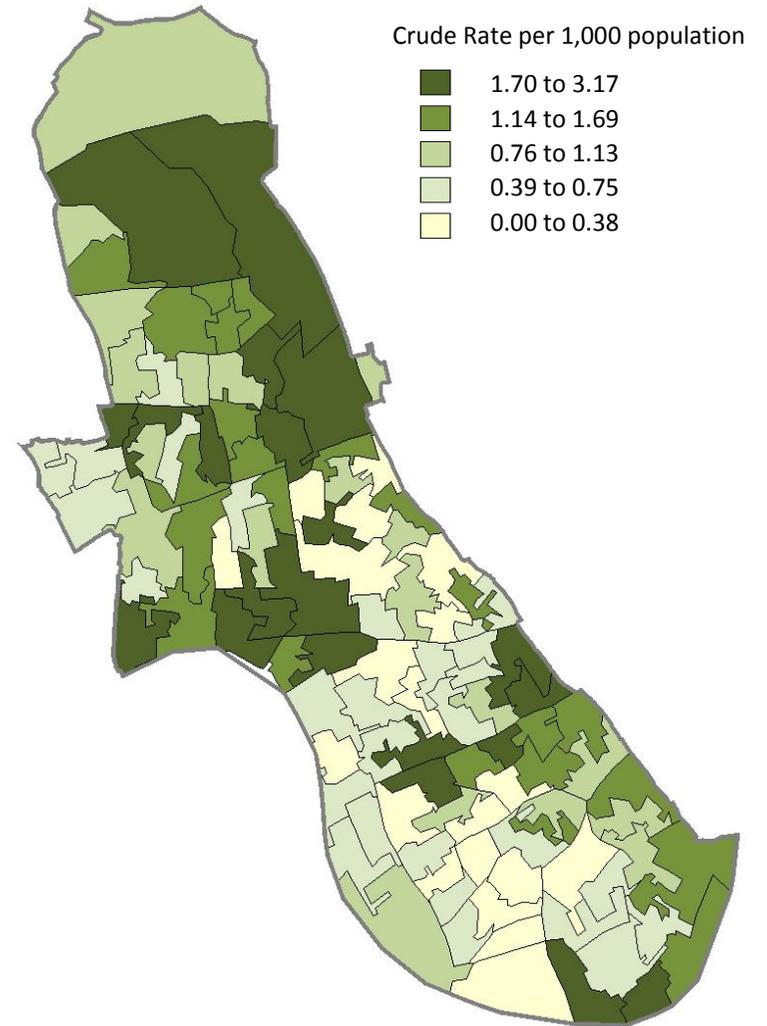
Crude Rate per 1,000 population

- 5.20 to 7.88
- 3.42 to 5.19
- 2.50 to 3.41
- 1.52 to 2.49
- 0.42 to 1.51

Figure 9: Crude rate of hospital admissions for assault by LSOA of patient residence within Hammersmith and Fulham LA, 2009/10-2011/12.

Crude Rate per 1,000 population

- 1.70 to 3.17
- 1.14 to 1.69
- 0.76 to 1.13
- 0.39 to 0.75
- 0.00 to 0.38

NHS data sources

A summary of the data sources used in this report is shown in Table 2, based on information from: Quigg et al. *Health data for violence prevention manual: A manual for community safety partnerships and other violence prevention partners, 2013.*

Table 2: Summary of NHS data sources.

Data source	Availability and access	Data fields available	Notes
1. Ambulance call-outs	Data available via the London Ambulance Service.	Variables include patient demographics, reason for the call-out, call-out time and date, and call-out location.	Years 2010/11 to 2012/13. Analysis was restricted to all ambulance call-outs within Hammersmith and Fulham local authority for assault.
2. HES experimental A&E data	Local authority level data are available via the Violence Indicator Profiles for England Resource (VIPER) www.eviper.org.uk. Bespoke data extracts/analyses are available via the Health & Social Care Information Centre (HSCIC) www.hscic.gov.uk/hes.	Variables include patient demographics, incident type, date and time of presentation and LSOA of residence.	Years 2009/10 to 2011/12. This dataset is published as experimental since although coverage was improving year on year, some data quality and coverage issues still remained. The data includes all Hammersmith and Fulham local authority residents presenting to an A&E in England regardless of which hospital they attended. Analysis was restricted to all patients presenting with an injury caused by "assault".
3. HES Hospital admissions	Local authority level data are available via the Violence Indicator Profiles for England Resource (VIPER) www.eviper.org.uk. Bespoke data extracts/analyses are available via the Health & Social Care Information Centre (HSCIC). www.hscic.gov.uk/hes.	Variables include patient demographics, admission date and method, cause of hospital admission and LSOA.	Years 2009/10 to 2011/12. This dataset includes information on all hospital admissions to NHS hospitals including private patients and admissions of NHS patients who are treated elsewhere. The data includes all Hammersmith and Fulham residents presenting to a hospital in England and Wales regardless of which hospital they attended. Analysis was restricted to ICD-10 codes X85-Y09 and emergency admissions.

About the profiles

Recognising the valuable role that NHS data can play in addressing the growing problem of gang and youth violence in some English cities, the Coalition Government has prioritised work to improve data sharing on violence within hospitals, and particularly A&Es. The Department of Health is currently running a programme to support A&Es with collecting a minimum data set (see Box 2) and sharing this with Community Safety Partnerships.

This violence profile forms part of a wider, three-year project funded by the Department of Health that aims to identify and support the optimum use of NHS data in local violence prevention, and to identify the impacts of local NHS data sharing on levels of violence. Nine local authorities in the North West and London are participating in the project. For more information visit: *http://www.cph.org.uk/optimising-the-use-of-nhs-intelligence-in-local-violence-prevention-and-measuring-its-impact-on-violence/*

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