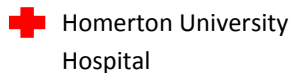
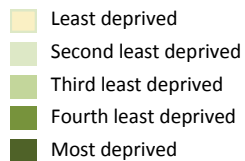


Violence profile: Hackney

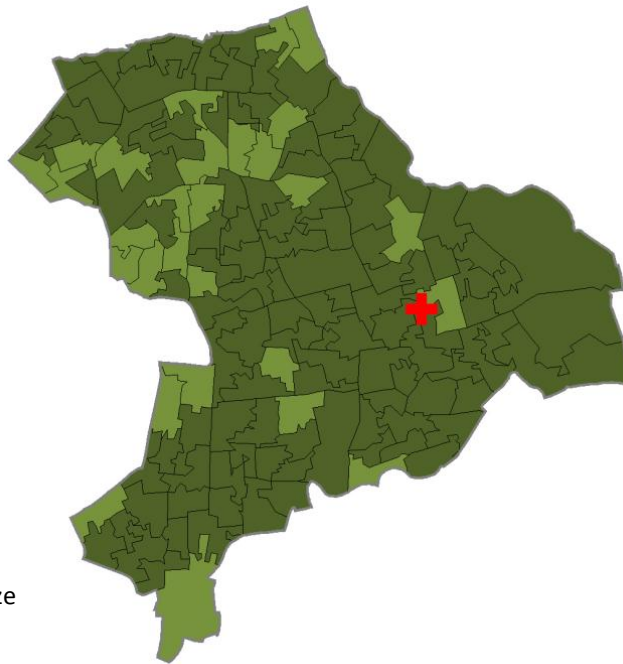
Use of NHS data in local violence prevention

This profile utilises five sources of NHS data to present a picture of violence in Hackney 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 Hackney.

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



* 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 NHS and police sources, have decreased in recent years in Hackney LA. However, rates of violence were higher than the England average for a number of indicators.
- Violence was most likely to occur on Saturdays and Sundays and between the hours of 4pm and 4am, largely reflecting Friday and Saturday nights (ambulance and A&E data).
- The majority of injuries from assaults were caused by a body part such as a fist or a foot (A&E data; 68%). Around 9% of ambulance call-outs for assault-related injuries reported use of a sharp object or a gun in the incident notes.
- The perpetrator was a stranger to the victim in just over half (52%) of assaults (A&E data).
- The majority of people treated for assault-related injuries were male (~70%) and aged 10-39 (~31% were aged 20-29, ~24% aged 30-39 and ~17% aged 10-19) (ambulance, A&E, hospital admissions and TARN data).
- There was a wide spread of ambulance call-outs for assaults across the authority, but a greater concentration of call-outs in Shoreditch.
- Areas of Hackney 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) attendances to Homerton University Hospital Accident and Emergency Department (A&E); 3) Hospital Episode Statistics (HES) experimental A&E data; 4) HES hospital admissions; and 5) reports from the Trauma Audit and Research Network (TARN; clinical reports of severe trauma). For more information about the data sources used, see Table 2.

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. TARN data is not included in the summary table since there are known problems with the level of reporting (see page 8 for more information). “Hospital-based” A&E data refers to attendances to Homerton University Hospital A&E (regardless of a patient’s area of residence). “Residence-based” A&E data refers to attendances reported to the HES experimental A&E database and covers all attendances to an A&E department for residents of Hackney LA (regardless of which hospital they attended). For more information about the data sources see page 8.

Table 1: Indicators of violence for Hackney 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	1702	6.75	na	-16.65	↓
A&E attendances for assault (hospital-based) (2012/13)²	1653	na	na	-11.41*	↓
A&E attendances for assault (residence-based) (2010/11)³	1356	6.19	3.60	na	na
Emergency hospital admissions for assault (2011/12)⁴	187	0.69	0.64	-11.37	↓
Deaths from assault (2011)⁵	<5**	nc	0.01	nc	nc
Police-recorded violent crime (2011/12)⁶	5399	24.63	13.60	-18.70	↓
Police-recorded sexual crime (2011/12)⁶	371	1.69	0.96	-19.87	↓

1. Data from the London Ambulance Service (LAS). Crude rate per 1,000 population (mid 2012 estimates, ONS), 2012/13.

2. Data from Homerton University Hospital A&E. Attendances for assault (regardless of patient residence), 2012/13.

3. 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 Hackney 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.

4. Data from HES admitted patient care. Emergency hospital admissions for assault (ICD-10 codes X85-Y09) by residents of Hackney local authority, 2011/12. Directly Standardised Rate per 1,000 population (mid 2011 estimates, ONS).

5. Data from ONS mortality database. Deaths from assault, 2011. Percent change has not been calculated due to very low numbers.

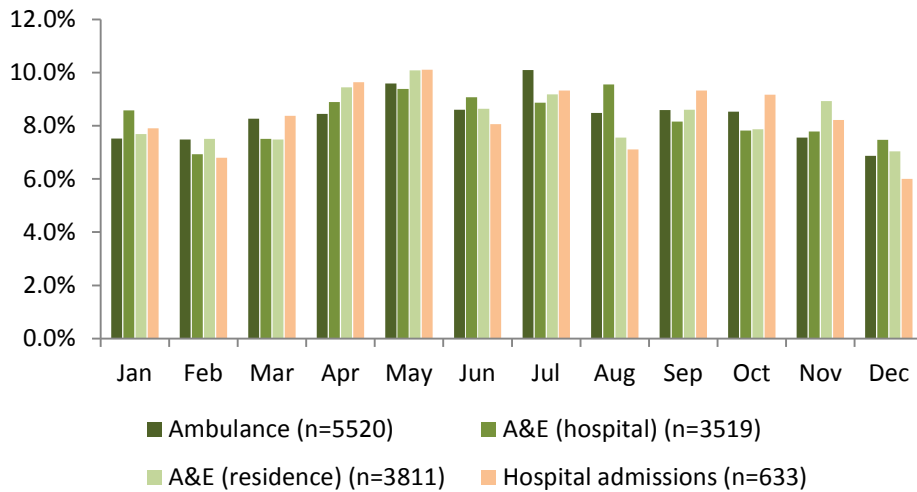
6. Data from police-recorded crimes, crude rate per 1,000 population (mid 2011 estimates, ONS), 2011/12.

Data in **red text** indicate that the value is significantly higher (statistically) than the England average; * % change from previous year (2011/12); ** 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 fall within each month by data source. TARN data is not included due to problems with the level of reporting (see page 8). While trends differ by data source, levels of assault were generally slightly higher during April, May and July.

Figure 2: Percentage of assault-related incidents by data source, by month (three years combined data; latest two years for A&E [hospital, 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 this information was not yet collected by Homerton University Hospital A&E. The available data sources show that assaults took place most frequently between the hours of 4pm and 4am (Figure 3). Assaults occurred 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; latest two years for A&E [hospital, see Table 2]).

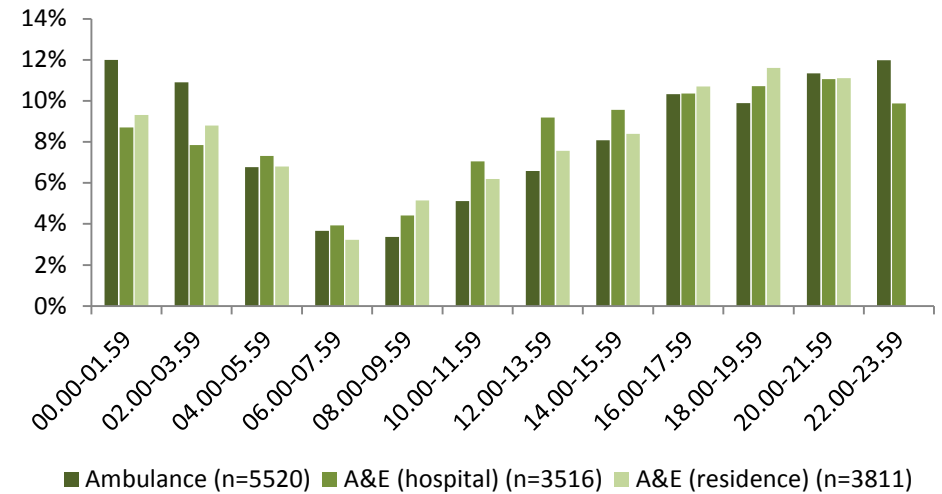
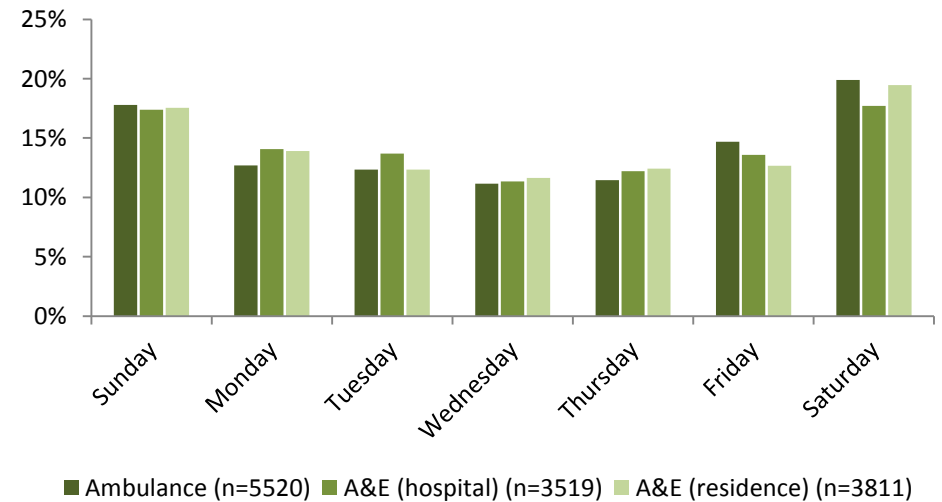


Figure 4: Percentage of assault-related call-outs/attendances by data source, by day (three years combined data; latest two years for A&E [hospital, see Table 2]).



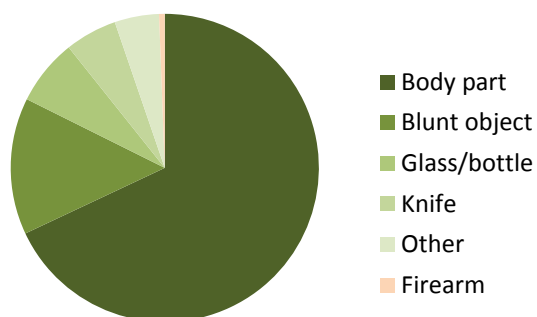
Circumstances around violence

Information on the circumstances of violence can be obtained from Homerton University Hospital A&E, which at the time of analysis collected CEM-recommended data (Box 2) on all assaults treated at the department. Information can also be obtained from ambulance service data and through TARN, although only 26 cases of severe assault were reported to TARN between 2010 and 2012.

Weapons used in assaults

Information on weapons can be extracted from Homerton University Hospital A&E, the ambulance service and TARN. A&E data show that the majority of assaults (68%) were caused by a body part (e.g. fist/foot; Figure 5). TARN data records that the majority of severe assaults were caused by either a stabbing (35%) or a blow to the body (31%). Around 9% of ambulance service call-outs for assault-related injuries recorded the use of a knife or gun in the incident notes.

Figure 5: Weapon used in assaults treated at Homerton University Hospital A&E, 2011/12 to 2012/13 (n=3519).

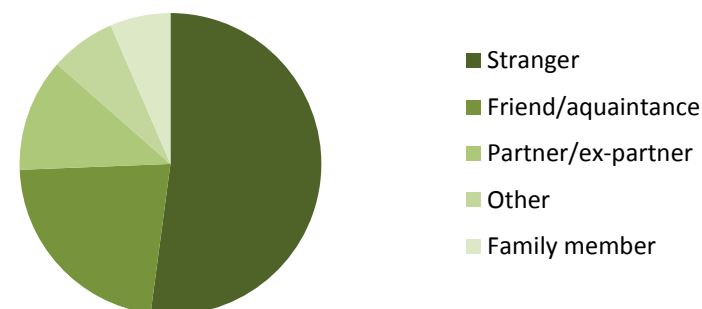


Perpetrator characteristics

A&E data report the number of attackers as well as the attacker's relationship with the victim. Where information was recorded (95% of cases), around two thirds of attacks (66%) were made by one attacker, 13% by two attackers and 20%

by three or more attackers. The perpetrator was a stranger to the victim in just over half of assaults treated at the A&E (where information is recorded [92%]; Figure 6).

Figure 6: Relationship of perpetrator to victim for assaults treated at Homerton University Hospital A&E, 2011/12 to 2012/13 (n=3255).



Context of assault

A&E data also report the context in which the assault occurred. Around 17% of all assaults were related to domestic violence, 16% to alcohol, 9% to robbery, 2% to gangs and 1% to drugs (some assaults will be related to more than one issue).

Box 2: CEM-recommended data collection at Homerton University Hospital A&E

The College of Emergency Medicine (CEM) has produced guidelines for information sharing at A&Es to reduce community violence. These guidelines promote collection of the following data fields by receptionists: the **date and time** of assault, the **location** (name of pub, school or street) and the **weapon** used. In September 2014, the Health and Social Care Information Centre developed an information standard on A&E information sharing to tackle violence¹, including the CEM-recommended questions, along with the time and date of the A&E attendance. At the time of analysis the Homerton University Hospital A&E collected information on the location of assault and the weapon used, along with other fields such as the relationship between victim and perpetrator, the number of attackers and what the assault was related to (e.g. gangs, alcohol etc).

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

At-risk groups

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. Figures 7 and 8 show that the majority of people treated for assault-related injuries were male, with data for the most severe cases (hospital admissions and TARN) showing slightly higher percentages for males than other sources. The majority of assault victims were aged between 10 and 39 years of age, with the highest frequency of cases seen in the 20-29 age group. TARN data has not been included in Figure 8 since overall numbers are very low (n=26).

Information on ethnicity can be extracted from hospital admissions data (81% complete). The majority of assault patients were either White (46%; 25% British, 21% other White background) or Black/Black British (28%; 9% African, 8% Caribbean, 11% other Black background). Around 7% were Asian or Asian British, 5% were mixed ethnicity and 14% were of another ethnic group.

Figure 7: Percentage of assault-related incidents by data source, by sex (three years combined data; latest two years for A&E [hospital, see Table 2]).

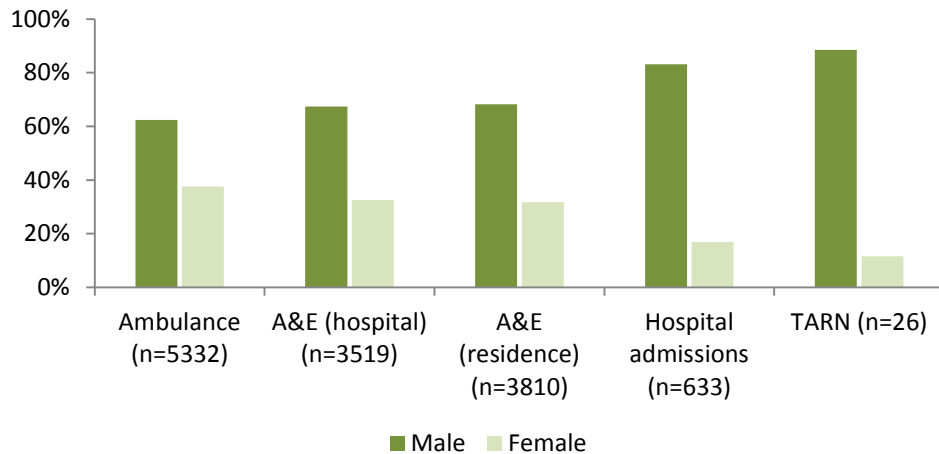
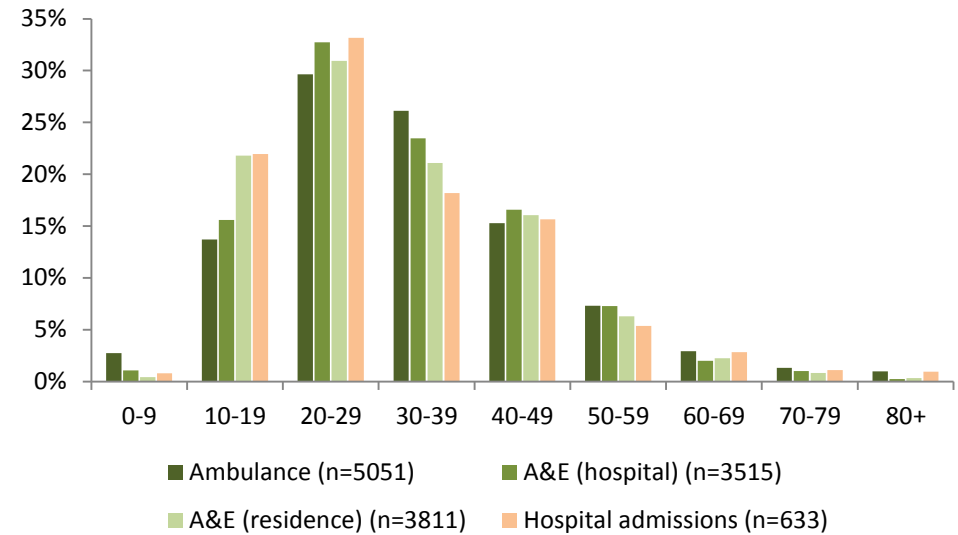


Figure 8: Percentage of assault-related incidents by data source, by age-group (three years combined data; latest two years for A&E [hospital, see Table 2]).



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 (77% and 72% of cases respectively), with the most frequent age group being 20-29 years (33% and 31% of cases respectively). Although the ethnicity of victims was unknown in about half of cases, the ethnicity of perpetrators was complete. Here, 46% of perpetrators were Black or Black British (19% Caribbean, 13% African, 14% other Black background), 35% were White (21% British, 14% other White background), 7% were Asian or Asian British (2% Indian, 2% Bangladeshi, 1% Pakistani, 2% other Asian background), 8% were of mixed ethnicity and 4% were of another (unspecified) ethnic group.

At-risk locations and communities

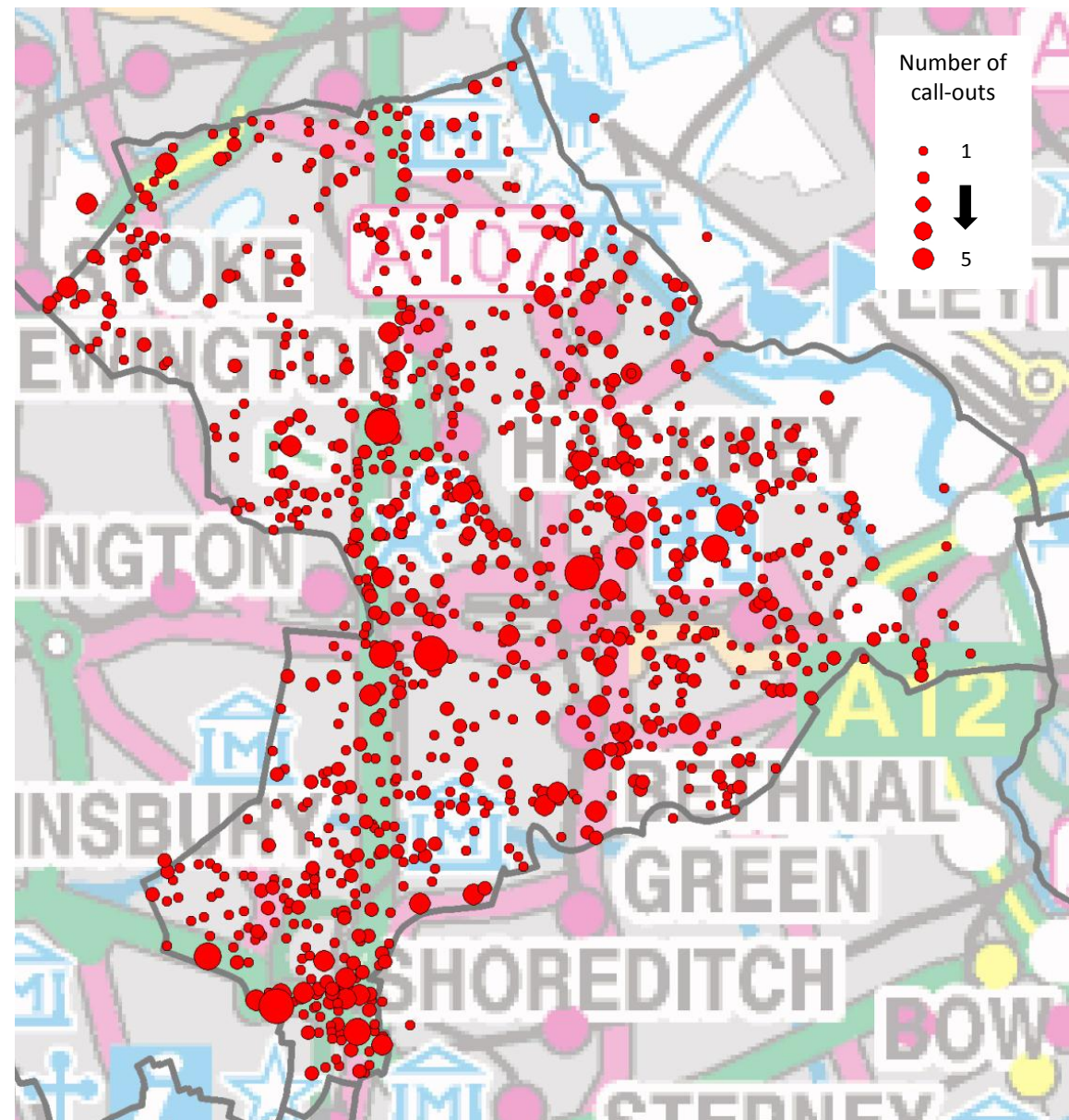
Health data can be used to identify where assaults take place and which communities are most at risk. Data from the ambulance service includes the location of call-outs for assault-related incidents. A map of the location of ambulance call-outs for assaults in 2012/13 is presented in Figure 9. There was a wide spread of call-outs across the authority, but a greater concentration of assaults in Shoreditch. Data from Homerton University Hospital A&E also has the potential to identify the location of assault and so hotspot areas for intervention (see Box 4) but would require further work to identify x and y co-ordinates from the location descriptions.

Figures 10 and 11 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 areas of Hackney that would benefit most from violence prevention initiatives. Areas of Hackney with higher deprivation levels (Figure 1) also had significantly higher* rates of A&E presentations for assault and hospital admissions for assault.

Box 4: Mapping the location of assaults from CEM-recommended A&E data

At the time of analysis a pilot was being undertaken with the GLA (Greater London Authority) SafeStats to convert the information recorded in the location of assault field (collected through CEM-recommended data fields at A&E) into x and y co-ordinates. This will allow assault locations to be mapped and enable hotspot locations for assault to be identified. This project includes data collected from King's College Hospital A&E, St. Thomas' Hospital A&E and Homerton University Hospital A&E.

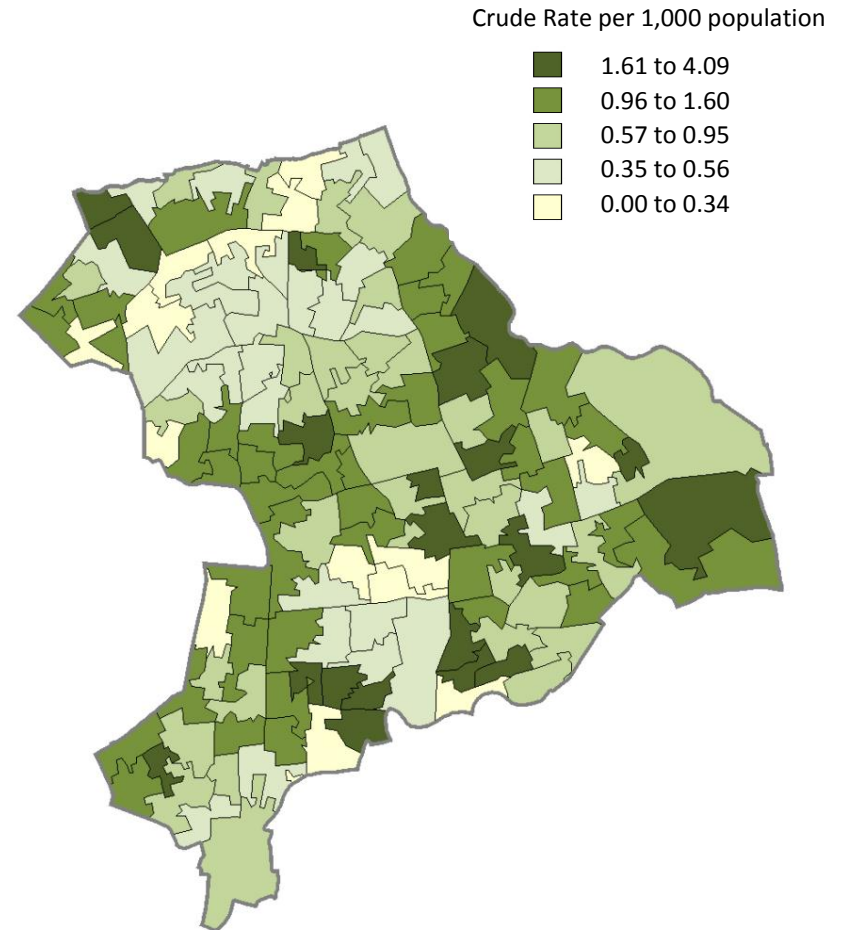
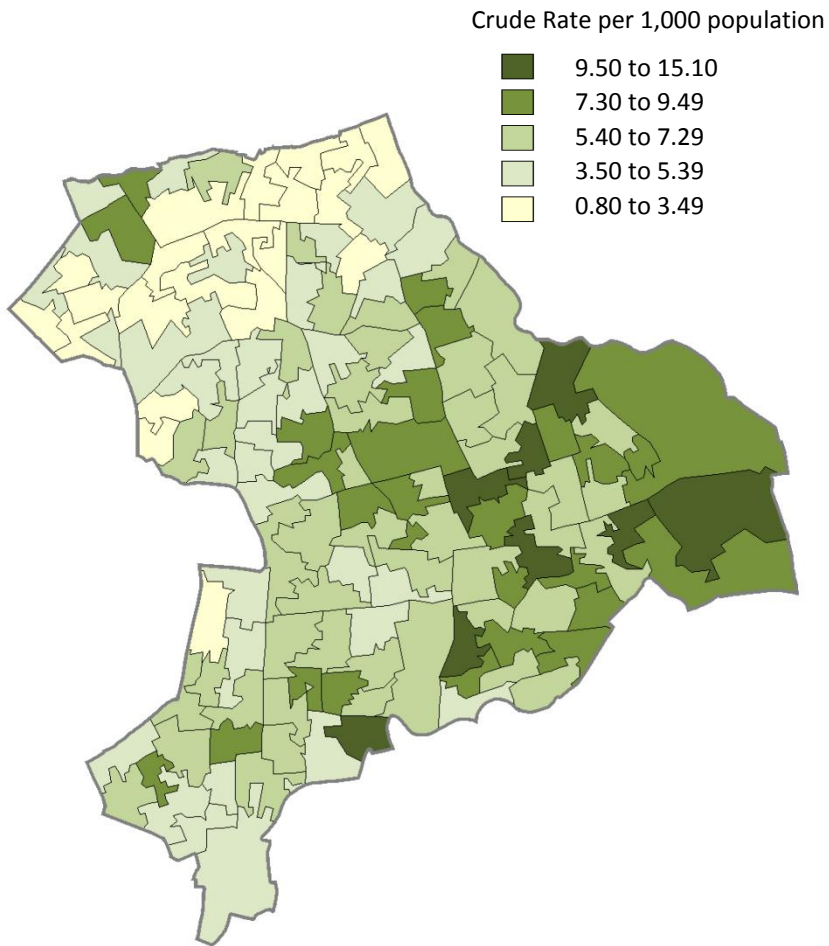
Figure 9: Location of ambulance call-outs for assault-related incidents within Hackney LA, 2012/13.



* Using Analysis of Variance (ANOVA). $F=28.36$ ($p<0.01$) for A&E presentations and $F=9.61$ ($p<0.01$) for hospital admissions.

Figure 10: Crude rate of A&E attendances for assault by LSOA of patient residence within Hackney LA, 2009/10-2011/12.

Figure 11: Crude rate of hospital admissions for assault by LSOA of patient residence within Hackney LA, 2009/10-2011/12.



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 Hackney local authority for assaults.
2. Homerton University Hospital A&E data (A&E hospital)	Data are shared regularly with local partners (e.g. CSP, public health and police). Bespoke data extracts are available from the A&E.	Variables include patient demographics, incident type, date and time of presentation, assault location, assault weapon, relationship to perpetrator, what the incident was related to and number of attackers.	Years 2011/12 to 2012/13. This dataset includes all patients presenting to Homerton University Hospital A&E regardless of their area of residence. Analysis was restricted to all patients presenting with an injury caused by "assault".
3. HES experimental A&E data (A&E residence)	Local authority level data are available via the Violence Indicator Profiles for England Resource (VIPER) www.evipr.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 Hackney 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".
4. HES Hospital admissions	Local authority level data are available via the Violence Indicator Profiles for England Resource (VIPER) www.evipr.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 and cause of hospital admission.	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 Hackney 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.
5. Trauma Audit and Research Network (TARN)	Bespoke data extracts are available from TARN www.tarn.ac.uk .	Variables include patient demographics, type of injury (blunt or penetrating), injury mechanism (e.g. stabbing, shooting) and injury location (e.g. home, office).	Years 2010 to 2012. This dataset records clinical records of severe trauma (e.g. a length of stay in hospital of 72 hours or more). Analysis was restricted to patients where the cause of injury is assault or intent inconclusive. There were issues with data coverage: the number of cases recorded for Homerton University Hospital was lower than expected (51% of expected cases).

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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