



Home Office

Trends and drivers of homicide

Main findings

Research Report 113

Authors: Nick Morgan, Oliver Shaw, Jennifer Mailley, Rebecca Channing, Abraham Sweiry, Kristy Kruithof, Jessamy Bloom, Andrew Kent, Kevin Smith and Anna Romaniuk.

March 2020

Contents

Contents	2
List of tables	3
List of figures.....	3
Acknowledgements	4
Executive summary	5
Trends and patterns	6
Drivers.....	8
Conclusions and policy implications	10
Aims and methods	13
1. Homicide trends in England and Wales	15
1.1. Overall trends	15
1.2. Sex of victim	16
1.3. Age of victim.....	17
1.4. Trends for homicide suspects	19
1.5. Geographical breakdowns	19
1.6. Ethnicity and country of birth	21
1.7. Method	22
1.8. Type of homicide	23
2. Homicide trends in other nations	25
3. Alcohol as a driver of homicide trends	31
4. Drugs as a driver of homicide trends	34
5. The effectiveness of the Criminal Justice System as a driver of homicide trends	38
5.1. Homicide and changes in incarceration, clearance rates and the severity of punishment	38
5.2. Homicide, police resources and policing interventions	40
5.3. Homicide and police legitimacy.....	42
6. Opportunity as a driver of homicide trends	43
6.1. Routine activities and homicide	43
6.2. Demographics and homicide	44
6.3. Homicide and divorce rates	44
6.4. Homicide and gun availability	45
7. Character as a driver of homicide trends	46
7.1. The civilizing process	46
7.2. Honour-based belief systems	47
7.3. Cohort effects involving socialization, parenting and fertility	48
7.4. The abortion hypothesis	49
7.5. The lead hypothesis	50
7.6. Conclusions.....	50
8. Profit, the economy and other factors as drivers of homicide trends	52

8.1. Profit, street gangs and organised crime	52
8.2. Economic factors	53
8.3. Other factors.....	53
9. Discussion and conclusion	55
9.1. The long-term trend.....	56
9.2. Long waves and short waves	56
9.2.1 The long wave.....	57
9.2.2 The short waves.....	61
9.3. Policy implications	64
9.4. Suggestions for further research.....	67
10. References	70

List of tables

Table 1: Population and homicide victimisation rate, by ethnicity and deprivation decile of victim's address (years ending March 2008 to 2018).....	22
---	----

List of figures

Figure 1: Homicide rates in England and Wales, 1901 to year ending 31 March 2018.....	5
Figure 2: Homicide rate in England & Wales, by age, sex of victim.....	7
Figure 3: Homicide rates in England and Wales since 1901	15
Figure 4: Homicide trends broken down by sex of victim	16
Figure 5: Numbers of homicides in England and Wales, broken down by age of victim	17
Figure 6: Homicide rates in England and Wales, broken down by age of victim.....	17
Figure 7: Homicide rates in England & Wales, by age and sex of victim.....	18
Figure 8: Homicides in England & Wales, by sex of victim and suspect.....	19
Figure 9: Homicide rates in England & Wales, by region	20
Figure 10: Proportion of homicides from years ending March 2008 to 2018, by deprivation decile	21
Figure 11: Alcohol-related and drug-related homicides, years ending March 2008 to 2018	24
Figure 12: Homicide rates in selected nations in years ending March 2017 or 2018	25
Figure 13: Percentage of homicide victims that are male in selected countries, 2000 to 2017	26
Figure 14: Homicide in selected countries in 2010, by age of victim	26
Figure 15: Rates of homicide in England and Wales, US and Canada (second chart indexed).....	27
Figure 16: Homicide rates in England and Wales and the Netherlands.....	28
Figure 17: Homicide trends in England and Wales and Japan, 1960 to year ending March 2018	29
Figure 18: Homicide rates in the US, 1960 to 2016, and the ratio of male-to-female victims.....	30
Figure 19: Annual alcohol consumption per UK resident, 1900 to 2010	31
Figure 20: Estimates for crack incidence, 1980 to 2016.....	37
Figure 21: Homicide rates and the prison population in England and Wales, 1960 to year ending March 2018)	39
Figure 22: Homicide and homicide clearance rate, years ending March 1998 to 2018.....	40
Figure 23: Homicide and police officer rates, 1950 to year ending March 2015	41
Figure 24: Homicide and divorce trends in the US (left) and England and Wales (right)	44
Figure 25: Panel of charts showing shifts in risk factors for crime and homicide in England and Wales	49
Figure 26: Recent homicide trends in London and Chicago.....	55
Figure 27: Homicide volume changes from 2014 to 2017 in selected countries	67
Figure 28: Long-term homicide trends in three US cities.....	68

Acknowledgements

The authors would like to thank the following academics who either peer-reviewed a section of this report, provided data, or both: Manuel Eisner, Nick Tilley, Fiona Brookman, Robert Parker, Ben Bowling, Tom Ellis, Stephen Messner, Jens Ludwig and Max Kapustin.

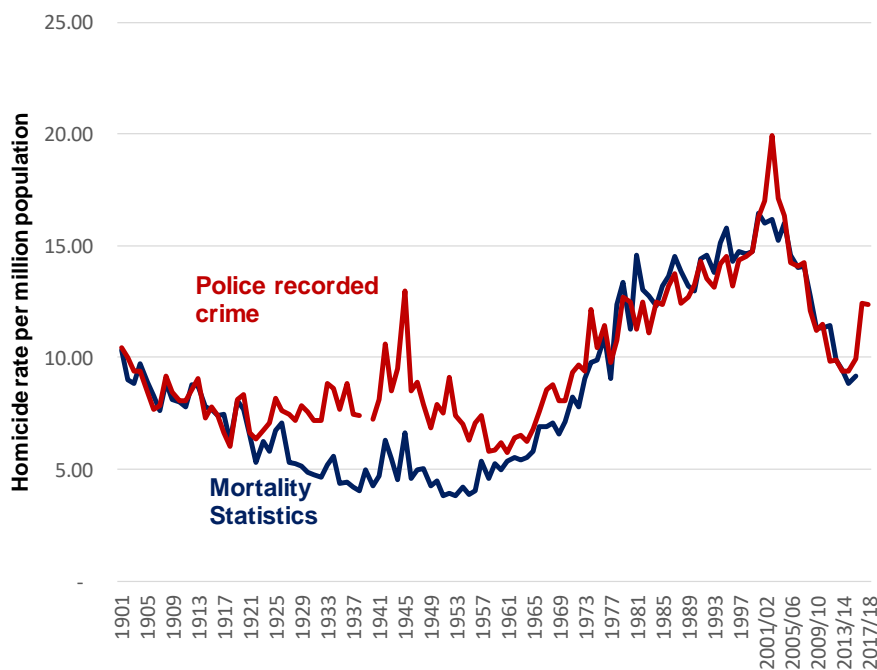
Executive summary

Homicide is the most socially damaging of crimes. In England and Wales, one homicide is estimated to cost society £3.2 million. In the year ending 31 March 2018, there were four times as many homicide deaths as there were deaths resulting from terrorism since 1980. Despite this, *drivers* of homicide trends are not well understood. This hampers policy-makers' ability to respond to increases, like the 39% rise in England and Wales' homicide rate between years ending March 2015 and 2018.

Part of the difficulty is that homicides are varied and complex. The circumstances giving rise to a domestic homicide are likely to be vastly different from a gang homicide or a corporate manslaughter case. The paradox of homicide is that, despite almost every case appearing different and uniquely motivated, homicide *trends* show features that suggest the possibility of common causes or drivers.

The first of these features is consistency. Once national homicide trends start moving in a particular direction, they have tended to do so for a while. In England and Wales, available data suggests there may only have been two meaningful turning points between 1900 and 2013; an upward turn around 1960 and a downward turn from 2002:

Figure 1: Homicide rates in England and Wales, 1901 to year ending 31 March 2018¹



Sources: Home Office police recorded crime series; Office for National Statistics (ONS) Mortality statistics; ONS mid-year population estimates.

¹ The mortality statistics series uses calendar years throughout so the year ending 31 March 2018 is actually 2017 for that series.

The second feature is comparability. This report shows that many of the basic features of the trend in Figure 1 are common to other nations and to sub-national areas within England and Wales. A third feature, particularly of city-level or sub-national trends in the last 30 years, is that homicide numbers can shift very quickly.² Having risen almost constantly for 40 years, homicide abruptly dropped by 40% between 2002 and 2014 in England and Wales. In Chicago, homicide rates jumped by almost 60% in 2016; in London, knife homicides doubled from the year ending 31 March 2017 to the following year.

It is hard to square persistence in trends, comparability across nations and large step-changes with a view that homicide is essentially a catch-all term for a set of crimes each with their own unique motivations and circumstances. If every homicide was different, surely trends would be more random and not display these patterns?

This report is an attempt to gather available evidence to start unpicking this paradox and hence explain trends. The main techniques employed are data analysis of trends and patterns and a review of the literature relating to drivers of homicide. The main conclusions are set out below.

Trends and patterns

While homicide has risen in the last five years, the rate in England and Wales has remained low, compared with rates per population across the globe or from England and Wales over the course of history. In the year ending 31 March 2018, the homicide rate in England and Wales was 12 per million. This is lower than the estimated global average of 61 per million and much lower than estimated rates of 240 per million for 14th century England. However, the rate in the year ending March 2018 was higher than at any point between 1900 and 1970.³

The homicide trend in England and Wales has had only a few meaningful turning points in at least 150 years. Available data suggest that homicide rates fell from 1860 to 1960. They then increased from 1960 until about 2002, fell again to 2014, then increased between 2014 and the year ending March 2018.

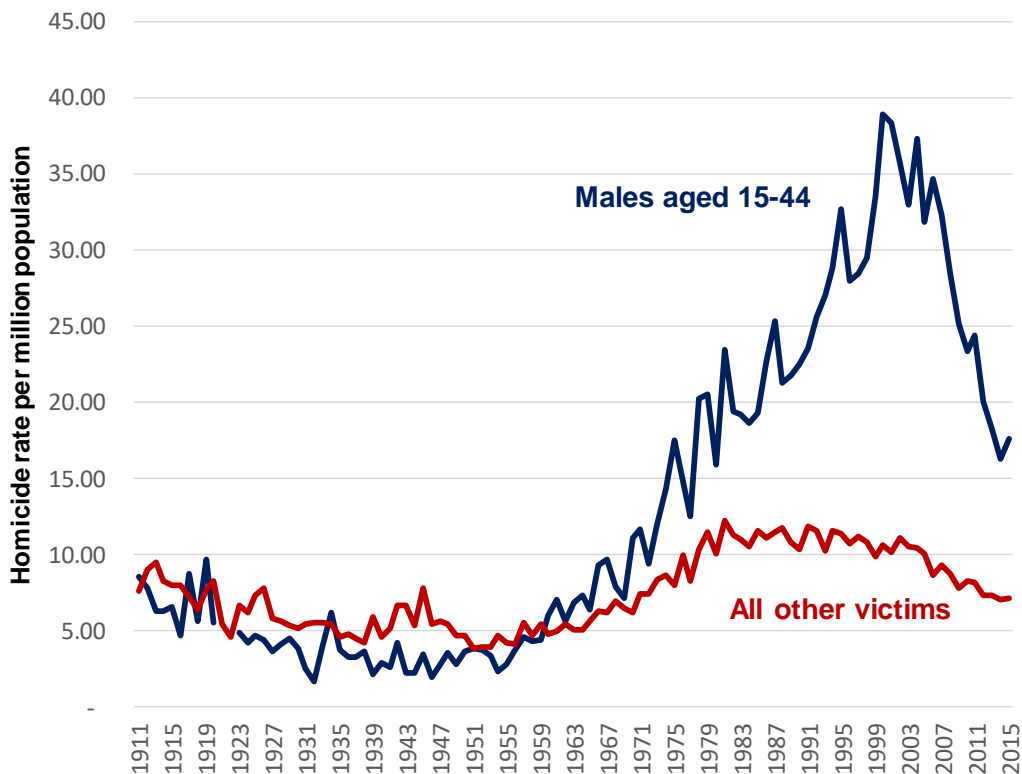
The fall in homicide to 1960 and the rise from 1960 to 1980 involved victimisation of both sexes, most age groups and most different types of homicide. From 1860 to 1980 available data suggest homicide was equally split between male and female victims. Homicide also seems to have followed similar trends to other types of crime over that period.

Since 1980, homicide trends in England and Wales have become more volatile and more male-on-male driven. After 1980, all the main trends have been driven by male victimisation, particularly those aged 15 to 44 (Figure 2). Trends in homicide and other types of serious violence have also started to diverge from other crime.

² An interesting question is whether this newer aspect of trends will change the 'persistence' feature mentioned previously. It seems plausible that it will and national turning points in homicide will become more frequent. However, the two are not completely incompatible. Homicide rates in England and Wales saw steep year-on-year falls for several years in succession between 2004 and 2014.

³ This is true when using the mortality statistics series. In the police figures there is one year (1945) where the rate exceeds the year ending March 2018 rate.

Figure 2: Homicide rate in England & Wales, by age, sex of victim



Source: ONS mortality statistics, ONS mid-year population estimates

Homicides against women, young children and babies have fallen since 1980. Numbers of homicides against under 1s have fallen markedly since the early 20th century, but this age group still had the highest homicide rate in the year ending March 2018. Homicides of women and girls accounted for 30% of homicides in England and Wales in the same year, down from about 48% in the year ending March 1978.

The increase in homicide since 2014 has been driven partly by drug-related cases and partly by terrorism cases. Drug-related cases accounted for about half of the homicide increase between the years ending March 2015 and 2018. Terrorism cases accounted for 15% of the increase and corporate manslaughter cases 3%. The increase has also been partly driven by cases in which no suspect has been identified.

Knives or sharp instruments have been the most common weapons used in homicide over the last 40 years. The homicide peak in the early 2000s saw a notable increase in gun homicides as well as those involving a knife. The rise since 2014 has been particularly knife-driven.

While the majority of homicide victims/suspects in England and Wales are White, black people had higher rates per population. In the year ending March 2018, homicide rates were more than four times higher for black victims compared with white victims, and about eight times higher for black suspects. This disproportionality, which has increased as homicides have risen since 2014, varies by age, sex and deprivation. It is starkest amongst

young men, but the disproportionality more than halves in the most deprived areas, suggesting deprivation is a factor in explaining higher rates among black people.⁴

The England and Wales trend is similar to that in most other developed nations. Nearly all nations with reliable long-term data (except East Asian nations like Japan and some countries in Central and South America) had an increase in homicide from 1960 to 1990 and a fall thereafter. Recent trends are more mixed. About half the nations studied have had an increase in homicide since 2014.

Nations with higher homicide rates per population tended to have a higher percentage of male victims and a higher percentage of victims aged 15 to 44. However, *within* nations male and female trends have tended to follow the same overall pattern of a rise to the 1990s and a fall thereafter, with male-victim cases driving short, sharp, area-specific fluctuations around that general trend.

Drivers

Alcohol

Over the long term there has been a strong correlation between homicide and alcohol consumption. It is not clear to what extent this is causal and to what extent alcohol is a correlate of other drivers. Evidence suggests alcohol is a stronger driver in countries whose citizens display more hazardous drinking patterns and that alcohol policies can reduce homicide in these circumstances.

Drugs

There is good evidence that illicit drug markets can drive serious violence. The main mechanism seems to be via disputes that cannot be resolved legally, so individuals and groups resort to violence (and establish reputations of violence) to avoid being taken advantage of in the market. In this light it may be important that the biggest growth in UK illicit drug markets likely occurred in the 1960s and then in the 1980s when evidence suggests street-level markets became more connected to profit-orientated street gangs and organised crime groups.

Illicit drugs seem particularly important in driving the short, sharp increases in homicide trends. Many studies found the crack epidemic to be a driver of the homicide spikes seen in many US cities in the 1980s. Drug-related cases also increased in England and Wales recently. However, what exactly triggers the timing of these spikes needs further investigation.

The effectiveness of the Criminal Justice System (CJS)

It seems unlikely that changes to clearance rates or the severity of punishment have driven homicide trends in England and Wales. Most evidence suggests that certainty of punishment is more important than severity. But the proportion of cleared homicides in England and Wales has varied little through the sharp swings in trend of the last 20 years,

⁴ Both suspect and victim ethnicity measures used in this section are police officer-identified ethnicity classifications.

staying on or around 80% throughout.⁵ Evidence on change in severity is largely limited to whether capital punishment works, which is of limited relevance to recent England and Wales trends.

Short-listed studies that used US data found that increased incarceration reduced homicide. Studies for other nations generally found no effect. One possible explanation for this would be that large changes in prison populations are needed for relatively small crime-reduction effects on homicide.

The evidence suggests that levels of police resources and the activities pursued can drive homicide trends but haven't always done so. Evidence suggests that if all else is equal, more police officers means fewer homicides and bringing justice to lawless areas or markets seems particularly important. However, inspection of longer-term trends shows that rising police numbers are no panacea (all else is never equal and other factors can override). What the police do is clearly important but there is a shortage of proven strategies in England and Wales.

Some researchers suggest that trust in the police and other state institutions is a strong driver of homicide trends, but the evidence is not clear. Rises in homicide have coincided with 'crises' either in police or state legitimacy, like the recent spike in the US, which coincided with public anger following a series of shootings by police. However, robust testing of this theory has been limited.

Opportunity

Demographics and changes to routine activities may have played a role in the homicide rise from 1960 to 1980, but there is less evidence for an impact since. The baby boomer generation meant more young people in the population for the homicide rise from 1960 and increasing female employment meant more people travelling outside of home. But these factors do not correlate with recent trends.

The availability of guns appears to be a factor in explaining differences in rates between nations but generally does not explain trends within nations. In the year ending March 2018, just 4% of homicides in England and Wales were by shooting. This is a markedly lower proportion than for the US (73%), but it is also lower than most European nations, for example Sweden (27%) and the Netherlands (28%). However, previous legislative attempts to tighten supply further, following mass shootings in Hungerford in 1987 and Dunblane in 1996, did not have noticeable effects on the homicide trend in England and Wales.

Between 1950 and 2010, divorce rates in an area consistently predicted homicide rates in that area, both cross-sectionally and longitudinally. This does not seem to have been an opportunity effect caused by more divorces leading to fewer domestic homicides. The relationship is in the opposite direction. Areas and time periods with higher divorce rates had *higher* homicide rates. While many mechanisms for this relationship have been suggested, there is little consensus and it may have broken down in the recent rise – divorce rates have not risen.

⁵ This includes cases in which a suspect was convicted, cases where the suspect died / committed suicide / was ruled insane and cases in which a suspect is awaiting trial.

Character

Changes to individuals' characteristics and beliefs may have been an important downward pressure on homicide over the long term, particularly increased self-restraint and decreased belief in honour (and the need to defend that honour with violence when 'disrespected'). Some authors argue these factors reversed in the 1960s and 1970s, which helped drive up homicide and crime generally in that period. However, lack of data limits quantitative evidence.

There were large decreases in early-years risk factors a generation before homicide, and crime generally, began falling in the 1990s and 2000s. In particular, teenage pregnancies and family size declined sharply, parenting became less authoritarian, parental time investment in children increased, lead exposure decreased and child abuse fell. It is not clear how big an effect these changes have had.

Profit, economic conditions, gangs and organised crime

There is a spatial link between homicide and deprivation but a temporal link is more elusive. The average homicide rate per population in the 10% most deprived areas is about seven times greater than the rate in the 10% least deprived.⁶ But changes in economic conditions do not correlate well with homicide trends.

More deprived areas have more gangs, but gangs seem to exert upward pressure on homicide rates over and above the effects of deprivation. The strong evidence that disruption in illicit drug markets can drive homicide trends also suggests a link to gangs and organised crime groups, given their function in those markets. However, generally there is a lack of good quality systematic data on gangs, organized crime groups and the conflicts between them, which has prevented the quantitative analysis necessary to cement this conclusion.

Conclusions and policy implications

Conclusions

A key conclusion is that the data and evidence relating to homicide do not suggest a simple explanation for trends or one that translates into a simple unarguable policy 'to-do' list. Many findings are subject to uncertainty and a close reading of the full report will reveal counter-findings and nuances. Our judgement is that the following conclusions and policy implications are justified on the *balance* of the evidence, but this caveat should be borne in mind throughout. There is a longer discussion of conclusions and policy implications at the end of the main report.

Two types of trend have driven homicide since 1945: a long wave affecting many nations and a series of locally-specific short waves. The long wave pushed all types of homicide and crime up from 1960 to around 1990 and then receded. In England and Wales, the homicide rise was extended to the early 2000s by a short wave of mainly male-on-male

⁶ There is a large sex difference when stratifying by deprivation level. In the least deprived areas, male and female victimisation rates are almost identical. In the most deprived areas, male rates are substantially higher.

weapons cases. The current increase has many of the same features, suggesting it will be a short wave with similar drivers.

Drivers of the long wave remain disputed. The long wave was partly driven by demographics and the baby boomer generation raising the numbers of young people in the 1960s and 1970s; however, the wave was too big to be explained by this alone. Other possible, non-mutually exclusive drivers include:

- cultural change from Victorian restraint to the more hedonistic 1960s and 1970s followed by a reversion in the 1990s
- a rise then fall in societal-level risk factors, which occurred in multiple nations
- the mass-marketisation of illegal drugs and CJS response that ultimately followed

However, they do offer a potential explanation for the persistence and comparability in trends. If the long wave was a cultural phenomenon, it is easy to see how it could affect multiple nations and last for a long period. Likewise, a whole cohort of individuals with a slightly higher level of risk would carry higher homicide rates with them through their lifetimes, creating the long-wave pattern seen in the data. Illicit drug markets are also an international and persistent phenomenon.

Short waves often seem to be connected to destabilisation of illicit drug markets. On top of the long-wave pattern there are many locally-specific peaks in homicide that are linked to drug market destabilisation. Examples include the drug war in Miami in 1980; the spikes in US cities throughout the late 1980s in line with the crack-cocaine epidemic; and the 2006 homicide surge in Mexico that coincided with a big drug market crack-down. That is not to say that other factors were not also involved in these spikes, but drugs do seem to be a common denominator.

This helps explain why there are short-term step-changes in homicide figures. The evidence suggests that for a short period, one type of homicide dominates due to *social transmission* rather than changes in structural factors. That is, a relatively small group of individuals, known to each other in some way, are suddenly drawn into a pattern of violence due to a gang beef, or competition related to a change in supply or demand of illicit drugs, or some similar mechanism.

The last two increases in England and Wales also fit this pattern. There is little published evidence on why homicide rose to a peak in the early 2000s and fell sharply thereafter. It occurred when economic and policing measures were generally favourable. But there is evidence of drug-market destabilisation at that time as a select group of mainly Jamaican sellers came to the UK following aggressive enforcement to expel them from the US. A similar rise in crack-cocaine use has occurred since 2014, in line with the recent homicide surge. This time the advances in data have captured the increase in drug-related cases more clearly.

Policy implications

Homicide rates can be reduced if approached scientifically. Data show that the homicide rate in England and Wales has risen but is still relatively low globally and historically. The increase requires a response, but a scientific one. Homicide is too complex to be reduced to

single-factor explanations. Instead a more considered, long-term approach is required. It seems sensible to try and learn what has worked previously, for example in the 1950s, and what is currently working in nations like Japan and Australia, where homicides between young men have sharply reduced.

For preventing both types of wave, early intervention is recommended. If the long wave was driven by changes in societal-level risk factors, then early intervention appears to be our best defence against future waves. It may also help with the short waves. Data show young male-on-male homicides cluster even more in deprived areas than domestic homicides and often involve even more vulnerable individuals. Activity should therefore be directed at testing the best prevention programmes and developing stigma-free ways to identify and support those at highest risk.

For short-wave homicide surges, focused police approaches are likely to be effective. Hot-spot policing, data-driven offender/victim targeting and problem-solving approaches like pulling levers and focused deterrence are likely to be effective, particularly if conducted by motivated individuals and carried out off the back of locally-specific analysis.

Enforcement effectiveness would be amplified by a more systematic, data-driven understanding of the nexus of gangs, organised crime groups, drug markets and serious violence. To fully understand and prevent the sudden surges in homicide it is vital to marry up street-level intelligence on drug markets and gang conflicts to data analysis of serious violence trends. We need to know which types of shift in drug supply, demand and gang conflict typically cause surges in homicides.

Other policies supported by this review are those aimed at: reductions in hazardous drinking; reinforcement of anti-violent norms; and efforts to legitimise the rule of law in areas and markets where it is rejected currently.

Aims and methods

This study gathers available evidence on the trends and drivers of homicide. The main aim is to investigate the reasons why homicide increased so markedly from 1960 to the early 2000s; why it then fell sharply through to 2014 and why it has since risen again. By understanding the trends and their drivers, the study aims to inform policy-making aimed at reducing homicide.

Two types of analysis have been used:

- Descriptive statistical analysis of available homicide data in England and Wales (Annex 1) and other nations (Annex 2).
- A rapid evidence review of the literature on drivers of homicide, divided into categories corresponding to the drivers of crime listed in the Modern Crime Prevention Strategy (Annexes 3 to 9).

Detailed information about the methods used throughout this report can be found in the Technical Annex. Briefly though, below is a description of the main methods and sources used for the various sections.

- **Homicide trends and patterns in England and Wales.** This section is largely descriptive statistics from three main data sources: mortality statistics (MS) produced by the ONS, police recorded crime (PRC) and the Home Office Homicide Index (HI). The MS series dates back to the 19th century and allows for homicide-trend breakdown by age and sex. This can be compared with PRC which also offers homicide counts back to 1900. The HI contains a far richer set of variables, including information on suspects as well as victims, but has a slightly shorter time series. The HI series used in this study begins in the year ending March 1978. Both PRC and HI are police-generated data, whereas the MS are data on the causes of death compiled by coroners from information supplied when deaths are certified and registered as part of civil registration, a legal requirement.⁷
- **Homicide trends and patterns in other nations.** This section also employs descriptive statistics and commentary. Data is taken from international databases of homicide like Eurostat and the United Nations Office on Drugs and Crime's (UNODC) *Global Study on Homicide* but also from crime statistics websites for individual nations. A full list of these sources can be found in the Technical Annex.
- The rest of the report uses **systematic rapid evidence assessment**. Studies were short-listed based on the following primary criteria:
 - The study must involve at least one OECD country.⁸

⁷ These include the deaths of individuals whose usual residence was outside England and Wales.

⁸ The Organisation for Economic Co-operation and Development (OECD) consists of member countries and partners that collaborate on key global issues at national, regional and local levels.

- The study must be concerned with changes in homicide over time.
- The study must examine homicide trends for a time period including at least one year post-1945.
- The study must concern the relationship between a causal factor(s) and homicide trends, and/or unpicking contributing factors to homicide trends.

The search identified 339 studies for inclusion.⁹ These were summarised and divided into six sections corresponding to the six of drivers of crime listed in the *Modern Crime Prevention Strategy* (Home Office, 2016). No studies were excluded on the basis of methodological quality. This was because our interest in understanding homicide trends was as much about developing hypotheses, as testing them. Methodological quality was of course taken into account when attempting to determine the strength of different hypotheses. Full references are also available in the supporting annexes.

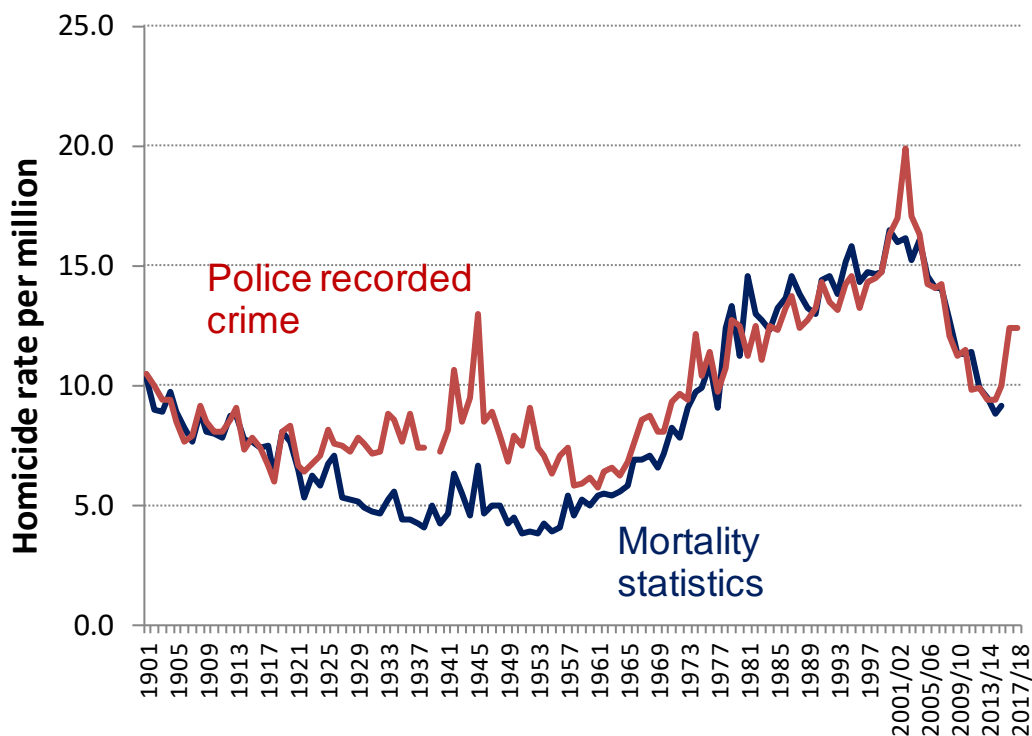
⁹ Some studies are counted twice in this total. These are studies that tested multiple variables (e.g. alcohol *and* drug-related variables) and hence appear in multiple sections.

1. Homicide trends in England and Wales

1.1. Overall trends

Available data suggests that the rate of homicide in England fell from an average rate of 240 per million inhabitants in the 14th century to a rate of about 10 per million at the dawn of the 20th century (Eisner, 2001; Eisner, 2008). Since then, there have been important fluctuations, including a sustained rise starting in the 1960s to a peak in the early 2000s. However, even at that point, homicide rates were less than a tenth of what they were estimated to be at the end of the medieval period (*ibid.*). Figure 3 shows trends in homicide since 1901, using the two main data series available: mortality statistics (MS) and police recorded crime (PRC).

Figure 3: Homicide rates in England and Wales since 1901



Source: Office for National Statistics (ONS) Mortality statistics (MS)

Note: MS are calendar year throughout so 2013/14 is 2013 for that series. The PRC series includes 173 of the homicides perpetrated by Harold Shipman in the year ending March 2002. In the MS, these homicides feature in the year in which they actually took place. MS are unreliable for the most recent two years.

The reason for the difference between the PRC and MS trends between 1920 and 1960 is not known. Other than that, the two measures show similar trends. After a long-term decline, homicide rates in England and Wales reached their lowest ever point between 1950 and 1960, following a brief period of volatility during the years of World War 2 (WW2). Homicide rates increased from the early 1960s to the early 2000s, before falling by more than 40% in just over

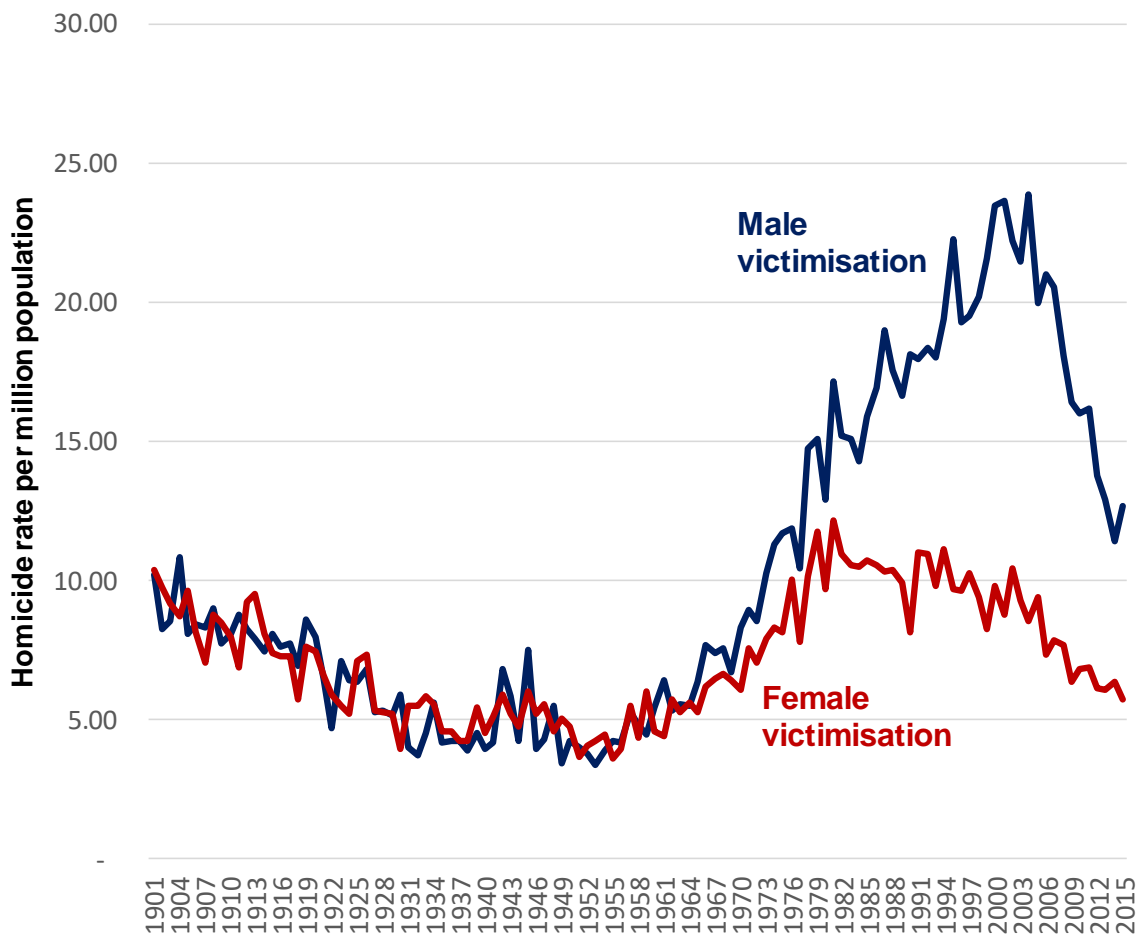
a decade. Since 2014, they have risen again, although remain well below the year ending March 2002 peak.

Both measures suggest that the trend from 1901 and 1961 was less volatile than the trend after 1961. From 1901 to 1961, the biggest percentage ten-year increase or decrease in the MS series was 42% (an increase from 1935 to 1945). After 1961 there were 19 ten-year periods with shifts bigger than that – the highest being a 107% rise from 1969 to 1979.

1.2. Sex of victim

Figure 4 shows the overall homicide trend broken down by sex of victim.

Figure 4: Homicide trends broken down by sex of victim



Source: ONS MS, ONS population estimates for the UK and constituent countries by sex and age: historical time series.

From 1901 until about 1970, male and female victimisation trends and levels were similar. They started pulling apart from around 1970 and the divergence accelerated in 1980. From that point, female victimisation trended consistently downwards, with some volatility, while male victimisation surged to the early 2000s, then dropped for ten years before increasing again.¹⁰ These patterns mean that after 1980, whenever homicide has risen, so has the

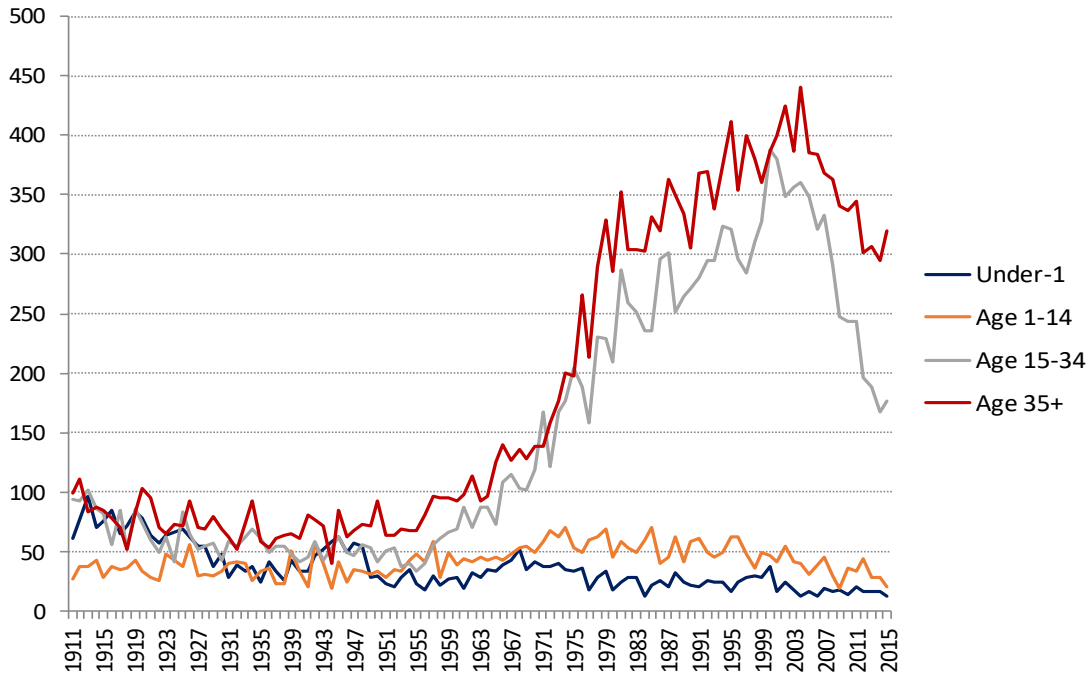
¹⁰ MS are used in Figure 4 because they have been consistently recorded back to 1901. However, they are unreliable in the most recent years so the series shown ends in 2015. It does not capture the recent rise well. However, police statistics show that the rise from 2014 has been driven by cases of male victimisation, at least to the year ending March 2018.

proportion of male victims, and vice versa. The proportion of male victims was exactly 50% in 1969. It rose to 74% in 2004, just after the homicide peak, then fell to 64% in 2014.

1.3. Age of victim

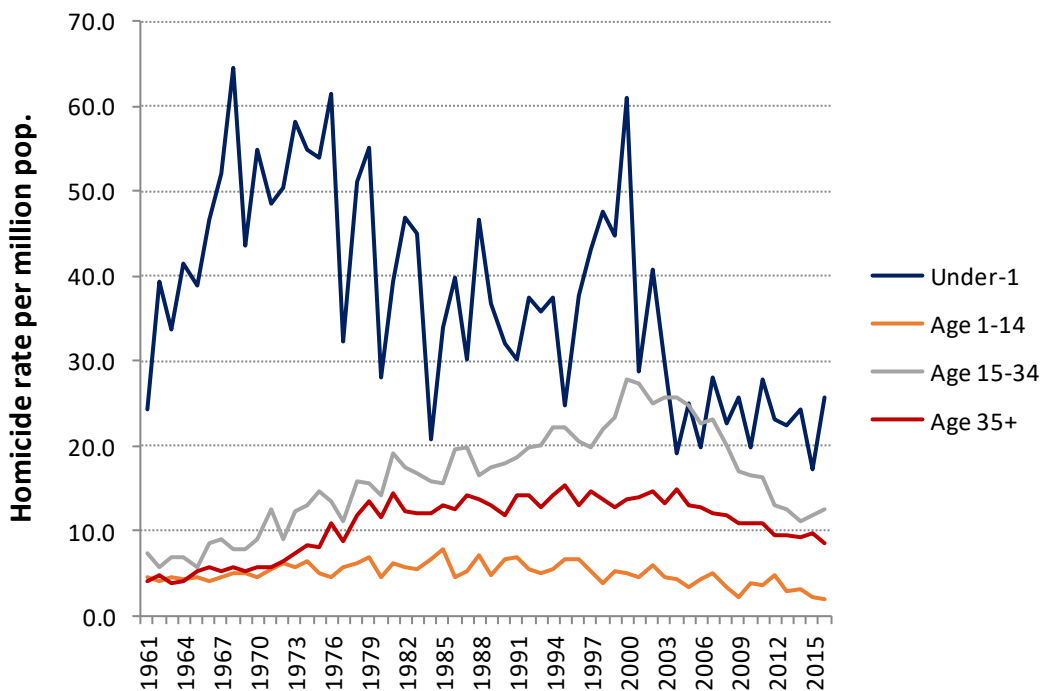
Figure 5 and Figure 6 show homicide overall trends broken down by age of victim.

Figure 5: Numbers of homicides in England and Wales, broken down by age of victim



Source: ONS MS

Figure 6: Homicide rates in England and Wales, broken down by age of victim



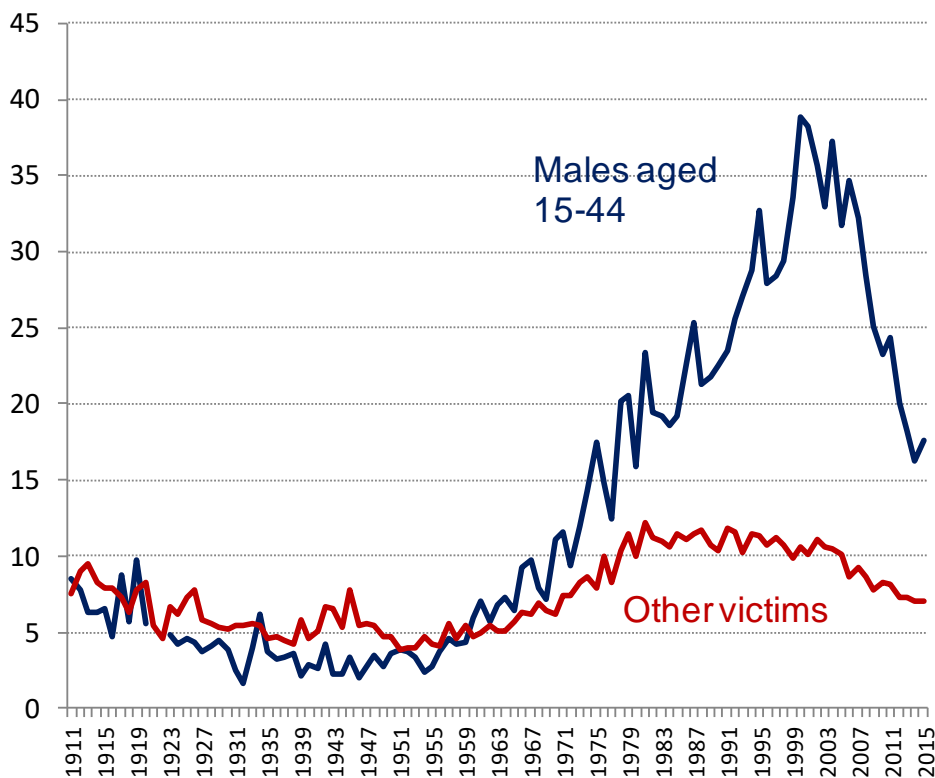
Source: ONS MS; ONS mid-year population estimates by individual age year

Two conclusions stand out from Figure 5 and Figure 6:

1. Under 1s have a high rate of homicide but this rate has generally decreased over the last century. From 1911 to 1920, 28% of all homicides involved under 1s; in the last ten years, the figure is 3%.
2. Homicides against those aged over 15 have driven volume trends since around 1960. However, the rates chart shows that this is partly caused by an ageing population. From 1980, the rate of homicide against over 35s is quite flat until the early 2000s when it starts to decline. Further analysis (see Annex 1) shows the main fluctuations in homicide rates have come from those involving victims aged 15 to 44. From 1911 to 1920, homicides against 15 to 44s made up 59% of all homicides. For the ten years to the year ending March 2018, this figure has been 92%.

Figure 7 breaks the overall trend down by age and sex simultaneously.

Figure 7: Homicide rates in England & Wales, by age and sex of victim



Source: ONS MS; ONS mid-year population estimates by sex and individual age year

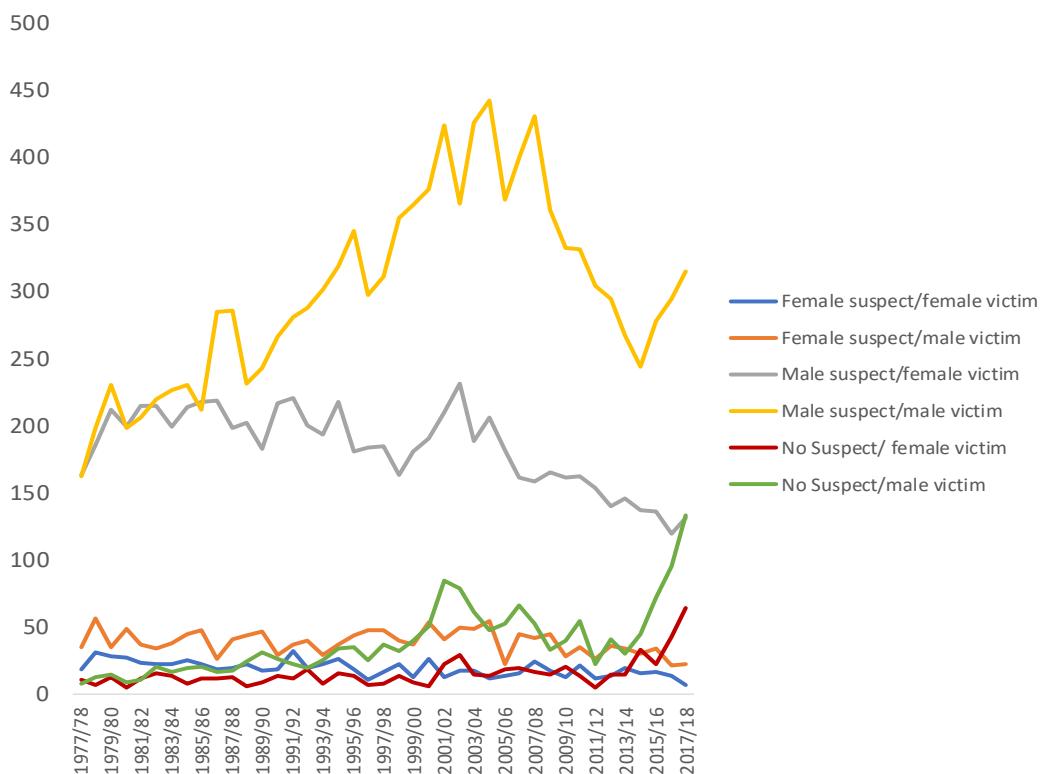
Figure 7 shows that for much of the 20th century, homicide trends – both the fall and the rise – affected all types of victims. After 1980, this changed. In aggregate, rates for females and males under 15 or over 45 doubled between 1960 and 1980 but after that they saw no further increase. Homicide rates for males aged 15 to 44 tripled from 1960 to 1980 and then continued to rise, driving the peak in the early 2000s and the fall thereafter. In fact, over the last 40 years homicides against males aged 15 to 44 have driven all the main overall trends.

1.4. Trends for homicide suspects

Trends for homicide suspects are available since 1977 from the Homicide Index (HI). These show that 81% of all homicides in the last 40 years had male principal suspects; 87% if cases in which no suspect was identified are excluded. Generally, the proportion of male suspects has increased over time, but, as with male victims, the proportion of male suspects also tends to rise and fall in line with overall homicide. Cases in which no suspects are identified also tend to rise disproportionately during homicide increases.

Figure 8 combines victim and suspect data. It shows that until the mid-1980s male-suspect homicides were as likely to involve a female victim as a male victim. After 1980, male-on-male cases have dominated and have driven all the main trends. There are two partial exceptions to this. No-suspect cases and male-on-female cases also increased around the early 2000s peak and no-suspect cases have risen markedly during the recent homicide increase.

Figure 8: Homicides in England & Wales, by sex of victim and suspect

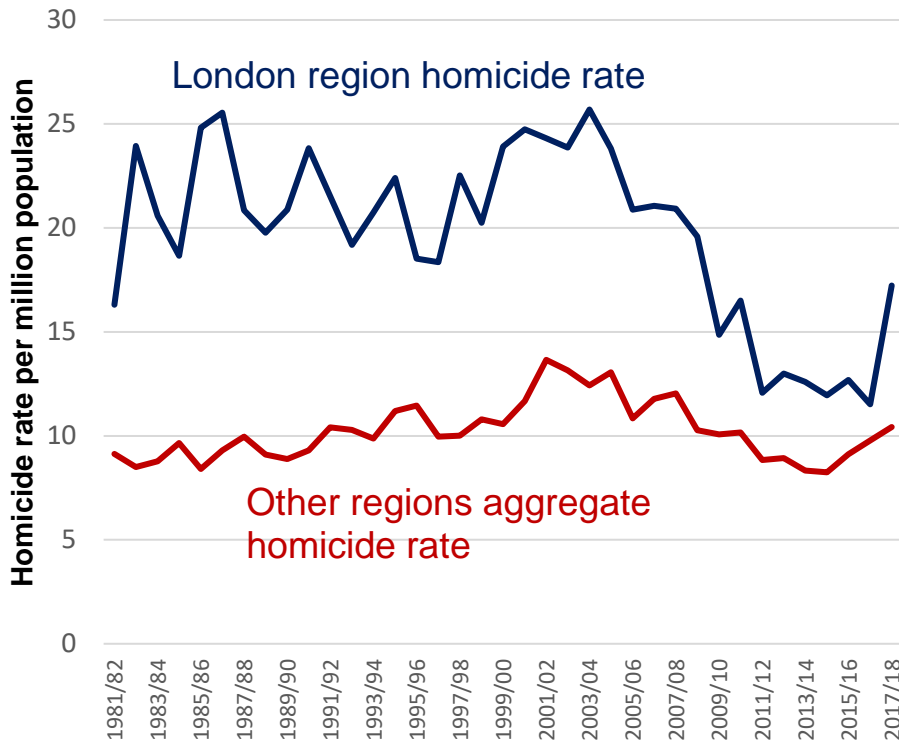


Source: Home Office HI

1.5. Geographical breakdowns

Breaking the overall homicide trend down by region (Figure 9) shows that London has a higher homicide rate than the rest of the country. However, this gap has generally narrowed over the last 40 years and particularly between 2000 and the year ending March 2016. In the two years up to the year ending March 2018, the gap has opened again. The sharp upward trend in London over the last two years is an example – of which there are many throughout this study – of homicide rates changing markedly in a short period.

Figure 9: Homicide rates in England & Wales, by region

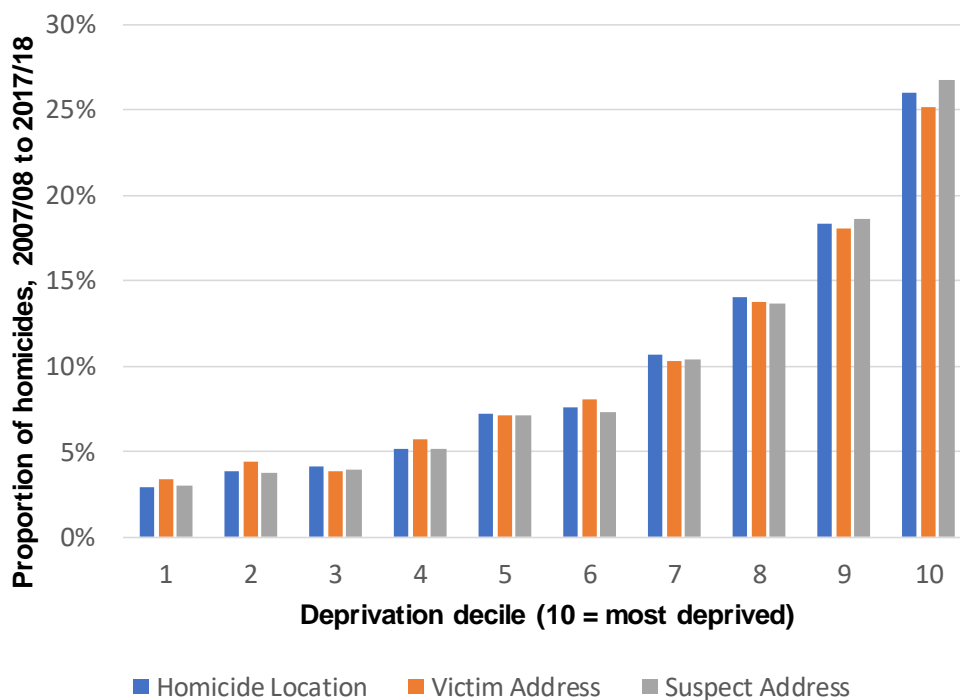


Source: Home Office HI, ONS mid-year population estimates by region

Breaking down the trends for other regions reveals that most share the overall shape of the national trend but that some (like London) have had milder upswings and greater downswings, and others (notably the North West and the East) have experienced the opposite, meaning that their rate is higher now than it was in the early 1980s. Comparison with other data shows no obvious patterns to explain why some regions have done better than others. There is no clear correlation with economic growth, migration patterns or the number of seaside/non-seaside localities (see Annex 1).

Homicide in England and Wales shows a strong geographical relationship with deprivation. This was demonstrated by Dorling (2006) for the period 1981 to 2000 and current data from years ending March 2008 to 2018 shows it remains true. More than 50% of homicides occur in the 30% of most deprived areas and more than 50% of victims/suspects live(d) in the 30% most deprived areas.

Figure 10: Proportion of homicides from years ending March 2008 to 2018, by deprivation decile



Source: Home Office HI

Notes:

- The table uses location data for homicides from 2007 to the year ending March 2018 from the HI; these were assigned to a decile of deprivation (1 = least deprived) using the Indices of Multiple Deprivation.
- Full methodological details are in Annex 1 and the Technical Annex.

Further analysis (see Annex 1) shows that the deprivation gradient is fairly stable across time though it has become fractionally steeper (meaning an even greater proportion of homicides are concentrated in the most deprived areas) during the recent increase from years ending March 2015 to 2018. Also, in the most deprived areas, relative to the least deprived, a greater proportion of homicides involve male victims, victims aged 15 to 44 and a victim-suspect relationship of friend/acquaintance.

1.6. Ethnicity and country of birth¹¹

Homicide ethnicity data is available from the year ending March 1997. It shows that most victims and suspects are White, though these proportions are falling. In the year ending March 1997, 83% of victims and 82% of suspects were White. In the year ending March 2018, the figures were 74% (victims) and 67% (suspects).¹² Rates are disproportionately high for Black victims (4.7 times higher than Whites in the year ending March 2018) and suspects (8.0 times higher). The disproportionality tends to rise in line with overall homicide. From years ending March 2014 to 2018, numbers of Black suspects rose 41%. Numbers of White suspects fell.¹³

¹¹ Both suspect and victim ethnicity measures used in this section are police officer-identified ethnicity classifications.

¹² 'Suspects' refers to principal suspects (see Annex 1 for a full description of different suspect categories) and the percentage for both victims and suspects is based on cases where the ethnicity is known, so excluding no-suspect cases and cases of unknown ethnicity.

¹³ A caveat to this finding is that the number of cases in which no suspect has been identified has also risen sharply between years ending March 2015 and 2018. To test the maximum effect this could have, a hypothetical scenario was modelled in which all no-suspect cases in the year ending March 2018 were assumed to have White ethnicity. This reduces the Black/White disparity to 5:1.

The disproportionality exists at all ages and for both sexes but is largest for young men. It is also affected by deprivation, see Table 1.

Table 1: Population and homicide victimisation rate, by ethnicity and deprivation decile of victim’s address (years ending March 2008 to 2018)

	RESIDENT POPULATION				HOMICIDE RATE				Ratio: Black to White rate
	Asian (%)	Black (%)	White (%)	Other (%)	Asian	Black	White	Other	
50% most affluent areas	29	17	53	34	5.7	23.1	4.3	5.6	5.3
50% most deprived areas	71	83	47	66	12.3	37.2	12.9	10.8	2.9

Source: Home Office HI; ONS mid-year population estimates, by ethnicity

Notes:

- The table uses location data for homicides from 2007 to the year ending March 2018 from the HI; these were assigned to a decile of deprivation (1 = least deprived) using the Indices of Multiple Deprivation, which provides a deprivation score to all Lower Super Output Areas in England and Wales.
- For this table, the victim’s address was used as the location measure.
- Full methodological details are in Annex 1 and the Technical Annex.

More than half the White population live in the most affluent half of the country, whereas just 17% of the Black population do. Given the strong relationship between deprivation and homicide shown in Figure 10, it seems likely that deprivation explains some of the disparity between Black and White homicide rates. The Black-to-White ratio reduces to just under three in the most deprived 50% of Lower Super Output Areas (LSOAs)¹⁴ and reduces further, to under two, in the most deprived decile (see Annex 1). However, stratifying by deprivation at this level of geography does not remove the disparity completely. Black homicide victimisation rates in more affluent areas are more than five times higher than White rates. The Asian population is also disproportionately distributed towards deprived areas, but Asian rates of homicide are comparable to the rates for ‘White’ and ‘Other’. These facts arguably suggest other factors are also involved in the Black/White disparity.

The HI also contains data from the year ending 31 March 1997 on victims’ and suspects’ country of birth. This shows that other than those born in the UK, those born in Pakistan are most victimised and those born in Jamaica have the highest number of suspects. Indeed, cases involving Jamaicans, either as victims or suspects, correlate with the early 2000s peak in homicide, although the numbers are not nearly big enough to explain that peak entirely.

1.7. Method

The most common homicide method, accounting for about 35% of cases in England and Wales over the last 40 years, has been use of a sharp instrument, usually a knife. The proportion of sharp-instrument homicides tends to rise in line with overall homicide and has been particularly important in driving the rise from years ending March 2015 to 2018 when 45% of homicides were sharp-instrument cases.¹⁵ For the early 2000s peak, shootings were also an important driver (see section 8 of Annex 1 for more on trends in weapon use within homicides).

¹⁴ An LSOA is a geographic area roughly akin to a neighbourhood. Each LSOA has a minimum population of 1,000 and overall LSOAs have a population mean of about 1,500 residents.

¹⁵ Excluding cases in which the weapon was not known.

1.8. Type of homicide

The data is also able to shed some light on which *types* of homicide have driven trends. Generally, this is consistent with other patterns noted so far. For example, just as the homicide rise from 1960 to 1980 involved victimisation of both sexes and all ages, it also seems to have involved multiple types of homicide including domestic cases, sexually-motivated homicides and male-on male argument cases. Home Office statistical reports recorded 17 sexually-motivated homicides in the three years from 1957 to 1959. A decade later, this number had increased to 42 (Gibson and Klein, 1969) and for the years ending March 1978 to 1980, the HI recorded 69 such cases. Since then however, numbers of sexually-motivated homicides have fallen. There were 26 in the three years to year ending March 2018. They played no part in either the early 2000s peak or the rise from 2014 to the year ending March 2018. Although more numerous, homicides involving family members and/or intimate partners, which made up around 40% of homicides in the three years to the year ending March 2018,¹⁶ show a similar pattern. These cases increased from 1960 to 1980 but then followed a flat or falling trend to the year ending March 2018 (see Annex 1). They played only a small role in the early 2000s peak and didn't contribute at all to the increase from 2014 to the year ending March 2018.

Instead, data on the relationship between victim and suspect generally show that homicides involving male friends or social acquaintances (people known to the victim but not necessarily friends) have been the main drivers of trends since the late 1970s. These increased by 61% from the late 1970s to the peak in the early 2000s. They then fell 33% to the mid-2010s before increasing 28% between years ending March 2015 to 2018.¹⁷ Corporate manslaughter and terrorism cases also played some role in the latest homicide increase. The total number of terrorism homicides from the years ending March 1978 to 2018 was 170, which is less than 1% of all homicides over that period. However, in the year ending March 2018, there were 32 terrorist homicides, the most in a year since the 7 July London bombings in 2005. This spike in terrorist cases accounts for 15% of the increase in numbers of homicides from years ending March 2015 to 2018. Corporate manslaughter cases account for an additional 3% of that increase; they became a category of homicide in the Corporate Manslaughter and Corporate Homicide Act 2007, which broadened the definition of homicide and had a marginal impact on the trend.

Since the year ending March 2008, it is also possible to classify homicides into the (not mutually exclusive) categories of drug related and alcohol related.¹⁸ The data (see Figure 11) show that drug-related cases have been an important factor in driving the recent increase. They increased by 47% between the years ending March 2015 and 2018, explaining 62% of the overall homicide rise over that period, when terrorism and corporate manslaughter cases are removed. Alcohol-related cases increased by 8% over those years and cases with no evidence of drug or alcohol involvement increased by 27%. A further breakdown shows that

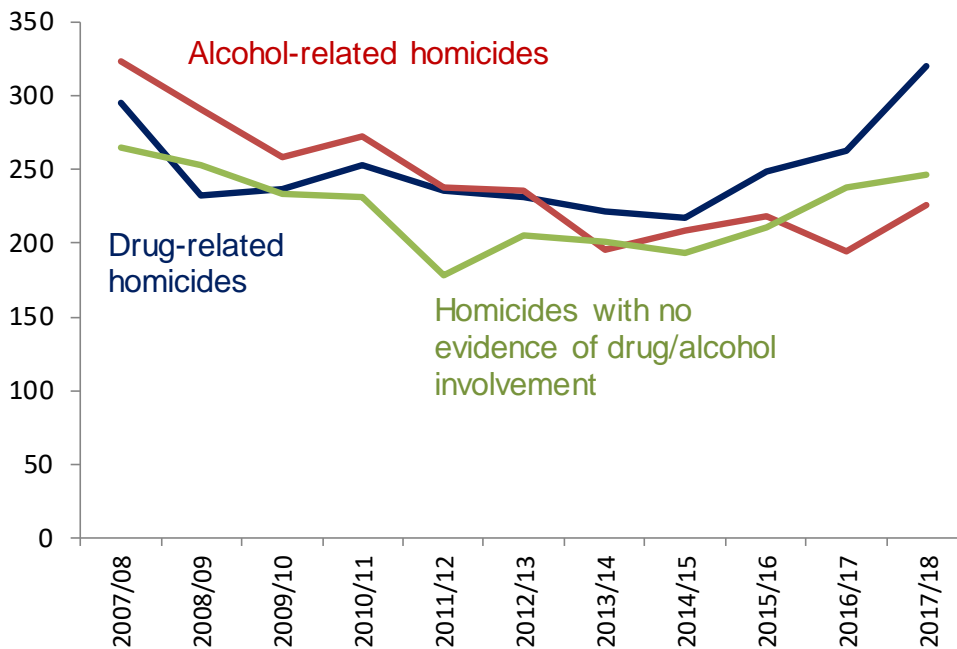
¹⁶ This excludes cases in which no suspect was identified and cases in which the victim-suspect relationship was recorded as unknown.

¹⁷ Exact calculations are: three-year average from years ending March 1978 to 1980 compared with three-year average from years ending March 2002 to 2004 compared with three-year average from years ending March 2014 to 2016.

¹⁸ When interpreting these data, it is important to understand that the definition of drug-related homicide used is broad. It primarily involves any case in which the police were aware that the victim or suspect was a known drug dealer or user. See Annex 1 for more details.

more of the drug-related cases involve drug users than dealers, but that drug-dealer cases have risen by a greater proportion.

Figure 11: Alcohol-related and drug-related homicides, years ending March 2008 to 2018



Source: Home Office HI

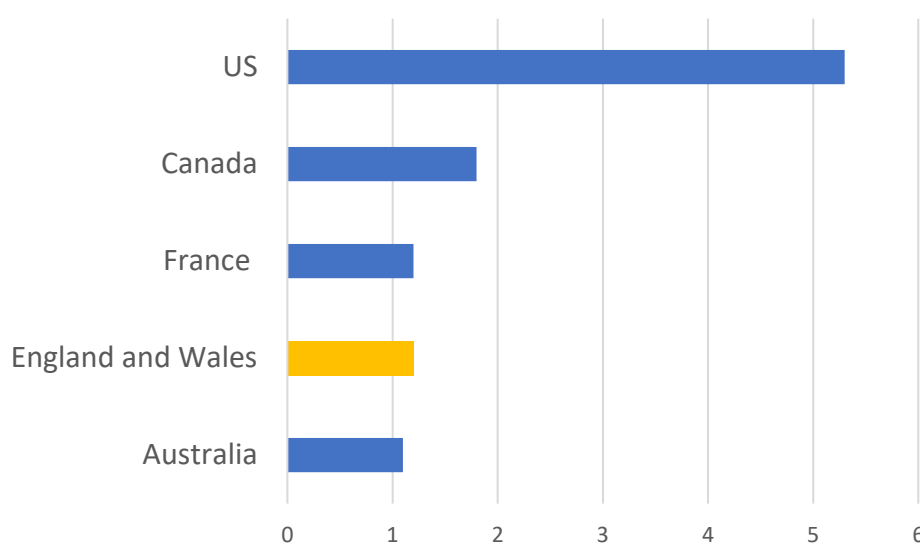
Analysis was also done to look at the correlation between trends in homicide and trends in other types of crime. The rise in homicide from the 1960s to the 1990s correlated with crime generally. However, trends since the mid-1990s have diverged from those of overall crime and overall violence (which did not peak in the early 2000s and did not rise sharply between years ending March 2014 and 2018). Instead, recent homicide trends show a stronger correlation with knife crime, gun crime and robbery.

Overall, this analysis has shown that homicide trends since 1960 can perhaps be divided into two phases. From 1960 to 1980, homicide trends increased due to rises in all types of homicides including those against women and children, sexually-motivated cases and those between males. Since 1980 that situation has changed markedly. Homicides against women and children have generally remained flat or trended downwards over the last 40 years, whereas there have been large swings in numbers of homicides between males aged 15 to 44 and these have driven the overall trend. More recent, granular data suggests these cases involve weapons and may be connected to illicit drugs with deprived, black communities most affected.

2. Homicide trends in other nations

Comparing international homicide rates and trends is not easy because the exact definition of a homicide varies across nations and within nations across time. For example, some nations include assaults that result in death, while others do not. Some include attempted homicides. Others do not. Some categories of homicide get added in different countries at different times (which can place a marginal upward pressure on trends generally). For all these reasons, judgements about whether country X has a higher homicide rate than country Y need to be taken very carefully. That said, available evidence suggests that the homicide rates in England and Wales are relatively low on a global scale, despite the recent increase. The *Global Study on Homicide* (United Nations Office on Drugs and Crime (UNODC), 2019) estimates a global average homicide rate of 6.1 per 100,000 residents. England and Wales had a rate of 1.2 per 100,000 residents in the year ending March 2018, close to the average for Western Europe generally (1.0).¹⁹ A selected group of nations with definitions of homicide similar to that of England and Wales are shown in Figure 12.

Figure 12: Homicide rates in selected nations in years ending March 2017 or 2018

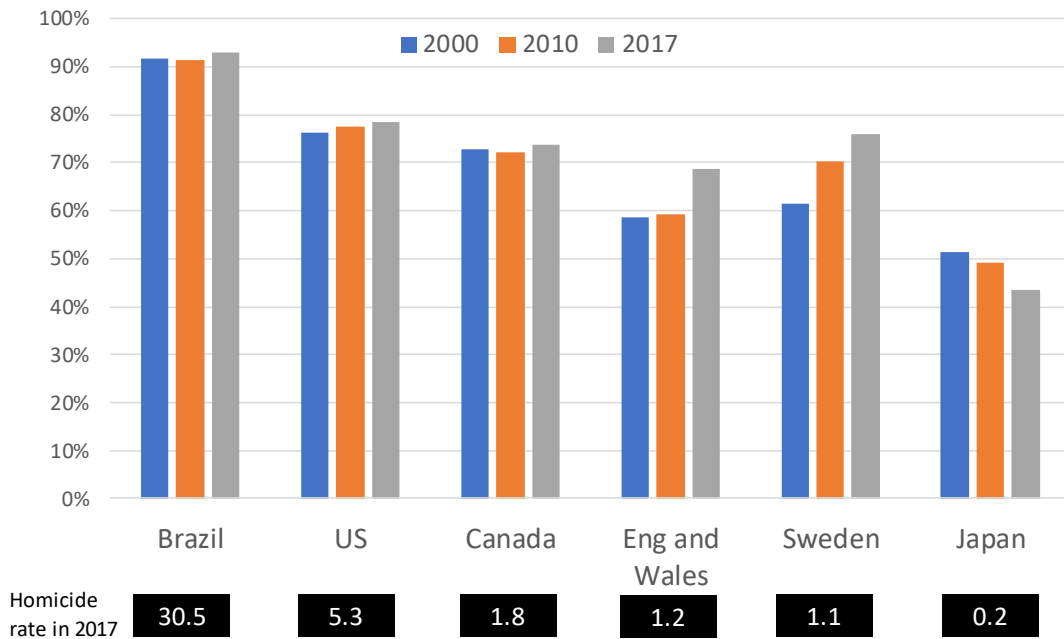


Sources: **US:** Uniform Crime Reports Data Tool; **Canada:** Statistics Canada, Homicide Survey, Canadian Centre for Justice Statistics; **France:** Interstats Conjoncture Series; **England and Wales:** HI; **Australia:** Victims of crime Australia (excluding attempted murder victims).

The United Nations Office on Drugs and Crime (UNODC) also provides cross-national data on rates by sex and age. Notwithstanding the definitional issues, two other broad conclusions seem justified from this data. Countries with higher homicide rates have a higher proportion of male victims and a higher proportion of victims aged 15 to 44 (see Figure 13 and Figure 14).

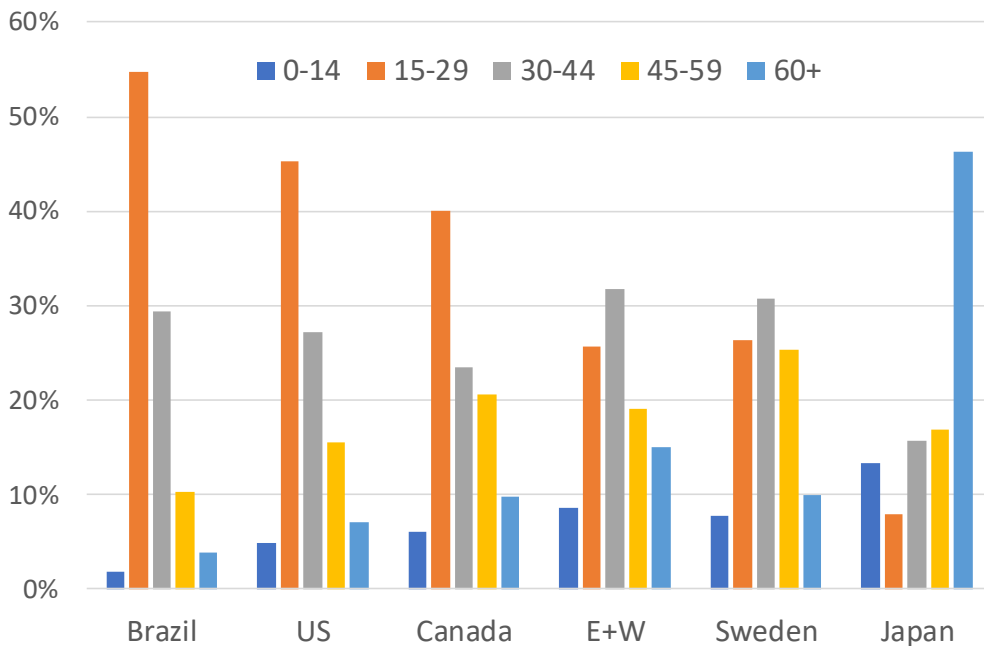
¹⁹ In 2010, the rate in England and Wales was 1.1, which was the same as the Western European average. The recent rise in homicide in England and Wales has meant it is now slightly above the average for Western Europe.

Figure 13: Percentage of homicide victims that are male in selected countries, 2000 to 2017



Source: UNODC Global Homicide Data

Figure 14: Homicide in selected countries in 2010, by age of victim

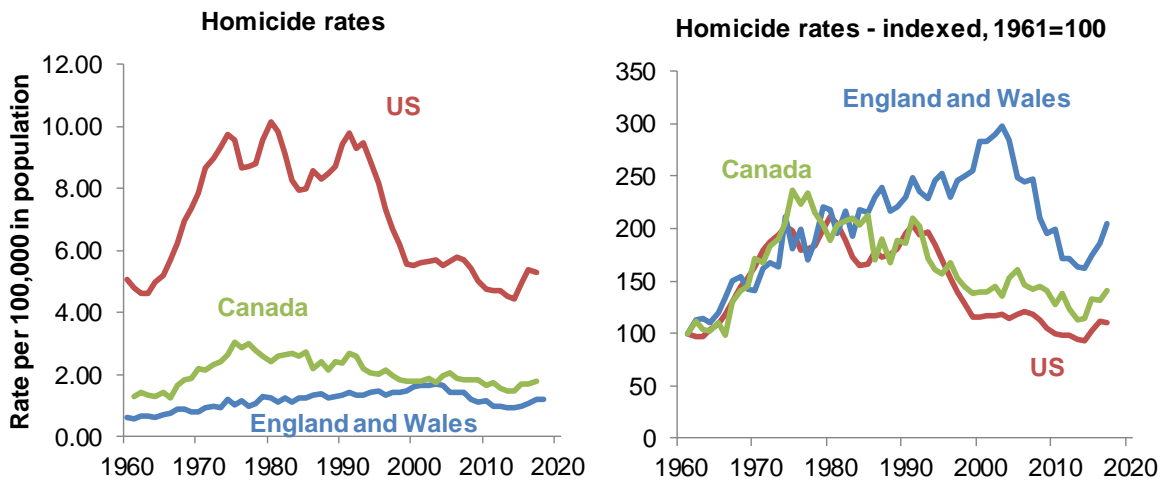


Source: UNODC Global Homicide Data

Turning to the main focus of this report, trends, an examination across nations reveals both similarities and differences. For example, like England and Wales, homicide rates in Canada and the US reached historic lows in around 1960 and climbed sharply thereafter. Also like England and Wales, homicide rates in Canada and the US fell sharply through the 2000s until around 2014 when they rose again. But the trends also have important differences. Whereas Canada and the US show a similar pattern of peaks between 1970 and 1990 (even though the

rate in the US is markedly higher), England and Wales had a fairly consistent increase between the 1970s and 2000 and hence a much later peak.

Figure 15: Rates of homicide in England and Wales, US and Canada (second chart indexed)

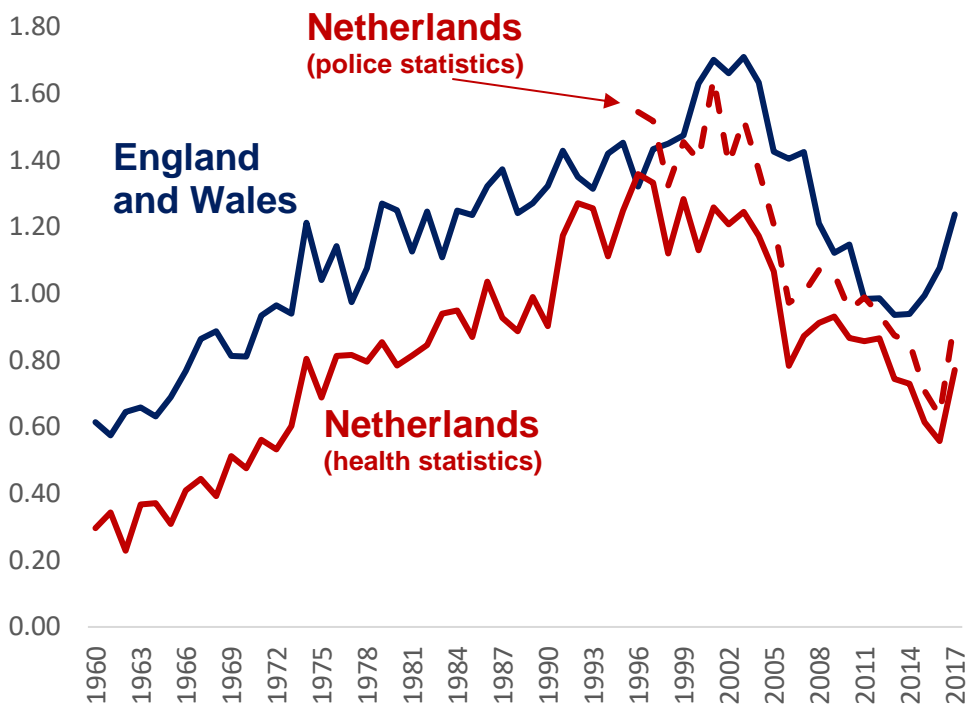


Sources: **E&W:** Historic PRC data, Home Office. ONS census figures and mid-year population estimates. **US:** FBI UCR data. Census Bureau data. **Canada:** Statistics Canada

Australia and New Zealand, most Western European nations, all the Nordic countries (Denmark, Finland, Norway and Sweden) and Scotland also have homicide rates that rise sharply from the 1960s and peak between 1990 and 2005. Data on Eastern European nations is generally only available for shorter time periods, but most of these nations also display a downward trend in homicide from the mid-1990s. For some, notably Bulgaria and Hungary, this followed a sharp peak in the early 1990s in the immediate post-Soviet era.

While there is a high degree of similarity in homicide trends across nations, the exact timing of the high point varies. Most peak more or less in line with the US and Canada in the early 1990s, but Scotland's peak is closer to that of England and Wales in the early 2000s, and New Zealand's rate only starts falling in the late 2000s. The nation with arguably the closest trend to that of England and Wales is the Netherlands (see Figure 16).

Figure 16: Homicide rates per 100,000 in England and Wales and the Netherlands



Sources: Home Office PRC homicide series; CNS Statline.

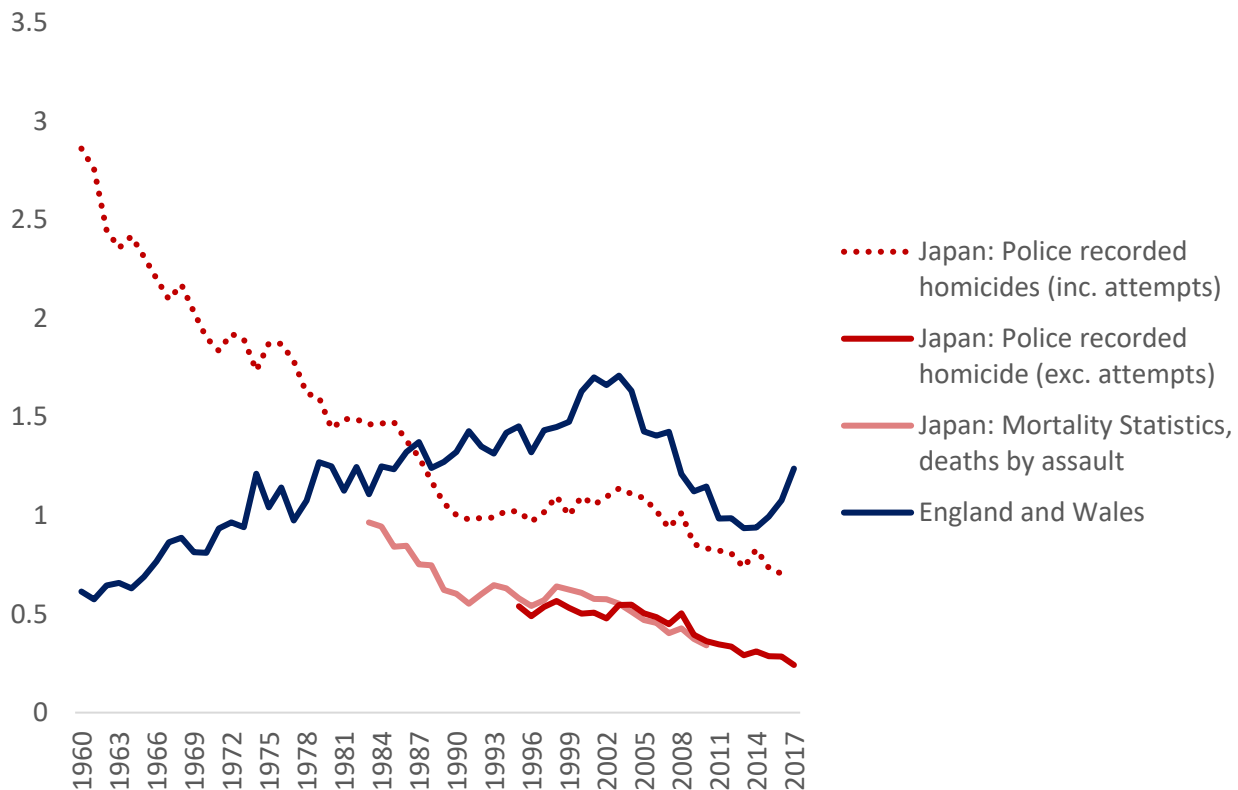
Figure 16 shows that the correlation in homicide rates extends to the recent increase from 2014 to 2017. Overall, 7 out of 13 nations studied had upturns in homicide from 2014 to the most recent year available (usually 2017).

Overall then, the analysis agrees with Eisner's (2008) conclusion that since 1860, homicide trends, and in particular their turning points, have been remarkably similar across many nations. Though there is a small degree of variation, homicide rates generally fell from around 1860 to 1960, rose until 1990 to 2005, fell again for another decade and then have started rising again (for about half the nations studied).

However, Eisner's analysis largely focused on Western Europe. There are some parts of the world that have had different trends, notably Japan, which was one of the very few developed nations identified that had a markedly *lower* homicide rate in the 1990s than the 1960s. Many Central and South America nations also followed a different trend, experiencing marked recent increases in homicide during the 2000s in contrast to the declines seen in most countries (see Annex 2).²⁰

²⁰ Available evidence suggests trends in other East Asian nations like South Korea and Singapore may be similar.

Figure 17: Homicide trends in England and Wales and Japan, 1960 to year ending March 2018



Sources: E&W: Home Office PRC homicide series. ONS census figures and mid-year population estimates. **Japan mortality statistics:** WHO database. **Japan police recorded completed homicides:** UN data, <http://data.un.org/Explorer.aspx>. **Japan police recorded homicides including attempts:** 'Historical statistics of Japan, chapter 28', and various 'Statistical yearbooks'. **Japan population:** World Bank database

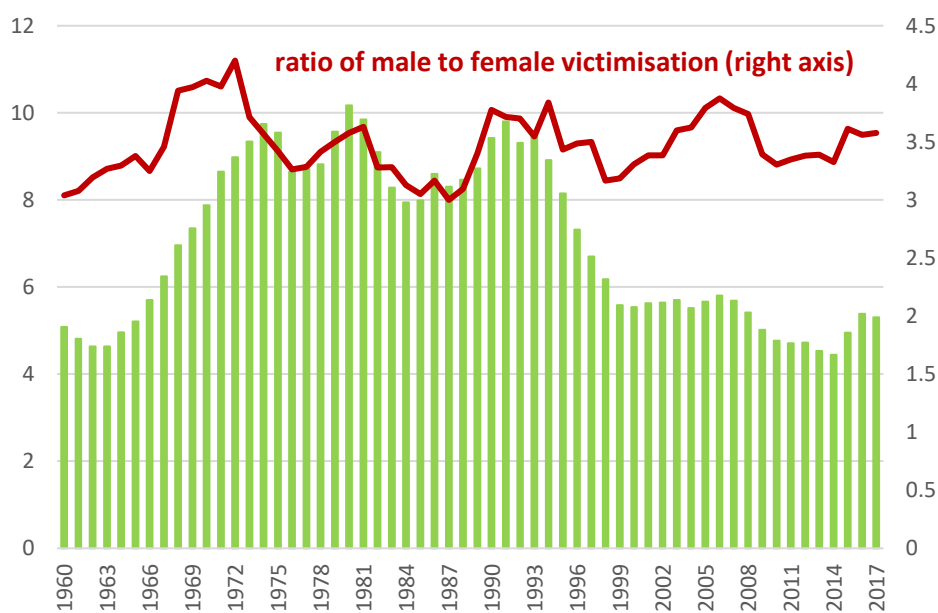
The 2019 Global Report on Homicide suggests that Japan's low homicide rate is typical of Asia, which has a lower overall rate of homicide than the other global regions: Europe, Oceania, the Americas and Africa (UNODC, 2019). By contrast, many nations in Central and South America did not experience the homicide decline that was typical for most countries during the 1990s and 2000s. Rates of homicide in some of these nations – notably Brazil, Venezuela, Mexico, Jamaica, El Salvador and Honduras – have remained high, or even increased since 2000, and are now among the highest in the world. The report also notes that homicides in these areas tend to be dominated by cases involving young men with firearms (*ibid.*). After the Americas, Africa has the next highest regional homicide rate, although data is sparse for many countries. South Africa has generally had the highest rate of the countries for which reliable data is available over the last 20 years (*ibid.*). South Africa's trend resembles many European nations in having a large decline in homicide from 1991 (following the end of apartheid) and a smaller increase in the 2010s.

For a more limited selection of countries it was possible to examine the trends broken down by sex of victim. This revealed that nations with higher overall homicide rates tended to have a higher proportion of male victims, but that *within* nations male/female victimisation trends were generally quite similar. England and Wales is something of an exception in having a clear divergence in male/female homicide trends after 1980, although Australia is somewhat similar. For Australia though, there has been no homicide increase from 2014. The result is that

Australia's homicide rate is now lower than England and Wales', driven by its rate of homicides against men aged 20 to 34, which is about half that of England and Wales.

Another consistent finding was that even though they are generally fewer in number, female-victim trends are less volatile. The short, sharp peaks in trends for most nations are generally driven by male-victim cases. The recent rise in England and Wales is an example of this, but further evidence also comes from a long-term trend in the US (see Figure 18).

Figure 18: Homicide rates in the US per 100,000, 1960 to 2016, and the ratio of male-to-female victims



Source: FBI UCR data

In Figure 18, the ratio of male-to-female victimisation tracks the fluctuations in the overall homicide rate quite well, meaning that short, sharp increases have generally been male-victim driven. But over the longer term there was a rise (mostly in the 1960s) and a fall (mostly in the 1990s) that affected homicides of males and females about equally, as the ratio does not shift much during those periods.

Trends in ages of victim and suspect were examined for the US and Canada. These revealed that, like England and Wales, homicides against babies and children have consistently fallen through all the recent fluctuations in the overall trend. In the US, the early 1990s homicide peak was clearly driven by younger (under 25) victims and a mixture of young or unknown/not-caught perpetrators. But the recent rise, both in the US and Canada, seems to be spread more evenly across victim age groups.

Finally, a very limited selection of nations has trend data available on the type or circumstances of the homicide. In the US, like England and Wales, the rise in homicide from years ending March 2014 to 2018 seems to have been partly driven by an increase in drug-related cases (see Annex 2). For Canada, data suggest that about 60% of the rise in homicide from 2014 to 2017 has been driven by cases connected to gangs and/or organised crime.

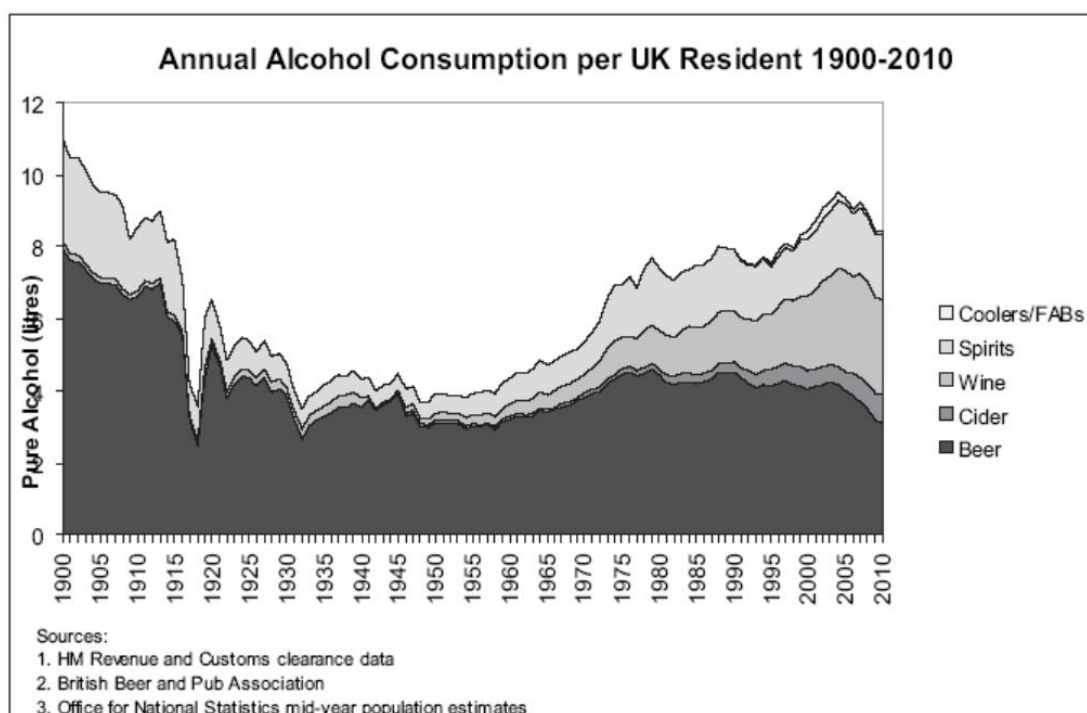
3. Alcohol as a driver of homicide trends

The previous sections used data analysis to examine trends and patterns in homicide in England and Wales and other nations. The rest of this summary focuses on the conclusions from the literature review of possible drivers of homicide trends, starting with alcohol. The systematic search (for detailed methodology see the Technical Annex) identified 17 studies which met the proposed criteria for inclusion and these were investigated along with secondary evidence pertaining to England and Wales. Annex 3 contains a full review of these papers; this section summarises the main findings.

The research literature suggests two main (not mutually exclusive) mechanisms by which alcohol could drive homicide trends. The first of these is via pharmacological effects. That is, that drinking alcohol has a direct effect on aggression, self-control and/or similar factors, making homicides more likely (NIAAA, 1997; Bye, 2012). The second is via environmental effects. Separate from the effects of alcohol itself, it is possible that the spatial concentration of people in the night-time economy environment may make homicides more likely (Bye, 2012). Both these mechanisms suggest that alcohol is most likely to affect spontaneous violent incidents that end up as homicide, rather than premeditated attempts to kill (Brookman, 2005).

Many studies note the strong long-term correlation between alcohol consumption and homicide in some nations, including England and Wales (Eisner, 2014). Like the homicide rate, alcohol consumption fell in England and Wales through the first half of the 20th century to a low point in the 1950s before rising sharply to a peak in the early 2000s.

Figure 19: Annual alcohol consumption per UK resident, 1900 to 2010



Although not shown on the graph, data since 2010 shows that the correlation has partially continued. Like, homicide, alcohol consumption started rising again in the latter half of the 2010s, though not as sharply as homicide. For example, whereas homicide rates increased by 35% from years ending March 2014 to 2018, beer consumption rose by 10%.²¹

Several studies were identified that tried to determine whether the correlation also indicates causality, though methodological quality varied. Generally, the strongest studies found some evidence of a causal effect (Parker *et al.*, 2011; Norström, 2011); however, the size of the impact varied by time, place and homicide type. The more hazardous the drinking culture, the stronger the relationship was likely to be, because the greater the proportion of homicides that were likely to be associated with alcohol (Rossow, 2001).

The evidence therefore suggested that there have been periods in certain nations where alcohol has been a key driver of homicide trends. Russia in the 1980s and 1990s appears to be an example. Research by Pridemore (2006) shows that Soviet policies implemented in the mid-1980s aimed at curbing alcohol consumption (by limiting manufacture and availability) almost certainly had a homicide-reducing effect and that the subsequent relaxing of these policies once communism fell, produced the opposite result: a sharp spike in both alcohol consumption and homicide.²²

But there have also been situations in which alcohol does not appear to have had a strong link with homicide trends, or when other factors seem to have been far more important. The homicide fall in New York in the 1990s is perhaps one example, and in France during the period 1960 to 1980, homicides increased while alcohol consumption fell (Rutter and Smith, 1997).

For England and Wales, direct evidence of any causal effect is extremely limited. But based on the findings from the international evidence and given that studies suggest England and Wales has a moderately high level of hazardous drinking compared with other nations (Anderson and Baumberg, 2006; Popova *et al.*, 2007), it seems reasonable to suggest that changes in alcohol consumption played some role in the rise and fall in homicide since 1950. Using data from Canada and the US, Rossow (2004) and Nortsrom (2011) both estimated that an annual 1-litre increase/decrease in per capita consumption would increase/decrease homicide by around 6%. If a similar relationship were to hold in England and Wales, that would imply that about a fifth of the fall in homicide between 2002 and 2014 was due to the fall in alcohol consumption over that period. By the same logic, the modest rise in alcohol consumption since the year ending March 2015 would be expected to have only a small effect. While this conclusion should be viewed as highly speculative, it is consistent with the modest (8%) rise in alcohol-related homicides reported in Figure 11 between years ending March 2015 and 2018.

²¹ Beer consumption figures were sourced from HM Revenue and Customs alcohol clearance statistics, available from: <https://www.gov.uk/government/statistics/alcohol-bulletin> [accessed 18/01/2020]

²² This conclusion is apparently at odds with the finding elsewhere that the period of alcohol prohibition in the US may have increased homicides at that time. However, prohibition creates two separate effects: the reduction in consumption would likely decrease homicide but the creation of an illegal market would likely raise it. Given the data, there is an argument that the latter effect dominated.

The studies were inconclusive regarding the *type* of drinker most associated with homicide. Many studies suggested a potential link between binge drinking and homicide (for example Brookman, 2005), however more than 10% of homicide offenders in one UK study were dependent drinkers (Shaw *et al.*, 2006). While there will be some overlap between binge and dependent drinkers, generally the latter are likely to require a different type of intervention.

4. Drugs as a driver of homicide trends

Annex 4 surveyed the literature on drugs as a driver of homicide trends. The systematic search identified 45 studies which met the proposed criteria for inclusion. When considering the theoretical link between drugs and homicide most of the papers referenced Goldstein (1985), which set out three ways in which illicit drugs might drive homicide trends.

1. **Psychopharmacological.** Similar to alcohol, it is possible that illicit drugs may have psychological effects on the individuals that take them – e.g. increased aggression or disinhibition – that makes them more likely to be homicide victims or perpetrators.
2. **Economic compulsive.** If illicit drug users have to steal to fund their use, it is possible that a homicide could occur in the act of robbery or burglary.
3. **Systemic.** These are homicides that arise from the fact that prohibition of drugs creates an illegal market, in which grievances cannot be reconciled through normal judicial channels so they may be settled through violence. For example, homicides resulting from disputes over drug-selling territory, hierarchy enforcement and punishment for failing to pay debts would all fall into this category.

Though the mechanisms are not mutually exclusive, most studies agreed that the systemic category is most important.

Unlike studies on alcohol and homicide, which tend to examine long-term relationships, the drugs literature was dominated by studies that focused on specific, short-term homicide peaks. The most prominent of these was the sharp peak in US homicide that occurred in 1991. Many studies sought to assess the hypothesis, proposed by Alfred Blumstein in a series of papers, that this was driven by the rise and fall of crack-cocaine markets (see for example Blumstein 1995a, 1995b; Blumstein and Rosenfeld, 1998).²³

These studies have an important limitation. Unlike alcohol consumption, which can be measured via alcohol sales, there is no easily available measure for illicit drug consumption. So the rise and fall of crack cocaine in the short-listed studies was measured via proxies, like arrests for crack possession/supply, or crack-related deaths (for example Baumer *et al.*, 1998; Fryer *et al.*, 2005). Even so, studies examining the difference in timing at which the crack epidemic affected different US cities (using one or more of these proxies) reveal a reasonably strong case that crack cocaine was an important driver of US homicide at that time.²⁴ Though it is less conclusive, there is also some evidence that the decline in homicide was driven to some extent by the degree to which crack markets waned and changed, in particular the move from street markets to off-street markets conducted via phones or beepers (Cohen and Tita, 1999).

²³ Full references for all the Blumstein studies are in Annex 4.

²⁴ See Annex 4 for a full list of studies that examined the 'Blumstein hypothesis'.

Another set of studies examined the large rise in Mexican homicide rates from 2007 to 2010. As with the US case, the majority of these studies concluded that drugs were an important driver of the trend (for example Rios, 2013; Phillips, 2015).²⁵

Collective evidence for the US and Mexican cases suggests a strong link between illicit drugs and homicide. However, the exact mechanism by which drugs can trigger sudden increases remains debated. Four inter-related factors seem to be important:

- **The structure of the market.** In particular whether it is monopoly-dominated at the street-level or operates on a freely competitive basis with lots of small groups vying for dominance. The latter seems to imply more violence.
- **The type of drug.** To the extent that psychopharmacological effects contribute (and on this the evidence is quite conflicted), cocaine and particularly crack cocaine seem to be more associated with homicide than marijuana or heroin (Miles, 2012). But also, drug-type affects the structure of the market. Crack has a shorter, faster high, meaning users come back to dealers more often and this use pattern has tended to generate more small-scale dealers than heroin use, which may make markets more competitive and less monopolistic.
- **The level of supply and demand.** As demand increases, so does potential profit which is likely to feed greater competition and violence. Periods of stable, low-demand are likely to favour more monopolistic structures and hence less violence (Reuter, 2009). Declining demand might lead to increased violence initially as different factions compete for a shrinking market, before stabilising once a monopoly or oligopoly is established. Most authors argue that supply is less important than demand for shaping the market (*ibid.*); even so, large supply shifts may still destabilise markets and drive up violence. Indeed, there is some evidence for this recently in England and Wales (see below).
- **The level of enforcement.** Evidence from Mexico in particular suggests that enforcement levels can contribute to market de-stabilisation and hence to homicide spikes (Rios, 2013; Phillips, 2015). Importantly though, there are also examples of enforcement activity ultimately having a dampening effect on homicide by killing, arresting or deporting the most involved individuals (though in some cases, this may have simply displaced the violence elsewhere – see the example of Columbia and Mexico in Annex 4).

It is hard to know how much bearing the findings from these relatively extreme cases – crack markets in the US and cartel violence in Mexico – have on recent trends in England and Wales. No study found in this review has quantitatively tested the relationship between homicide trends and drug consumption or drug markets in England and Wales.

There are reasons to suggest that drugs may not have been as big a driver of trends in England and Wales. An important aspect of the crack hypothesis involved the link between burgeoning drug markets and the easy availability of guns in the US (Blumstein, 1995a; 1995b), a dynamic that may be very different in England and Wales due to the greater restrictions on firearms. Also, crack consumption has never reached the same epidemic levels in the UK, and while Mexico is largely a producer/supplier of illicit drugs, England and Wales is largely a receiver.

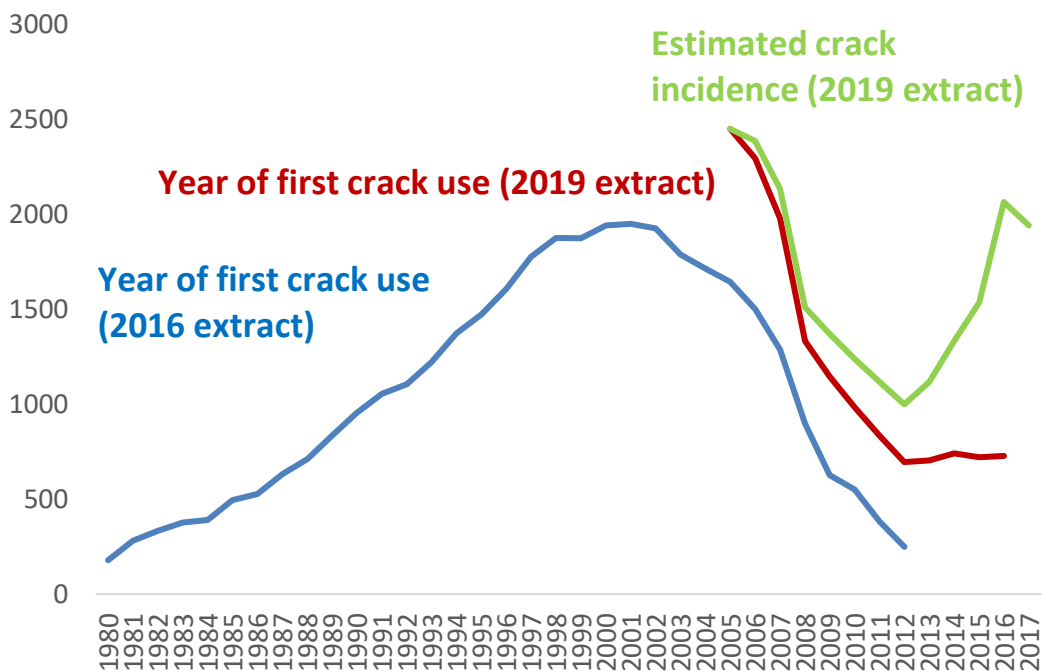
²⁵ See Annex 4 for all studies and references.

On the other hand, much *secondary* evidence does suggest the importance of illicit drugs as a driver of homicide in England and Wales. For example, qualitative studies looking at the history of the illicit drugs market show key links with the homicide trend in England and Wales. Dorn *et al.* (1992) show that the illicit drugs market really took off – in line with most nations – in the 1960s, correlating with the start of the long rise in homicide. They also show that while the market attracted some violent criminality from the outset, it wasn't until the start of the heroin epidemic in the late 1970s and 1980s that control of drug markets really switched from relatively passive user-dealer co-operatives to loose networks of more violent organised crime groups and street gangs. This fits with homicide trends in England and Wales becoming more volatile and dominated by male-on-male cases from 1980 onwards. Furthermore, as homicide continued to rise through the 1990s, some studies (along with police intelligence reports and journalistic accounts) pointed to the influence of crack-cocaine dealers, particularly Jamaican groups (Silverman; Cragg, 2003; Lupton *et al.*, 2002). Data suggest that crack incidence peaked in line with homicide in the early 2000s (see Annex 4) and so did homicides involving Jamaicans.

Also consistent with an association between drugs and homicide is the fact that whenever trends have risen recently in England and Wales, so have cases involving hand-held weapons and cases in which no suspect was identified. Studies reveal strong links between drug markets and the use of weapons in targeted attacks (Hales *et al.*, 2006). Arguably these cases would also be less likely to result in a suspect being identified.

The strongest evidence comes from the recent homicide rise between years ending March 2015 and 2018. Drug-related homicides explain more than half the overall increase in homicide between these years (see Figure 11). Available (but imperfect) data also suggest a strong correlation between homicide and the number of new users of crack cocaine, which increased to a peak in the early 2000s, then fell sharply before rising again (Schifano and Corkery, 2008; Jones *et al.*, under review).

Figure 20: Estimates for crack incidence, 1980 to 2016²⁶



Source: National Drug Treatment Monitoring System; Jones *et al.*, under review.

As with the US and Mexican evidence, the exact trigger remains uncertain. One possibility is a surge in global cocaine supply which increased by 119% from 2013 to 2017 (UN, 2019). Change in demand is another possibility. Data show that in the period before the recent increase in homicide (years ending March 2007 to 2014) the number of crack and heroin users dropped by 29% in the major urban centres in England and Wales (London, Manchester, Birmingham and Liverpool) but rose by 0.2% in the rest of the country (PHE, 2019). Maybe this led urban dealers to seek out markets elsewhere in the model that has become known as ‘County Lines.’ This involves dealers from urban hubs moving drugs out to county towns and selling them via a branded phone line (NCA, 2018). Evidence shows that when an area switches from local dealers to County Lines dealers, serious violence generally increases (Hallworth, 2016). This phenomenon may have been helped by growth since 2014 in vulnerable groups, like school-excluded children, children in care and the homeless, all of which are at higher risk of being drawn into drug use, drug selling and serious violence (Lloyd, 1998; Farrington *et al.*, 2012; MOJ/DFE, 2016).

Overall then, it seems likely that drugs have been an important driver of homicide trends in England and Wales, particularly recently. It also seems likely that the primary mechanism for this effect is via systemic cases caused by the illicit nature of the market and the use of violence for resolving grievances.

²⁶ This chart uses two sets of data to estimate numbers of new crack users over time. The red and blue lines are the number of individuals in the National Drug Treatment Monitoring System (NDTMS) who say they started taking crack in that year. The NDTMS is a live system so numbers change all the time. The lines show a cut of data that was taken in 2016 and a cut taken for the Jones *et al.* (under review) paper in 2019. These numbers will under-estimate crack incidence because not all users will come to treatment and many take some time to do so. The green line uses an estimation technique to correct for the lag.

5. The effectiveness of the Criminal Justice System as a driver of homicide trends

The systematic search identified 80 studies which met the proposed criteria for investigating the effect of the Criminal Justice System (CJS) on homicide trends. These were largely divided into three types:

1. Studies that examined relationships between homicide and CJS metrics like the prison population, the clearance rate or changes in the severity of punishment.
2. Studies that looked at the relationship between homicide and police resources or specific types of police practice.
3. Studies that examined the relationship between homicide and attitudes towards the police, particularly their level of legitimacy.

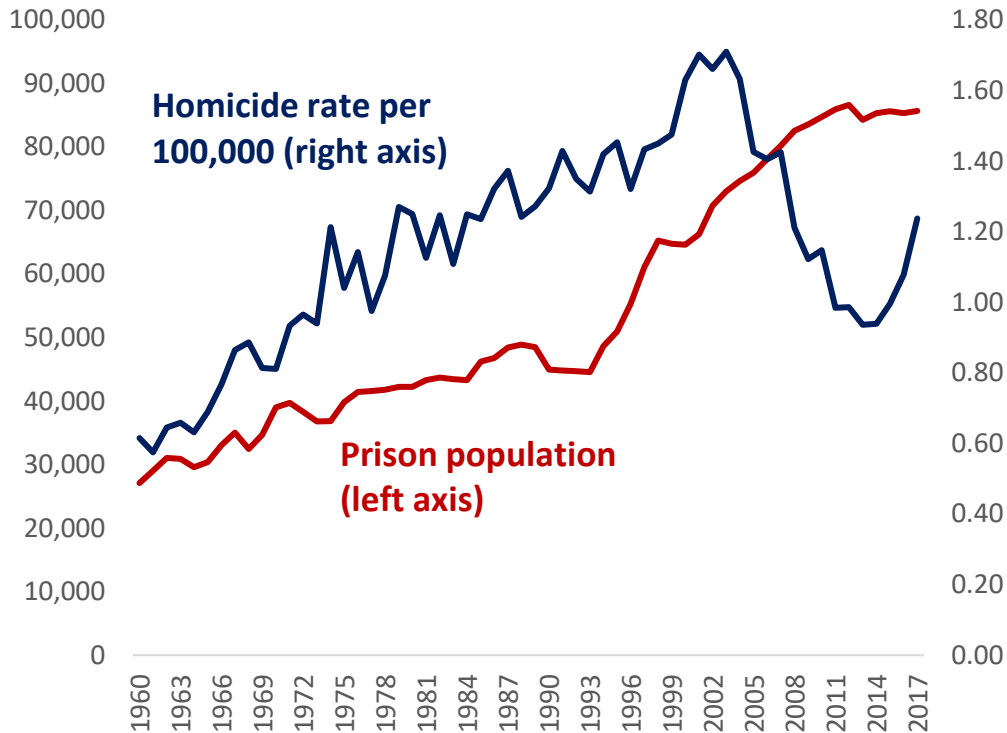
5.1. Homicide and changes in incarceration, clearance rates and the severity of punishment

A key issue for understanding the literature in this area is that the metrics used in these studies do not map perfectly onto the established theoretical mechanisms by which police and the wider CJS might affect homicide trends, namely via deterrence, incapacitation or rehabilitation.

For example, in the first category of studies, nine looked for a potential relationship between changes in prison population and changes in the homicide rate. Studies that used US data (the majority) tended to find a small but significant effect, with higher prison populations associated with lower homicide rates (for example McCall, Parker and MacDonald, 2008).²⁷ However, the research was unable for the most part to offer any view on whether that effect was due to incapacitation, deterrence or rehabilitation. Studies that looked across multiple nations, including England and Wales, tended to find no effect (for example Lappi-Seppala and Lehti, 2014). In England and Wales, homicide increased for another decade after the sharpest increase in the prison population.

²⁷ All studies are referenced in Annex 5.

Figure 21: Homicide rates and the prison population in England and Wales, 1960 to year ending March 2018)



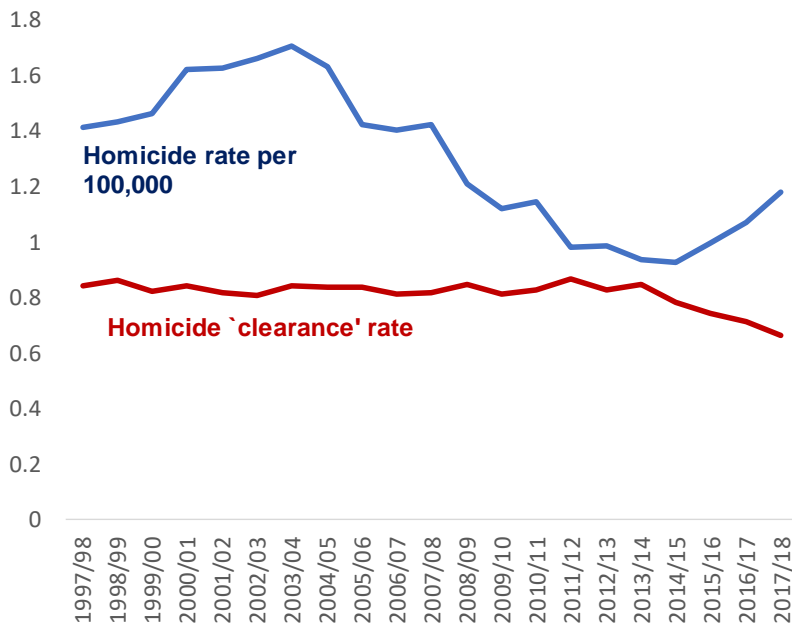
Sources: Home Office PRC homicide series, excluding the Shipman cases; UK Prison Population Statistics – Commons Library briefing.

Note: The homicide series uses financial years from 1997 to 1998. So the point corresponding to 1997 is actually year ending 31 March 1998.

Three short-listed studies examined whether changes in clearance rates have driven homicide trends. The studies were mostly methodologically weak and had contradictory results (Lattimore *et al.*, 1997; Merriman, 1998; Roberts and LaFree, 2006). None used data from England and Wales. It is therefore hard to draw strong conclusions about whether a big shift in the homicide clearance rate would affect homicide trends. More certain though is that the homicide ‘clearance’ rate in England and Wales has remained at around 80% throughout all the sharp swings in the homicide rate over the last 20 years (Figure 22).²⁸ So even if the homicide clearance rate *can* be a driver of trends, it does not seem likely that it has been.

²⁸ Includes cases in which a suspect was convicted, cases where the suspect died / committed suicide / was ruled insane and cases in which a suspect is awaiting trial.

Figure 22: Homicide and homicide clearance rate, years ending March 1998 to 2018



Sources: Home Office PRC homicide series, excluding the Shipman cases; Home Office HI for 'clearance' rate. See details for the latter in Footnote 28

It is possible that homicide trends might be affected by clearance rates for other crimes. To the extent that homicides occur as a result of robberies or violent incidents that get out of hand, or that offenders progress from less serious crimes to homicide, this could be possible. Clearance rates for most crimes, notably robbery, have fallen sharply in England and Wales since 2014 as homicide is risen.

Another set of short-listed studies examined whether changes in the severity of punishment affected homicide rates. Virtually all of these examined whether the death penalty lowers homicide rates. Findings were mixed with conclusions dependent on the statistical method, time period and geographical areas used (for a review see Gerritzen and Kirchgassner (2013); all studies can be found in Annex 5). In any case, given that capital punishment has not been used in England and Wales for 55 years, this cannot be a driver of recent trends.

5.2. Homicide, police resources and policing interventions

There was stronger evidence from 11 short-listed studies that changes in police numbers have influenced homicide trends in the US. Again, the methods used in these studies do not allow for clarity about the mechanism. In theory, more police could influence homicide rates through preventative activity (increasing deterrence) or by raising the clearance rate (and thus affecting deterrence and incapacitation) or by increasing police legitimacy. Results were generally in favour of an effect: all else being equal, more police led to lower homicide rates (see for example Heaton, 2010). However, the size of the effect varied across the studies and most/many concluded that it was quite small (Spelman, 2016). There were no short-listed studies in this area that used data for England and Wales, so no strong conclusions can be drawn about the extent to which changes in police numbers may have driven homicide trends here. Available data (Figure 23) is not immediately supportive. Correlation is largely in the opposite direction from expected, though this likely reflects the fact that when crime rises there are generally calls for more police officers. Trends can therefore give the impression that more

police lead to more crime when in fact the causality is in the opposite direction. The short-listed studies from the US use techniques to cope with this ‘endogeneity’ but none could be located that tested homicide in England and Wales.

Figure 23: Homicide and police officer rates, 1950 to year ending March 2018



Sources: Home Office PRC homicide series, excluding Shipman; Home Office police strength data.

Notes:

- Rates for police officers are in calendar years, so figures shown as 2017/18 are actually 2017. The police numbers series had two changes in recording practice, in 1996 and 2007, so caution is required for interpreting trends across the whole period.

There has been much speculation about the role of declining police resources in the recent rise in homicide. Given the lack of robust UK-based studies, this review cannot add much to that debate. However, if the elasticities from the robust US studies *are* transferrable to the UK context, then police numbers are likely to be a contributory factor, rather than the driving factor. Even the highest national estimate from the short-listed US studies (an elasticity of -0.91) would only equate to a homicide rate rise of about 7% between years ending March 2014 and 2018 (Levitt, 2002). The actual rise was 35%, which suggests other factors were also involved.

Another group of 29 studies examined whether specific police practices or interventions have affected homicide trends. While there was mixed support at best for ‘broken windows’ or ‘zero

tolerance' style policing,²⁹ studies examining the 'focused deterrence/pulling levers' approach³⁰ generally found a significant effect, although mostly this was seen as being an additional contributor to a general homicide decline rather than as the driving factor (Fagan, 2002; Braga and Weisburd, 2018).³¹ Nearly all the studies were US-based and attempts to transfer this model to England and Wales (in Manchester and London) have suffered from implementation issues (Bullock and Tilley, 2008; Davies *et al.*, 2016). More successful was the Street Crime Initiative, which had a demonstrable effect on robbery across multiple areas, but its impact on homicide was not measured (Machin and Marie, 2005). Given that it coincided with the point in the mid-2000s when homicide turned downwards, this warrants further investigation.

5.3. Homicide and police legitimacy

The ten studies examining police legitimacy and homicide trends were of two types. The first set examined police legitimacy in the context of overall trust in government institutions. This follows a theory espoused separately by US researchers Gary LaFree and Randolph Roth (LaFree, 1998; Roth 2009). Both have noted long-term correlations between increases in the US homicide rate and increases in distrust of central government, including protests against police and other institutions. They argue that when faith in institutions is healthy, people are more likely to get on with each other, but when it breaks down, this leads to mistrust and arguments that can end in violence.

The second set of studies looked more specifically at recent trends in America and the impact on police legitimacy of a series of well publicised police shootings (for example Rosenfeld, 2016). One of these was the killing of Michael Brown in Ferguson, Missouri, leading to this being known as the 'Ferguson effect'. Authors noted two different mechanisms by which this effect could be linked to recent homicide rises in the US: via 'de-policing', leading to falling clearance rates and less incapacitation; and/or via a general surge in distrust of police (which is more in line with the Roth/LaFree hypothesis).

Both sets of studies revealed points in time when shifts in the legitimacy of government, policing and other institutions could be linked with trends in homicide. But nearly all the evidence is correlational, and the few studies that have attempted more sophisticated causal analysis have generally not found significant results (Baumer and Wolff, 2014).

²⁹ The theory of broken windows posits that low-level disorder (broken windows) encourage further, more serious criminality. This approach gave rise to a style of policing known as zero tolerance which suggested that by tackling low-level offences (begging, skipping travel turnstiles) police might also prevent more serious crime.

³⁰ These approaches are implemented on a specific group of offenders (e.g. gang members) who are made aware that all sanctions (or 'levers') will be applied if they offend. A key factor can be the idea of collective responsibility: the police make clear that the whole gang would be held to account for the actions of any one of its members. These approaches can also include 'carrot', as well as stick, offers of housing, employment, drug treatment support etc.

³¹ Though it was not short-listed because it did not consider homicide specifically, a Campbell Systematic Review by Braga and Weisburd (2012) (and updated in 2018) found that combining ten of the most robust pulling levers studies into a meta-analysis produced a statistically-significant, medium-sized crime reduction effect.

6. Opportunity as a driver of homicide trends

There were 57 studies short-listed for inclusion in the review of how opportunity might affect homicide trends. Our concept of 'opportunity' is based for the most part on the 'crime triangle' which states that for a crime to take place, three things are required: a motivated offender; a potential victim or target; and a lack of guardianship (Cohen and Felson, 1979). Crime trends may therefore be driven by factors that make this confluence more likely or more frequent.

Annex 6 examines the evidence that this process has driven homicide trends via one or more of four different mechanisms:

- **Routine activities.** Changes in people's daily routines might increase/decrease the opportunity for homicide by bringing more victims and offenders together or by increasing/decreasing guardianship.
- **Demographics.** Changes in the number of people of the most crime-prone ages may increase the opportunity for victims and offenders to interact.
- **Divorce.** Changes in divorce rates potentially impact the opportunity for homicide in two ways:
 - By splitting up conflicted parties, divorce might reduce the opportunity for domestic homicide.
 - By reducing informal guardianship of children by parents and of husbands by wives, divorce might increase the risk of other types of homicide.
- **Gun availability.** Changes in the availability of guns increase the opportunity for homicide by making any confluence of victim and offender more likely to be lethal.

6.1. Routine activities and homicide

In relation to routine activities, there were only a limited number of studies and methodological robustness was generally quite poor. The seminal paper by Cohen and Felson (1979) offered a strong case that social change, particularly the increase in female employment, resulted in more routine activity taking place outside the home, and that this may have played some role in the rise in homicide in the US from 1960. However, the case appears weaker that routine activities also drove the fall in homicide either in the US or England and Wales. Certainly, the same indicators that Cohen and Felson linked to the rise in homicide – like female employment and single-person households – did not turn around and start falling in line with the decline in homicide. It is possible that a different switch in routine activities, from socialising in the night-time economy to socialising online, may offer a stronger explanation (Aebi and Linde, 2014), but this hasn't been explored much beyond simple correlations at this point, to our knowledge, and is somewhat belied by the latest increase in homicides.

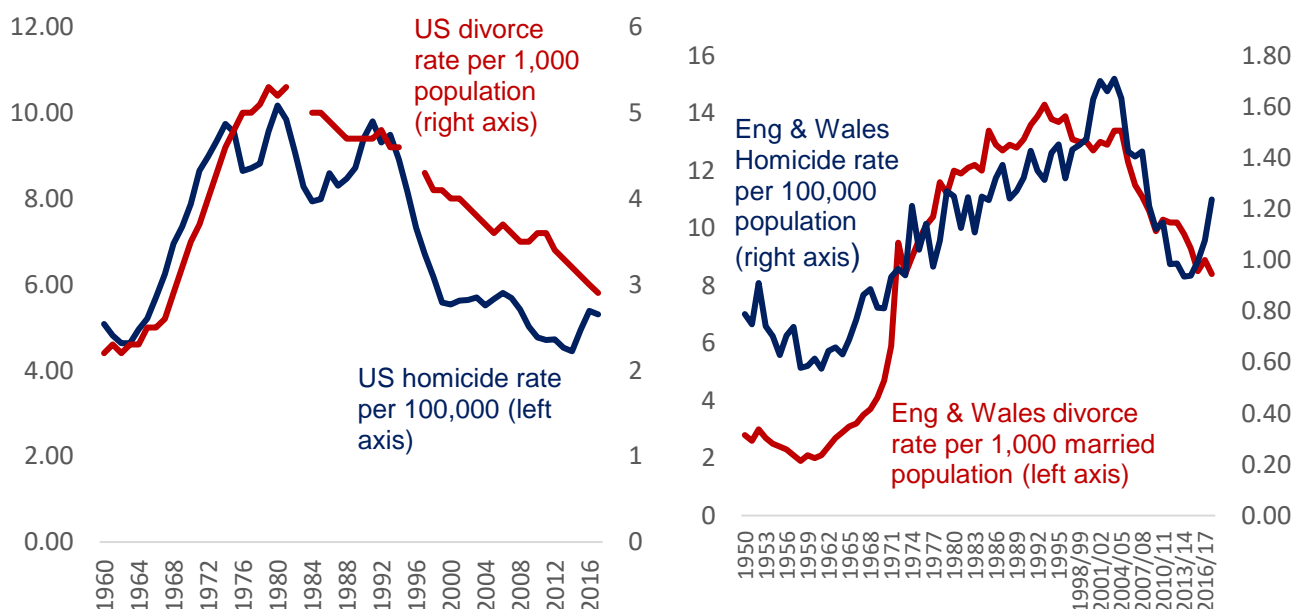
6.2. Demographics and homicide

For demographics, the main conclusion from the short-listed studies was that it was likely to have been only a minor driver of homicide trends, at most, and this probably also varied by time and place (Rogers and Pridemore, 2016). While there was some evidence that the impact of the baby-boom generation reaching their most crime-prone ages did influence homicide trends in England and Wales, the US and some other nations during the period 1960 to 1980, any effect seems to have lessened in more recent decades. Since 2014 as homicide has risen, numbers of 15 to 34 year-olds have fallen. However, a few studies did find support for a slightly different type of demographic effect that looked not at the simple *numbers* of young people in the population, but at the ratio of young to old (Baumer and Wolff, 2014). The argument being that a lower ratio implies a higher level of guardianship by older people, who typically have lower crime rates. This feels worthy of further exploration, although it also cannot explain the recent rise in homicide (see Annex 6).

6.3. Homicide and divorce rates

Of all the opportunity theories explored, divorce rates had the most quantitative support. Higher divorce rates consistently predicted higher rates of homicide even when many control variables were included (see for example Messner *et al.*, 2011). In addition, there was quite a high degree of positive correlation between trends in divorce and trends in homicide for both the US, and England and Wales.

Figure 24: Homicide and divorce trends in the US (left) and England and Wales (right)



Sources: Uniform Crime Reports, homicide data; Home Office PRC homicide series, excluding Shipman cases; ONS divorce data.

However, studies disagreed about the mechanism for any effect. Some researchers suggested that opportunity may be important, particularly in the effect it had on reducing the resources

available for parental monitoring (Beaulieu and Messner, 2010).³² However, others argued instead that the relationship between divorce and homicide was likely due to ‘social disorganisation’ with divorce acting as a symbol for the rejection of the social bonds implied by institutions like marriage (McCall *et al.*, 2011). There was also some evidence that the *timing* of any such effect may be more complex than the above charts suggest. For example, some studies suggested that rising divorce rates in the 1960s and 1970s were part of a wider social change, involving increased women’s rights and status, which put upward pressure on homicide initially (via male backlash and/or lack of parental guardianship), but downward pressure over time as a more female-orientated approach to child-rearing flourished and fewer children grew up in households affected by domestic violence (Whaley *et al.*, 2013). Amato (2001) showed that for a minority of individuals from the most chaotic and abusive backgrounds, parental divorce can significantly improve outcomes. A study with a robust methodology found that when US states adopted no-fault divorce laws during the 1970s and 1980s (as England and Wales did in 1971), domestic violence within marriage dropped by 30% (Stevenson and Wolfers, 2003). See Annex 7 for more on this.

Overall then, while quantitative evidence supports the idea that divorce may be an important driver of homicide, the exact relationship is not yet well defined. Furthermore, any correlation has broken down in the recent homicide increase. Divorce rates have not risen since 2014 in England and Wales, staying largely flat.

6.4. Homicide and gun availability

The final set of studies dealt with gun availability. Reviewing this literature revealed much methodological disagreement and contrasting results (see for example Kates and Polsby, 2000; Hepburn and Hemenway, 2004). Overall, the balance of the evidence seemed to suggest that gun availability may be a factor in explaining the different *levels* of homicide between nations, but that it is only likely to affect *trends* under certain conditions. There was some evidence that the proliferation of highly lethal weapons among groups already inclined towards conflict was an important factor in certain local-area homicide spikes in the US (O’Flaherty and Sethi, 2010). And this could have relevance for the distinct ‘spike’ in gun-related homicides identified during the England and Wales homicide peak in the early 2000s. But the macro-level trends in England and Wales showed little evidence that population-level change in gun ownership was a factor (this analysis is shown in full in Annex 6).

One final point on this topic is that while security improvements have been strongly linked, both to the opportunity framework and to the fall in acquisitive crime in England and Wales and other nations, there were no studies located that tested whether improvements in security may also have driven down trends in homicide (Farrell *et al.*, 2011; Morgan *et al.*, 2016). Some have suggested a possible relationship with the fall in violence generally – particularly in relation to the expansion of CCTV and private security services within the night-time economy – but a specific effect on homicide remains an avenue to be explored quantitatively (Farrell *et al.*, 2010; Garius, 2016).

³² Note that any opportunity effect must really be through lack of guardianship. Figures 23 and 24 reveal no real support for the opportunity-based approach that greater numbers of divorces would result in fewer domestic homicides by separating conflicted couples.

7. Character as a driver of homicide trends

Annex 7 looks at ‘character’ as a driver of homicide trends. For the purposes of this report, ‘character’ includes both values and beliefs, like the degree to which violence is seen as acceptable in certain contexts, *and* traits or characteristics (which would more normally be referred to as ‘personality’ in the psychology literature) like impulsivity and empathy.

There is considerable evidence at the individual-level that ‘character’ has a link with violent crime. That is, many researchers have found that factors like low self-control, lack of empathy or a belief that violence is acceptable in certain contexts predict involvement in violence (Gottfredson and Hirschi, 1990; Moffitt *et al.*, 2013; Joliffe and Farrington, 2004; Wikstrom *et al.*, 2012). A smaller body of literature has linked changes in these factors at the population level to changes in homicide trends. Annex 7 reviews these studies. For ease of consumption, the studies were divided into five themes: the civilising process; honour-based belief systems; cohort effects involving socialisation, parenting and fertility; the abortion hypothesis; and the lead hypothesis.

7.1. The civilizing process

Several short-listed studies argued that the most important factor in driving down homicide since the 14th century has been the ‘civilising process’. Norbert Elias, who first coined the term, described it as the development over many centuries of a personality that emphasised self-restraint and impulse control (Elias, 2000). As evidence, he provided a detailed study of the development of manners, from being an irrelevance in the medieval period to a tool by which the nobility distinguished themselves in the post-medieval period, to something that all classes aspired to in the modern period. Manners, Elias argued, are essentially a willingness to exercise restraint in order to conform socially. Importantly, he argued that this process was entwined with the development of the nation state, starting with the monarchy’s consolidation of power which transformed the aristocracy from a class of knights constantly warring with each other for land to a courtly nobility, dependent on the monarchy for favour. Ingratiation, rather than violence, became the way to get ahead. A simple but powerful fact supports this hypothesis: data show that the high rates of homicides in the medieval period were driven partly by killings between high-status individuals; but just as manners have diffused down the social hierarchy, so homicides are now much more common in the most deprived areas.

Elias and his followers, like Spierenburg and Spierenberg (2008), Pinker (2011) and Leyton (2011), emphasised other links between nation state development and the emergence of a personality prioritising restraint over violence. One was the growing importance of trade and its need to foster relationships with far-away individuals, rather than conquer them. Another was the development of state justice and the fact that it provided a system in which elites (initially, but eventually everybody) could seek redress, rather than extracting their own violent revenge, for wrongs done to them. This arguably remains important for trends today. There are still

pockets of geographical space (e.g. certain estates) or markets (e.g. the illicit drugs market) where the rule of law does not operate as elsewhere – ‘self-help’ justice prevails, offenders are protected by a code of silence and black markets in stolen goods operate. The evidence from the long-term trends suggests that if the rule of law could be brought to these areas, violence and homicide might be reduced.

Many authors also used the civilising process to explain the big fluctuations in homicide over the last 70 years. Pinker (2011) argued that the rise from the 1960s was driven by a shift from Victorian values to the hedonistic culture of the 1960s and that the fall could be linked to self-restraint reasserting itself, driven by widespread examples of the dangers of hedonism – drug addiction, AIDs etc. Eisner (2014) added some data to this proposition by showing correlations between homicide and societal measures of self-control in Germany, and between homicide and the use of certain words associated with hedonism (sex, drugs, narcissism) in other nations.³³

7.2. Honour-based belief systems

For some, the civilising process was more about a belief in honour than the ability to exercise self-control. Spierenburg and Spierenburg (2008) pointed out that trends in European homicide were linked to a culture of vendetta involving carefully planned tit-for-tat violence, rather than an immediate lack of impulse control. What mattered then was the *belief* that violence was right in those vengeful circumstances. As such, Spierenburg and Spierenburg and other authors, like Muchembled (2012) and Lane (1997), argued that the rise in homicide in the latter part of the 20th century was less about hedonism and more due to a “*partial return of traditional male honour*” situated in enclaves where state control failed to reach, like drug markets and honour-based cultural enclaves.

Supporting evidence has been reasonable, if not conclusive. Detailed ethnographic studies, like Elijah Anderson’s *Code of the Street* (2000) have linked such honour-based belief systems to violence within gangs and drug-selling groups. In England and Wales, studies interviewing gang members have shown that they are more likely than non-gang youth to say that they have “specific rules and codes” and that these were linked to the moral justification of violence and displacement of responsibility (Alleyne *et al.*, 2014). Other studies have demonstrated a cross-sectional relationship in which southern states or cities in the US south had higher rates of homicide for reasons that weren’t explained by structural factors. Nisbett and Cohen (1996) made a persuasive case that this was due to the persistence of honour cultures within frontier-based, male-dominated herding societies in the US south and that, at the individual-level, a belief in honour seems to be linked to aggression via biological differences. However, none of these studies tested changes in aggregate homicide *over time*, and some authors, notably Roth (2009) have argued that the theory flounders when this is attempted.

³³ The source of this data was the Google Books NGRAM corpus. Launched in 2010, NGRAM is a database of 8 million digitised books published between 1500 and 2008, corresponding to about 4% of all books ever printed. The interface allows users to track the frequency of any group of words as a percentage of all words in the corpus over a specified period of time.

7.3. Cohort effects involving socialization, parenting and fertility

If character is formed mainly by socialisation or other early-years environmental factors, then the effect on homicide might be cohort-based. That is, if quality of upbringing varies systematically by time (e.g. parenting becomes harder during times of hardship) then we might expect a whole generation of individuals to grow up with a slightly higher/lower propensity for being involved with homicide.³⁴

Most of the short-listed studies that examined possible cohort effects found some evidence that different generations have had different average homicide propensities and that this has affected homicide trends (for example Smith, 1986; O'Brien and Stockard 2009). However, most suggested this effect was small and that there were periods and places in which cohort effects seem to be entirely absent from the data, notably in US trends from 1985 to at least 2000 (Cook and Laub, 2002).

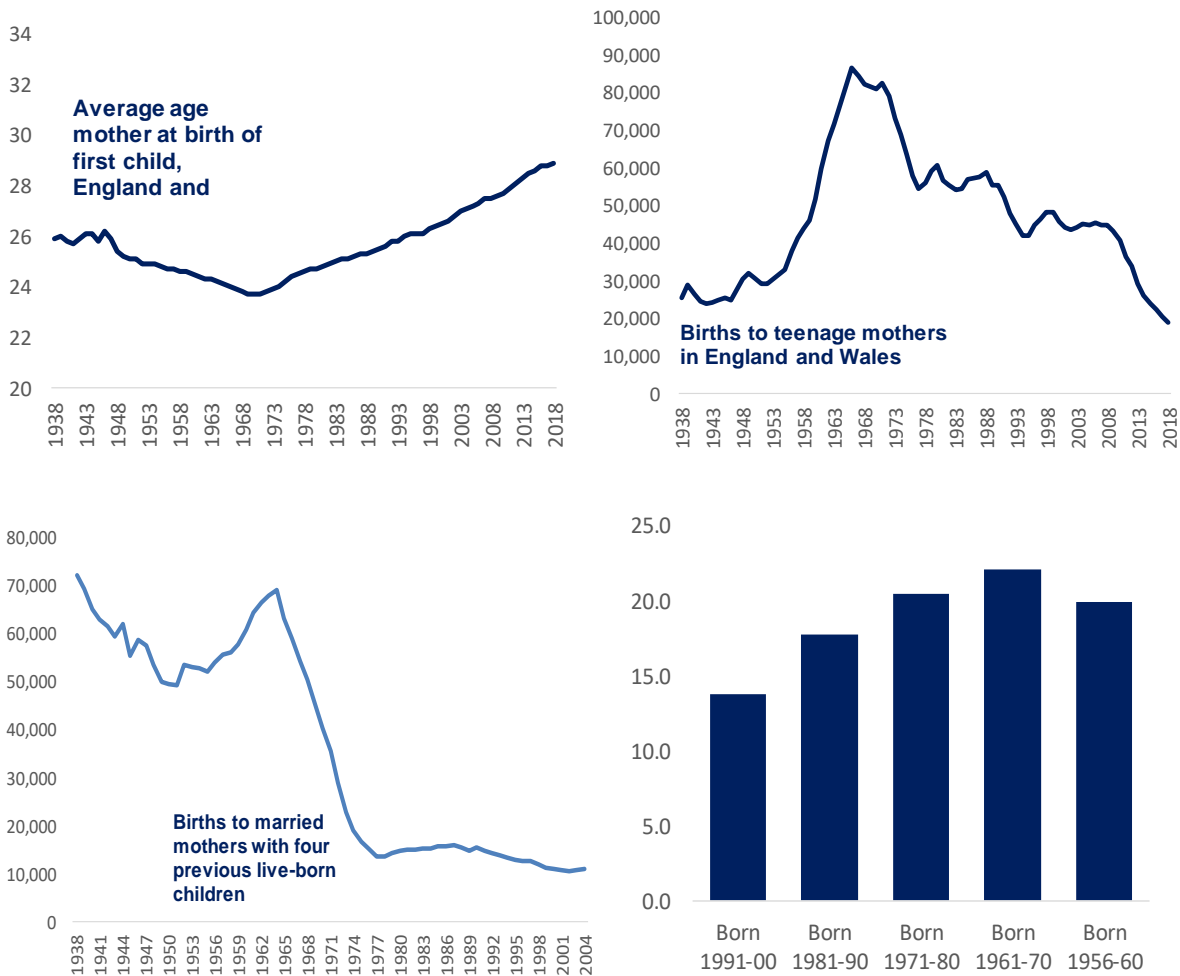
If there has been a cohort effect – what has driven it? One group of studies found that, on the whole, those born into larger cohorts, like the post-WW2 baby-boom generation, have slightly higher rates of homicide victimisation and perpetration (Easterlin and Shapiro, 1979; Pampel and Gartner, 1994).³⁵ Two mechanisms for this effect have been proposed. One has nothing to do with the development of characteristics or beliefs; it is that larger cohorts must compete more for pro-social resources like employment, making crime a more attractive alternative option (Easterlin, 1980). However, there was arguably better evidence for an alternative link via fertility, parenting and evolutionary strategy. Studies have suggested that during stressful times, when life expectancy drops, it can be a rational evolutionary strategy to increase fertility in order that at least some offspring survive to reproductive age (Wilson and Daly, 1997). This 'life-course strategy' is linked to greater risk taking, younger pregnancy and less parental investment in emotional and financial resources per child, all of which are risk factors for violence (*ibid.*). From the short-listed studies, evidence for this kind of effect came from the fact that replacing cohort size with family variables, like proportion of non-marital births and proportion born to a teenage mother, generally increased the strength of the cohort effect (Baumer, 2008).

There was also some suggestive evidence for a parenting/socialisation effect from the secondary literature. There were large swings up and then down in several crime-related risk factors in the years after WW2, both in England and Wales and many other nations. From 1945 to 1970, data suggest that maternal age at first birth dropped and teenage pregnancies, family size and physical, emotional and sexual abuse all increased. This occurred a generation before the rise in homicide and crime generally. Furthermore, all these trends abruptly reversed after 1970, a generation before violence began to decline again.

³⁴ It is important to point out that the presence of a cohort effect, in isolation, does not prove that character is an important driver of homicide. There are other possible cohort effects that have nothing to do with the development of characteristics, values or beliefs. Similarly, the absence of a cohort effect does not totally rule out a relationship between character and homicide. It is possible that character could drive homicide via period effects too – for example Pinker's argument that the counter-culture of the 1960s had a direct and immediate effect on people's values.

³⁵ Note that these studies looked at rates, so the results imply a greater propensity for homicide, not just the mechanical fact that – all else being equal – bigger cohorts will have higher levels of homicide because there are more of them.

Figure 25: Panel of charts showing shifts in risk factors for crime and homicide in England and Wales



Sources: ONS: Births by parents' characteristics data series; Office for National Statistics (2016) Abuse during childhood: Findings from the Crime Survey for England and Wales, year ending March 2016.

Tentative evidence suggests also that children born between 1945 and 1970 were subject to slightly more authoritarian parenting than those born before and after (Collishaw *et al.*, 2012; Trifan *et al.*, 2014). Given this evidence it is also suggestive that Japan, one of the only developed nations not to have had a homicide bounce from 1960 to 1990, also had a much briefer fertility bounce after WW2 and hence a much smaller baby boomer generation and none of the surges in teenage pregnancy and divorce seen in many other nations (see Annex 7).

7.4. The abortion hypothesis

Another cohort-based theory is Donohue and Levitt's (2001) abortion hypothesis. They argued that legalisation of abortion, which occurred in most US states in 1973, reduced crime in two ways. Firstly, they claimed that it resulted in fewer individuals being born, which would be expected to reduce crime a generation later, all else being equal. They also argued that individuals born after the legislation would have fewer crime-prone characteristics. To support this, they cited evidence that: i) teenagers, unmarried women, and the economically disadvantaged were most likely to seek abortions in the US after legalisation; and ii) studies tend to show that children born to teenagers, unmarried women and the economically

disadvantaged have higher crime rates generally. They suggested this could explain about half of the crime decline in the US from 1991 to 1997.

Our review found support for the theory in some studies while others dismissed it (see for example Francois *et al.*, 2014; Joyce, 2009). One study tested England and Wales data (abortion was legalised in England and Wales in 1968 so the hypothesised effect would be similar). It found no effect on overall crime but an effect on violence (Kahane, *et al.*, 2008). Taken together the evidence perhaps suggests that abortion legalisation probably did have an effect on the average propensity for crime and violence, but that this effect was much smaller than Donohue and Levitt originally suggested. An important point is that virtually all the short-listed studies tested the hypothesis using the change in abortion legislation as the key explanatory variable. However, abortion legalisation was part of much broader social change occurring at that time, which also included the introduction of the pill, changes to divorce laws, growth in women and children's rights etc. As the previous section showed, these brought large changes in key family variables related to violence: fertility, family size, teenage pregnancy and so on. Viewed as part of this whole, the abortion hypothesis perhaps carries more weight as a driver of homicide trends.

7.5. The lead hypothesis

Some authors have proposed an entirely different mechanism for a possible cohort effect – the so-called 'lead hypothesis' (Nevin, 2007). This posits that high levels of lead drove systematic biological effects on individuals, which produced, on average, a greater propensity for aggression in those who experienced the high lead levels at a young age.

We found robust evidence from a number of studies that high childhood lead levels can affect childhood brain development causing changes in homicide-relevant characteristics like a raised propensity for aggression (Needleman *et al.*, 1996; Needleman 2004). But quantitative studies that directly tested the proposition that increases, and then decreases, in lead exposure have driven aggregate-level homicide trends found only mixed support (see for example McCall and Land, 2004; Reyes, 2007). However, they were significant predictors of violence trends more generally, and the timing of lead declines in England and Wales would fit with a cohort effect on homicide, so further investigation is recommended.

7.6. Conclusions

Overall, while this section contains a wide body of different theories and hypotheses, often tested using relatively sparse data, two conclusions can perhaps be taken, though there is an important caveat in each case.

The first conclusion is that there is a reasonably large body of evidence suggesting that changes in characteristics and/or beliefs have influenced homicide trends over time, particularly self-control and a belief in honour (including the need to defend it violently). The caveat to this conclusion is that these characteristics and beliefs cannot be viewed in isolation. They are constantly interacting with other drivers like alcohol, drugs and the effectiveness of the CJS. As Eisner (2014) has noted, a lack of self-restraint makes alcohol a more important trigger for homicide. An absence of policing and justice (either through lack of geographic

reach or the need for participants to self-regulate in illicit markets) likely fosters belief in honour and the violent vendetta culture that can accompany it.

The second conclusion is that there is tentative evidence for a cohort effect within homicide and wider crime data. This opens the door for a character effect either driven by: parental socialisation (or similar); by societal change like the shift in abortion legislation; by wider environmental effects like changes in lead levels; or perhaps more likely, by some combination of these. The caveat to this conclusion concerns the *type* of homicide trends that these theories can be applied to. As Annex 1 showed there is some evidence for both fast and slow-moving trends within homicide and, generally speaking, character-based explanations seem more applicable to explaining the latter. As LaFree (1999) has noted:

“...the simple rapidity of the changes (in homicide) calls into question explanations based on fixed biological characteristics, deep-seated psychological characteristics, or slow-moving social characteristics.”

Certainly, the ‘epidemics’ of homicide that occurred in many US cities during the 1980s and early 1990s (or in London and Chicago more recently) do not lend themselves easily to character-based explanations. Unless changes in self-control and/or the belief in honour and the rightness of violence can be transmitted instantly at large scale, they cannot explain sharp swings in homicide trends.

In some cases, however, faster mechanisms may be possible. Eisner and Pinker’s theory that the explosion of a hedonistic celebrity culture in the 1960s may have led to greater impulsivity at the population level is one example (recall that the early part of the homicide rise in England and Wales was common to all ages and both sexes). Another possibility is that if gangs and drug markets do indeed have their own ‘code of the street’ which newcomers quickly grasp, then sudden shifts in gangs or drug markets (as when the arrival of crack in the US resulted in large numbers of youth being recruited into selling in a short space of time), could see belief systems about violence transformed relatively quickly across large numbers of individuals. However, LaFree’s critique surely holds for some of the theories examined here. Blood-lead levels cannot be transmitted quickly between individuals in quite the same way as an us-and-them vendetta culture.

One final general caveat: in general the studies in this section were the most qualitative and the least data-driven.

8. Profit, the economy and other factors as drivers of homicide trends

The final annex examined short-listed studies on criminal profits and homicide as well as studies that didn't easily fit into any other category, like economic factors, immigrations and the impact of television and media violence.

8.1. Profit, street gangs and organised crime

No studies were located that specifically looked at the relationship between criminal profits and homicide. Instead, Annex 8 therefore explored studies that analysed the relationship between organised crime and homicide, and between urban street gangs and homicide, accepting the caveat that any relationship could be caused by competition for profits within drugs or other illicit markets, but might also be driven by factors unrelated to profit.

Although studies were limited, especially for England and Wales, a consistent finding was that areas with higher street-gang density experience higher levels of homicide, even when structural conditions are controlled for (Robinson *et al.*, 2009). In other words, while gangs are more prevalent in the poorest areas, the presence of gangs seems to exert an effect on homicide over and above the effect of poverty and other structural factors alone.

This suggests the possibility that *changes* in the level of street-gang density and changes in the level of conflict between street gangs may be an important driver of homicide trends. Hagedorn (2015) in particular has argued, using the example of Chicago in the 1990s, that the punctuated nature of gang warfare offers a persuasive explanation for the sudden increases in homicide that have occurred in certain localities. However, due to lack of data on gang wars over time, this hypothesis remains to be properly tested.

Evidence was even sparser for organised crime and homicide. One England and Wales study found that the proportion of homicides directly driven by organised crime was just 2% of the annual total (Hopkins *et al.*, 2013), but evidence on whether this has changed over time is lacking. Of course, organised crime may still have a large indirect effect via drug markets and/or their influence over gangs and lower level criminality. In this vein, the hypothesis that the 'handing over' of the retail end of drug markets from organised crime groups to more fractured and volatile urban street gangs, which occurred in the US in the 1960s and (possibly) in England and Wales in the early 1980s, was a major driver of homicide trends deserves further attention. It may help to explain why trends have become more volatile and more male-dominated.

8.2. Economic factors

There was a large body of literature in this area with many studies quantitatively analysing variables like gross domestic product, unemployment, welfare and inequality and their effects on homicide trends. Two clear conclusions emerged.

Firstly, internationally and for England and Wales, there is a strong and consistent spatial correlation between economic factors and crime. Put simply – the most economically distressed areas have the highest homicide rates (for example McCall *et al.*, 2010, and see also Figure 10). The most deprived areas also have the biggest swings in homicide rates. They suffer the sharpest increases and benefit from the sharpest decreases (Kubrin and Herting, 2003).

Secondly, however, despite having a strong cross-sectional relationship with homicide, deprivation and other economic factors do not correlate well with homicide over time (McCall and Brauer, 2014). For England and Wales and other nations, the rise in homicide in the 1960s coincided generally with a period of very favourable economic trends and there was no sign of an (immediate) homicide bounce following the 2008 recession.

What should we conclude from this regarding economic factors as a driver of homicide? This is the subject of a lively academic debate; resolving it should be a priority for policy-makers and academics. Currently there are at least five possible explanations:

- Cross-sectional and temporal studies capture different types of effect, with the former capturing more long-term permanent effects and the latter capturing shorter-term fluctuations.
- There is no strong relationship between economic factors and crime; the strong cross-sectional results would disappear if a full set of control variables (including drug markets, organised crime and perhaps some societal ‘character’ measures like self-control etc.) were included.
- There is a relationship between economic factors and crime, but it is lagged in such a way that makes temporal results hard to detect. One possibility here is that suffering economic deprivation during childhood is what matters.
- The most deprived areas consistently pull in the individuals most likely to be involved with homicide. Or conversely, those less likely to be involved with homicide consistently move away from the most deprived areas.
- Economic factors *interact* in some way with other factors to drive homicide trends. For example, if burgeoning drug markets are an important driver of changes in homicide trends, it may be that poorer areas suffer the brunt because that’s where those most susceptible to the drugs trade reside, but trends are driven more by fluctuations in the drugs market than by macro-economic factors.

8.3. Other factors

While there does seem to be evidence that viewing violent television/films or playing violent video games can increase aggression (Bandura, 1978; Sapolsky, 2017), this only seems to occur in individuals with a predisposed tendency towards violence, and the evidence that

macro-level changes in media violence have driven aggregate homicide trends is weak (Perry, 2007).

Findings from the UK, the US and Canada suggest that immigration has either no effect on homicide rates or has the potential to decrease them (Andresen, 2013; Martinez, *et al.* 2015). However, the effect likely depends on who is migrating to where. Migration from a high homicide rate country (or area) to a low homicide rate country/area may raise rates temporarily and vice versa (Latzler, 2016).

Studies found that the proportion of homicides perpetrated as a direct result of mental illness was very small and therefore changes in mental health are unlikely to be a big driver of trends (Taylor & Gunn, 1999).³⁶ In England and Wales, the proportion of homicides directly attributable to mental health seems to have increased from the 1950s to around 1980 but has decreased thereafter (Large *et al.*, 2008).

Some argue that improvements in medical care may have been very significant drivers of homicide trends, both over the centuries (Roth, 2009) and more recently (Andresen, 2007). They argue that medical advances mean fewer violent incidents become homicides giving rise to improved figures that don't necessarily reflect a reduction in the propensity for homicidal violence. However, the evidence on how much this may have affected trends remains unclear.

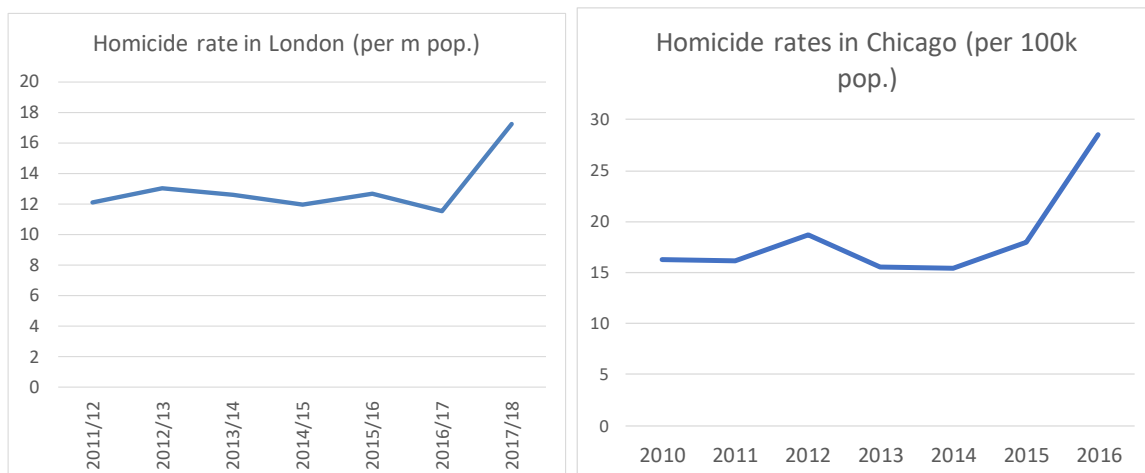
³⁶ Note that mental health issues related to alcohol and drug addiction may have far bigger indirect effects.

9. Discussion and conclusion

This final section attempts to draw together some of the key points about trends and drivers of homicide and to demonstrate what lessons they might imply for police, policy-makers, researchers and anyone else motivated by the goal of reducing of homicide.

The analysis showed that homicide is a complex, non-homogenous crime. Everyone agrees there are different types of homicide. But pinning those types down into useful analytical categories is problematic. Categories like alcohol-related, drug-related, domestic and gang-related are not mutually exclusive, and overlap with other types of categorisation like infanticide, intimate partner homicides, robbery homicides and sexually-motivated homicides. This makes explaining trends difficult even though those trends display clear patterns that beg for a simple explanation. Looking at the charts in Figure 26 it is hard not to conclude that *something* important happened in London in 2016 and in Chicago in 2015, and that as researchers we should be able to identify it to help policy-makers from preventing it happening again.

Figure 26: Recent homicide trends in London and Chicago



Sources: Home Office HI; Chicago Data Portal

One way into this puzzle, we would argue, is to accept that homicide – and its trends – will be multifaceted. Multiple factors will affect different types of homicide at any given moment. This implies that the overall homicide trend is made up of smaller micro-trends. What follows is an attempt to describe the three most important of these: the long-term trend operating over centuries; the 'long-wave' which pushed up all types of homicide in England and Wales and other nations between 1960 and 1990, before subsiding; and the short waves which have generated more locally-specific surges in homicide.

9.1. The long-term trend

It seems clear that homicide was on an almost continuous downward trend in England and Wales from 1860 to 1950 and that the rate in 1860 was much lower than it had been centuries before. This implies that there is a long-term trend in which downward pressures outweigh upward pressures. Although our literature review of homicide drivers focused on the post-1945 period, many studies touched upon drivers from earlier periods. For the most part, these authors agreed that the following downward pressures on homicide are linked to those for 'progress' more generally and which have been articulated by authors like Stephen Pinker (2011) and Hans Rosling (2019).

- Increasing trade and prosperity, which fostered co-operation in resource generation rather than competition.
- The growing belief that violence in all forms is not honourable, but wrong and the spreading of the rule of law to enforce that belief.
- An increasing respect for others and the self-restraint that breeds.
- Improvements in science including the medical technology that made any type of violence less likely to become homicide.

This review only really revealed two long-term upward pressures to set against those forces: the existence of increasingly lethal weapons and a recording effect: the gradual inflation in what is included within the categories of violence and homicide.

Arguably, all of the long-term downward pressures continued unchecked through the 20th century and into the 21st. Pinker (2018) has argued for a more or less continuous improvement through that period, highlighting improving indicators relating to absolute poverty, life expectancy, health, wealth, rights, treatment of minority groups and scientific progress. To be sure, weaponry has also become more lethal and, occasionally a new category of homicide has been added – corporate manslaughter being a recent example in England and Wales. But overall it seems reasonable to say that on the basis of these long-term factors, homicide rates should have been lower in 2018 than in 1900, not the other way around.

9.2. Long waves and short waves

The long-term analysis suggests that the recent homicide trends requiring explanation are the *upward* surges – the long wave from the 1960s and the sharp increase since 2014. One way to think about these is to consider them in the context of a study by Manuel Eisner (2013) in which he looked at the types of homicide that occur in high and low homicide societies. He concluded that:

In low homicide societies the majority of killings are committed by highly marginalised people who usually experience a number of psychological, genetic, neuro-cognitive and family risk factors. In contrast, in high homicide societies, violence is much more [male-dominated], goal-driven, embedded in economies of violence and protection [with weapons routinely carried], and coordinated or carried out by powerful individuals.

Although Eisner's conclusion involves comparing different countries and societies, this review focusing on England and Wales has identified much to support it. Indeed, one reading of homicide trends in England and Wales over the last 70 years is that they have oscillated between these two states. In global terms, England and Wales has generally been a low homicide country, but when rates *have* surged, they have generally become more male-dominated, more cases have involved weapons and (certainly recently) more cases seem to have been 'embedded in an economy of violence' – the illicit drugs market.

It may be possible to take Eisner's dichotomy a stage further. Perhaps the two types of homicide also have their own trends? Some of the analysis in this report suggests this. For example, comparison of trends across nations revealed similarities and differences. Generally, the similarities are of a long-wave type. Homicide rates generally increased from the 1960s to the 1990s and fell thereafter. The differences between nations tended to be short-term fluctuations: England and Wales had an additional surge in the late 1990s/2000s; the US and Canada had a series of mini-peaks from 1970 to 1991; and some nations and cities have had marked upturns since 2014, while some have not. The data generally showed that the long wave involved virtually all types of homicide (and indeed other crimes). In England and Wales, rates for males aged 15 to 44 increased by the most, but rates for women, children and older men aggregated together still more than doubled from 1960 to 1980. By contrast, the short waves have been more focused within male-on-male, goal-driven killings and weapons crime. This latter pattern seems to have dominated during the early 2000s peak in England and Wales and the upswing in homicide since 2014. Between the years ending March 2015 and March 2018, there were 14 additional homicides against women, children (under-15s) and older people (over-60s). Over the same period there were 154 additional homicides involving male victims aged 15 to 59.³⁷

This analysis implies that, in addition to long-term factors, there have been two other categories of homicide driver: those that operate on the slower, long-wave trend and have been common to most nations; and those that can shift homicide rates much more dramatically over a shorter space of time and tend to be more area-specific.

9.2.1 The long wave

What drove the long wave? Data suggest that the search should focus on something that affected the propensity for risky and criminal behaviour generally, and in many nations. It must also, of course, fit with the timing of the wave. On that basis, it is hard to implicate economic factors, which were generally positive and improving as the upward surge in crime began in the 1960s. For England and Wales, it is also hard to blame a failure in the effectiveness of the CJS. Police numbers were lower in the low-homicide 1950s than in the 1960s and 1970s and homicide clearance rates probably remained high throughout.³⁸ There would certainly have been an impact from the baby-boom generation reaching their teens and 20s and from them ageing out of the most crime-prone years, at the other end of the wave. But the magnitude of the wave was far too big for this to be the main explanation. Some kind of additional or

³⁷ This calculation uses the Homicide Index with terrorism and corporate manslaughter cases removed.

³⁸ However, it is worth noting that capital punishment was suspended for murder in 1965 and abolished completely in 1969.

multiplier effect is required. For that, the literature review has suggested perhaps three, not necessarily mutually exclusive, candidates:

- One explanation, supported by authors like Manuel Eisner and Stephen Pinker, is a cultural shift from Victorian restraint to 1960s hedonism, including higher levels of alcohol and drug use; a trend that may have partially reversed in the 1990s as epidemics in AIDs and heroin use brought self-restraint back in fashion again (Pinker, 2011; Eisner 2014).
- Another possible explanation relates to the large shifts in societal levels of risk factors. Evidence suggests with variable certainty that between 1945 and 1970 there were higher levels of fertility and family size rates, births to teenage mothers and authoritarian parenting; atmospheric lead levels; and possibly domestic and sexual abuse, including against children. It is certain these factors reduced sharply after 1970 in England and Wales and in many other developed nations.
- Finally, it is important to acknowledge the possibility that the long wave was not a single factor that surged and receded but two separate effects – one pushing upwards in the 1960s and another pushing downwards from the 1990s. Chief candidates for the upward pressure might be:
 - the expansion of the illicit drugs market which pushed the retail end of that market away from organised crime to more volatile street gangs and the ‘code of the street’ that generated³⁹
 - increased opportunity for homicide caused by more people spending longer outside the home (Cohen and Felson, 1979)

For the downward pressure, higher police numbers and incarceration rates along with more evidence-based policing tactics have been suggested by many (Zimring, 2006; Levitt, 2004).

Evidence is mixed for the three different theories, for different reasons. Cultural change is notoriously difficult to measure, though Eisner has demonstrated correlations with some survey data on self-control and on the use of certain key words (Eisner, 2014). Currently though, this evidence is probably best viewed as suggestive rather than conclusive.

Explaining the long wave via separate upward and downward impacts arguably requires double the evidence. The rise and fall must be explained separately, which is challenging. Take, for example, the theory that homicide increased in the 1960s due to changes in routine activities, leading more people to be outside the home and hence vulnerable to attack (Cohen and Felson, 1979). The assembled evidence for that theory seems plausible for the rise in homicide through the 1960s and 1970s. However, these routine activities continued to increase in the 1990s and 2000s. Supporters of the routine activity theory must therefore recruit a new downward pressure, like the move from external to online socialising among young people that over-rides the original trend (Aebi and Linde, 2014). Evidence for the latter

³⁹ In the England and Wales context there are two additional points that bolster this theory. One is that the end of the so-called ‘British System’ of heroin prescription began in 1964 in line with the start of the surge in homicide. Secondly, research on the history of the UK’s illicit drugs market generally shows that a sea-change occurred in the 1980s when supply activity became more serious, more linked to street-gangs and organised crime, and more violent (Dorn *et al.*, 2002). This coincides with the point in England and Wales trends when homicide became increasingly dominated by male-on-male killings.

is partial at best and doesn't really fit with the latest increase that clearly involves homicides between young social acquaintances.

The explanation relating to illicit drug markets and street gangs is arguably slightly less susceptible to this critique given the evidence that for at least some types of drug there has been a long-term rise and then fall in use. It would also fit with another unexplained long wave in homicide trends: the US bulge in homicide during the 1920s and 1930s which was not seen in other nations, but which coincided with the creation of an illegal alcohol market due to prohibition. However, this theory has other problems. The violence associated with illicit drugs fits with a rise in robbery homicides and through that to an increase in homicides against different ages and sexes. But can the drugs market really be held responsible for the bulge in sexually-motivated killings in England and Wales (see Annex 1) and in the US (Jenkins, 1992); or for the rise and fall in homicides involving mental illness (Annex 8); or homicides involving 1-14 year-old victims (Annex 1); or for the wave of serial killers in the US (Vronsky 2018)?

Likewise, those who link the waning of the long wave (also known as the crime drop) to CJS indicators, must admit that crime increased alongside numbers of police through the 1960s and 1970s in England and Wales. Furthermore, there are also instances of places that achieved the downturn without parts of the criminal justice response. Canada's homicide reduction was not accompanied by higher incarceration rates or large changes in policing practice (Ouimet, 2004). Even in the US, policing activity varied across states in the 1990s, including in relation to evidence-based policing strategies, yet the decline was common to almost all areas (Zimring, 2006).

Of the three explanations, the general surge and then reduction in risk factors has perhaps received the least attention in homicide research. Authors have tended to focus on one particular factor, like teenage pregnancy, lead exposure or the fertility patterns generated by abortion legislation, with mixed results (Donohue and Levitt, 2001; Nevin, 2006; Hunt, 2006). This is perhaps surprising given that the more general clustering of risk factors can be demonstrated with reliable data (see Annex on character as a driver of homicide) and there is well-established literature demonstrating that the more risk factors an individual suffers, the more likely they are to become involved in crime and violence (for example Farrington *et al.*, 2012). Furthermore, a risk factor explanation would be consistent with a long-wave pattern given that individuals would carry their higher rates of homicide with them through their teens, 20s and 30s, and then rates would reduce as those cohorts reached the age at which homicide rates decline. There is also evidence that many of these risk factors increased and then decreased across multiple nations (for example Nevin, 2007; Teitler, 2002). Coontz (2016) notes an almost identical pattern of family-related risk factors in the US, including sudden increases in teenage pregnancy and declines in the age of marriage in the post WW2 period. Importantly, she also notes that these changes reversed trends that had moved in the opposite direction for one hundred years prior to that. This correlates exactly with the long-term decline in homicide documented by Eisner from 1860 to 1960 (*ibid.* p25).

It therefore seems prudent to ask *why* these risk factors suddenly surged internationally. The studies in this report have outlined several, possibly inter-linked explanations:

- **Technology and pollutant levels.** If early-years lead exposure is the most important risk factor, then the long wave was likely driven by technological advances, particularly the

mass-marketisation of cars and leaded petrol.

- **A post-war crisis in fatherhood.** Peter Vronsky (2018) notes the bulge in serial killers active in the 1970s and 1980s who were born during the decades immediately after WW2. To explain this, he develops a theory involving fathers returning from combat who are likely to have witnessed and experienced extreme forms of violence, including sexual violence. Vronsky raises the possibility that some may have carried this trauma back with them into the home where it affected the development of children. In some cases, this may have resulted in a distant or absent father. For others, it may have taken a more abusive turn. Vronsky's theory is made in reference to serial killing only, but if he is right it seems plausible that it could have affected risky and criminal behaviour more generally. Studies show that traumatic events can lead to the adoption of a 'faster life-course' strategy involving higher rates of fertility with lower levels of parental investment in each child (Wilson and Daly, 1997).
- **The status of women.** Many of the risk factors involve fertility patterns. Development studies are clear that the status of women is a key driver of such patterns. When women's status improves, mothers choose to have fewer children, to have them later and to adopt less authoritarian parenting techniques (Jejeebhoy, 1995; Presser & Sen, 2000). Following the initial breakthroughs of the first half of the 20th century, it is generally accepted that the women's movement took a backwards step in the post-WW2 period. Feminist historians Leila J. Rupp and Verta Taylor described the period 1945 to 1960 as 'the doldrums' in their 1987 book (Rupp and Taylor, 1987).⁴⁰ Likewise, the sharp downward trend in many risk factors coincided with another step forward in the women's movement in the 1970s which brought changes in abortion and divorce laws among other things. It is also striking that Japan was alone in developed nations studied in this report in having no sustained baby boom and no teenage pregnancy bulge, as well as no long wave of homicide.

It is also possible that the risk factor explanation, the drugs explanation and the cultural explanation are part of the same story. Did the unique and rebellious culture of the 1960s arise spontaneously out of political events, the birth of celebrity and technological advances; or was it carried on a wave of people's characteristics? Pinker notes that the cohort born shortly after WW2 seem particularly susceptible to substance abuse, such that while they featured prominently as young people in the US heroin epidemic of the 1970s, they still feature as 40- to 60-year-olds in the opioid epidemic of the 2000s (Pinker, 2018). This may be because the advent of illicit drugs as a mass-market phenomenon coincided with this cohort's formative years, when people were not aware of the adverse long-term effects. But there is another possible explanation. It is well established that illicit drug use is more prevalent in those with childhood trauma and clusters of risk factors of the kind surged on the eve of the long wave (Butt *et al.*, 2011; Hayatbakhsh *et al.*, 2008). It therefore seems possible that the risk factors helped generate the culture rather than the other way around. Perhaps this also explains the strong relationship between homicide and divorce rates that existed for much of the 20th century. Research shows that many of the risk factors that predict crime also predict higher rates of divorce (Teachman, 2002; Yousefi *et al.*, 2010).

⁴⁰ For an England and Wales perspective, see Chiripanhura and Wolf (2019). They note that at the peak of WW2, up to 90% of single women aged 18 to 40 years were engaged in national service activities. But that after the war: "*explicit rules and social norms meant that women faced limited opportunities to work, and where work was available it was often less well paid*".

The main challenge to the risk factor explanation comes from studies that have tested for the presence of a cohort effect. If the long wave is to be explained by a societal-level surge and then reduction in risk factors, this should be detectable within homicide age patterns as the higher-risk cohorts (born between 1945 and 1970) carry higher rates of homicide with them throughout their life-spans. The absence of a cohort effect might lend more support to other hypotheses. Cultural change and routine activities would arguably be more likely to affect individuals of all ages at the same time – a period effect.

This cohort question is far from settled. While a slight majority of the reviewed studies did find a cohort effect on homicide, the impact seems stronger for types of crime other than homicide and for other types of risky behaviour like suicide and illicit drug use (Gunnell *et al.*, 2003; Pinker, 2018). Many have examined the age trends for homicide in the US and concluded that any cohort effect is minimal and was particularly non-existent between 1985 and 2000 (Cook and Laub, 2002). The evidence is also unclear for England and Wales. One study found tentative evidence for a cohort effect in homicide data but concluded that the high-risk cohort was born from 1970 to 1980, which is inconsistent with the risk factor explanation as risk began to fall from 1970 (Dorling, 2006). Other studies have found results more in keeping with the risk factors theory, but for crime more generally, rather than specifically homicide (Kim *et al.*, 2016; Porter *et al.*, 2016; Prime *et al.*, 2001; Francis *et al.*, 2004; Farrell *et al.*, 2015; Matthews and Minton, 2018). Part of the issue is likely to be the difficulty of separating long-wave effects from powerful short waves, to which we will shortly turn.

Overall, the key driver(s) of the long wave remains uncertain despite a number of strong candidates. Arguably, we are in a better position to pin down the causes of the short waves, which – in the absence of another long wave – have come to increasingly dominate trends in England and Wales. But this raises a final point. The presence of a long wave should not imply a cycle. It is imperative the wave is better understood, so as to prevent a similar surge in the future.

9.2.2 The short waves

The data presented in this report point to the presence of short homicide waves as well as more long-term drivers. The difficulty in unpicking the two is undoubtedly one of the reasons why trends in homicide, and crime generally, have been so hard to explain.

For the short waves, perhaps the three most likely (and not mutually exclusive) explanations suggested by this report are:

- fluctuations in illicit drugs markets
- conflicts between street gangs or organised crime groups
- crises in the legitimacy of policing or trust in the state generally

Evidence is arguably strongest for the first of these. There are clear examples of localised surges in homicide in which the data point to the involvement of illicit drug markets. Examples include:

- the spike in homicides in Miami in 1980, which occurred during a war to control a crucial cocaine entry point into the US (Wilbanks, 1984)

- the homicide spikes in cities across the US in line with the crack epidemic from 1985 to 1993 (Blumstein 1995; Blumstein and Rosenfeld, 1998)
- the surge in Mexican homicide in 2006 that coincided with a robust enforcement effort to disrupt drug markets (Rios, 2013; Phillips, 2015)
- the last two homicide surges in England and Wales (which are explored in more detail below)

That is not to say other factors were not also implicated in each of these cases, but drugs do seem to be common denominator.

In his careful study of age patterns in US homicide trends, Latzer (2016) notes that within the complex interplay of age, period and cohort effects, one clear finding is that some cohorts have extremely high rates of homicide during their youth but do not carry these higher rates with them through to older ages. The cohort born between 1970 and 1980 in the US and England and Wales is the clearest example. One explanation for this would be that every so often, changes in drug demand create a sudden influx of young drug sellers into the market and hence into involvement in a system in which violence is somewhat normalised. In this way, a long wave of illicit drug use can give rise to short waves of violence among young sellers as a new drug comes onto the market, or a new supply route opens or a shift in conditions drives more individuals into use. More sellers are recruited into street gangs and drug-selling groups during these periods and competition/antagonism between them drives violence. Evidence would suggest that this antagonism will often have nothing to do with drugs, yet the reason they have a weapon and are willing to resort to violence so quickly may do.

Note also the subtle difference between this short-wave explanation and the long-wave risk factor theory espoused earlier. In normal circumstances, only a tiny fraction of the population becomes involved in a homicide. A societal bulge in risk factors would arguably increase that tiny fraction slightly and provide a slightly higher risk to a slightly bigger number of people throughout their lives. Risk factors are also important during moments of drug market destabilisation. Evidence is clear that those who are most vulnerable are likely to be those recruited into street gangs and drug selling when the moment arises. Importantly though, this occurs irrespective of the general societal level of risk. So, during periods of drug market destabilisation, what might increase is not the number of individuals with an extreme level of risk, but the pool of individuals at the high end of the risk spectrum who are likely to be involved in a homicide.

Evidence is weaker for the gang/organised crime conflict theory, but largely this is due to a lack of data on these 'beefs' and their timings. This therefore warrants further investigation. There is also the obvious possibility of an overlap with the drugs explanation outlined above. It seems plausible that moments of destabilisation within illicit markets may just as easily be caused by some casual insult that sparks a war between groups as by a surge in demand or supply.

The evidence gathered in this review was also less supportive of the final theory, the mistrust in institutions, which some researchers might also argue is a candidate for the long wave (LaFree, 1998; Roth, 2009). The most robust studies found little evidence of this effect (Baumer and Wolff, 2014). However, there are instances in which the correlation is hard to ignore, particularly the homicide spike in Russia and other Eastern European nations in the early 1990s following the collapse of communism; and also in the US more recently following the protests against police shootings – the so-called 'Ferguson effect'.

Can this short-wave analysis help explain the recent homicide surges in England and Wales? For the peak in the early 2000s, there are several factors that are consistent with an explanation linked to destabilisation in drug markets and antagonism between gang/organised crime groups. The surge was propelled by male-on-male violence using knives and – unlike in the recent rise – guns. The number of cases in which no suspect could be identified also increased.

As with the long wave, it is hard to blame economic factors or the CJS for the early 2000s peak. This was not a period of austerity – in fact the nation was in the middle of a long period of prosperity – and police numbers were higher than they'd ever been and still rising. Social media, which has been much implicated in the recent homicide rise, was only in its infancy. It was, however, a period in which crack-cocaine use was increasing. Many findings in this report have under-scored the general criminological principle that a few highly prolific and motivated offenders can be responsible for an inordinate amount of societal damage. The data show that aside from those born in the British Isles, individuals born in Jamaica have committed most homicides in England and Wales over the last 20 years and that this was a factor in the homicide surge in the early 2000s. But careful analysis also shows that this has little to do with Jamaicans per se and is likely to be more about a particular cohort of individuals who were trained in street-level weapons combat as part of a political battle in Jamaica in the 1970s (Gunst, 1995; Small, 1995). This same group then migrated to the US in the 1980s where they became embroiled in the wars for control of crack-cocaine markets and committed many homicides (Small, 1995). Forced out of the US by higher enforcement, a small number then came to the UK and, perhaps, brought the same crack-related violence with them (Silverman, 1994). This may have spread to other groups as local drug-selling gangs were forced to become more violent to compete.

At present, this explanation remains a hypothesis rather than a certainty. Some crack-related competition has been linked to homicides and destabilisation of markets in locally-specific reports, particularly Gavin Hales's examination of gun violence in Brent in the early 2000s (Hales, forthcoming) and the Lupton *et al.* (2002) study of eight local drug markets in the UK. But there was no systematic national dataset in which drug-related (let alone crack-related) homicides were captured at that point. Arguably the plausibility of this explanation has increased given the evidence for the homicide increase since 2014. The recent rise in homicide has again correlated with a rise in crack use according to a number of indicators. Furthermore, with the arrival of a (admittedly imperfect) data series for alcohol and drug-related homicides from the year ending March 2008, there is good evidence that drug-related homicides played an important role in driving the rise from the years ending March 2014 to 2018.

This explanation may also help to explain the correlation between homicide trends and robbery trends that is particularly strong in England and Wales and the US. Soothill *et al.*, (2002) have noted that a prior robbery conviction was a:

"...significant risk factor that doubled the risk of a subsequent conviction for murder of a male stranger and trebled the risk of an acquaintance murder."

Supporters of the 'trust in institutions' theory might point to the fact that the rise from 2014 has more or less coincided with the volatile period of Brexit politics. But there has been no comparable 'Ferguson effect' in the UK. The Crime Survey shows that the proportion of those who believe the police are doing a good/excellent job stayed constant at just above 60% from

the years ending March 2012 to 2018.⁴¹ Arguably then, the drugs explanation has the strongest supporting evidence. The exact trigger remains uncertain though. Was the de-stabilising factor a glut in supply? Global production of cocaine increased by 113% from 2013 to 2017⁴² and this was reflected in a doubling of crack-cocaine purity on the streets of England and Wales between 2013 and 2017. Or was it caused by changes in demand? Numbers of crack/heroin users in major cities (London, Birmingham, Liverpool and Manchester) fell 29% between years ending March 2007 and 2014, while numbers in the rest of the country increased by 0.2% (PHE, 2019). Did that push city dealers out to other areas to seek new markets (in what has become known as County Lines) and did that increase violence? It is certainly the case that the rising supply and County Lines distribution are increasing demand again. Numbers of crack/heroin users increased by 4% from years ending March 2015 to 2017 (O'Connor, 2019).

9.3. Policy implications

What does this tangled web of trends and their possible causes imply for policy and future research? This final section attempts to answer that question. First though, a caveat. This study was aimed at explaining trends rather than looking systematically at what works. So these conclusions should be treated tentatively and supplemented with other evidence.

The first point to make is that it is vital to think clearly and scientifically about homicide. The current level in England and Wales demands attention. Homicide is at a higher rate than it was for most of the 20th century. In that sense we have gone backwards, and it is imperative to understand why in order to implement the policies that could bring us back to a level of homicide already achieved in the 1950s and which has been maintained in some parts of the world today, notably in Japan, Singapore and South Korea, and which is being approached by nations like Australia, where homicides between young men have reduced sharply. Equally, the current rate does not warrant a sense of panic. England and Wales is still well below the global average and, in a historical sense, the recent rise in homicide is a blip in the long-term downward trend.

The second policy implication is the need to match activity to the short- and long-term factors drawn out above. Starting with the long wave, the evidence in this report showed that it seems to have affected all types of individual and all types of homicide *as well as* other types of violence, crime and risky behaviour more generally. It is therefore vital to develop strategies to ensure it does not happen again. In the absence of a concrete explanation for why it was triggered, the most obvious policy direction – which would fit with Eisner's dichotomy mentioned earlier – is to focus on gradually reducing the numbers of individuals who suffer multiple risk factors at an early age.

Early intervention was a central plank of the Serious Violence Strategy in England and Wales and is gaining traction as a policy response to violence in many nations. The evidence gathered here suggests that is the right approach, but that it perhaps needs to go further and

⁴¹ See:

<https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/crimeinenglandandwalesannualsupplementarytables> [accessed 17/01/2020]

⁴² UNODC World Drug Report, 2019. Available at:

https://wdr.unodc.org/wdr2019/prelaunch/WDR19_Booklet_1_EXECUTIVE_SUMMARY.pdf [accessed 17/01/2020]

be better directed at the individuals who need it most. Most practitioners are aware that reducing deprivation, domestic abuse and parental substance abuse are key targets. But what about head injury, self-restraint, blood-lead levels, and a belief in honour or the justification of violence in certain circumstances? Some of these things are less well understood and may also be harder to measure or influence. An additional issue is that it is still not clear which factors to prioritise. At this stage we are not in a position to say whether homicide would be reduced more by: trying to decrease poverty in the most deprived areas; trying to offer more parenting and social support; implementing education policies aimed at instilling self-restraint and a clear belief in the 'wrongness' of violence; or even by reducing exposure to lead in the atmosphere. Yet we are entering an era in which many believe these questions *can* start to be answered due in part to the development of more sophisticated techniques⁴³ and in part due to improved data. There is probably, therefore, the need for a public debate around the costs and benefits of linking government datasets in such a way as to better measure the importance of factors leading to victimisation and perpetration (which often overlap) for serious crimes like homicide. This has already been achieved in countries like Denmark and New Zealand. England and Wales might look to follow.⁴⁴

Other long-term drivers of homicide imply slightly different policy approaches. Some of the most striking findings in this report have been those relating to persistently high or low homicide rates within certain areas, cultures and groups that nevertheless respond to trends in the same way as lower homicide areas or groups. Just as it is vital to understand trends, it is also vital to understand why these differences in levels arise. Black rates of homicide were lower than White rates in the US in the 18th century. Yet now they are persistently higher, as they are in England and Wales. Given this, Latzer (2016) is surely right that understanding the historical sequence of events that led to that change is the most socially beneficial approach, for all ethnic groups. At the other end of the scale, the raw data would suggest that England and Wales has much to learn from countries like Japan, particularly for preventing homicides between young men. Perhaps we need to consider risk and protective factors for places and cultures as much as for individuals. The common retort that Asian cultures are just too different for us to learn from seems self-defeating. In the 1950s, Japan had a high homicide rate and it was dominated by homicides between young men (Hasegawa, 2005), just as in England and Wales now.

Linked to this, there was persuasive (if not conclusive) evidence that higher homicide rates persist among people and cultures in which violence is deemed acceptable in certain contexts, especially when an individual has their honour challenged or is publicly disrespected, to give the same notion a more modern slant. These value systems, though persistent, can be changed. Authors like Pieter Spierenburg have shown persuasively that they have been slowly rejected over time, but policy-makers should perhaps consider ways to speed this process up (Spierenburg and Spierenburg, 2008). Making sure that anti-violent norms are a formal element of the educational curriculum may be one method worth testing.

Another consistently cited long-term downward pressure on homicide has been the reach of the rule of law. Historically, nations and regions consistently gained lower homicide rates once justice systems were established and citizens handed retribution over to the state rather than

⁴³ See for example, Pearl, J. & Mackenzie, D. (2018) *The book of why: the new science of cause and effect*. Basic Books.

⁴⁴ Some work is already underway in this direction; for example, MOJ and DFE are bringing together education data and offending data with the aim of better identifying risk factors and better evaluating prevention interventions.

pursuing self-help justice (Pinker, 2011). A key finding from this report is that this process may not be quite finished. Evidence is clear that homicide is most prevalent in the most troubled estates within the most deprived areas and also within illicit markets, where the rule of law is fragile and often replaced by an alternative moral code, the 'code of the street' as Elijah Anderson (2000) has labelled it. Under this code, the CJS is seen as the enemy, not a legitimate authority for righting wrongs. All evidence suggests that changing this could have a significant downward impact on homicide rates.

What about tackling the short waves? As important and socially beneficial as early intervention and extending the rule of law may be, these are not things that change quickly. So other strategies are also needed. As many researchers have noted, some spikes in homicide simply flare up too quickly to be explained by changes in risk factors or belief systems (LaFree, 1998). Policies are needed to prevent or suppress these sharp surges and all the pain and societal damage that come with them. In this vein, perhaps the most important policy question raised by this report is: given that legal retribution cannot be extended to illicit drug markets, how do we nevertheless make them generate less violence?

Hot-spot policing and problem-solving approaches like focused deterrence are no doubt part of the solution (see Braga *et al.*, 2014; Braga *et al.*, 2018). But it is also important to acknowledge their limitations. The resource for such concentrated activity is hard to maintain; one attempt at focused deterrence failed to have an effect in London (Davies *et al.*, 2016). Evidence therefore suggests the need for more experimentation and testing of new enforcement approaches to reduce drug market and County Lines violence. To facilitate this, what seems to be needed is a more systematic and data-driven understanding of the nexus of gangs, organised crime groups, drug markets, their enforcement and serious violence offences. This requires better linkage of crime data to more qualitative, local intelligence on drug markets, street gangs and organised crime, and to find a method of making the latter more systematic for that purpose. For example, we need to start testing whether a shift in the control of a particular drugs market in a particular area tends to increase or decrease serious violence. And similarly, we need to start testing the extent to which the start of a new conflict between street gangs drives up violence in the areas in which they operate.

In addition, drug markets should not only be tackled from the enforcement side, given the evidence that crackdowns are just as likely to increase violence as they are to achieve a (temporary) reduction in it (Cheatwood, 1995; Rios, 2012). Stronger support exists for treatment and demand reduction. In addition, research by ethnographers like Anthony Gunther and Lisa McKenzie (2015) suggest that part of the reason youths in deprived areas get involved with criminal activity like drug dealing is because it is "*seductive, humdrum and functional*" (Gunther, 2010, p.93). In other words, it provides income and a source of excitement but is also seen as largely normal by those who have grown up in areas where drug markets have always operated during their lifetimes. Identifying these individuals and making it easier for them to access the benefits and employment opportunities they are entitled to would probably therefore be beneficial,⁴⁵ as would alternative activities like drama, music and sport. However, at the moment these approaches have not been well tested in England and Wales, so it is not clear how well

⁴⁵ For a particular vivid example of this, see Sergeant (2012).

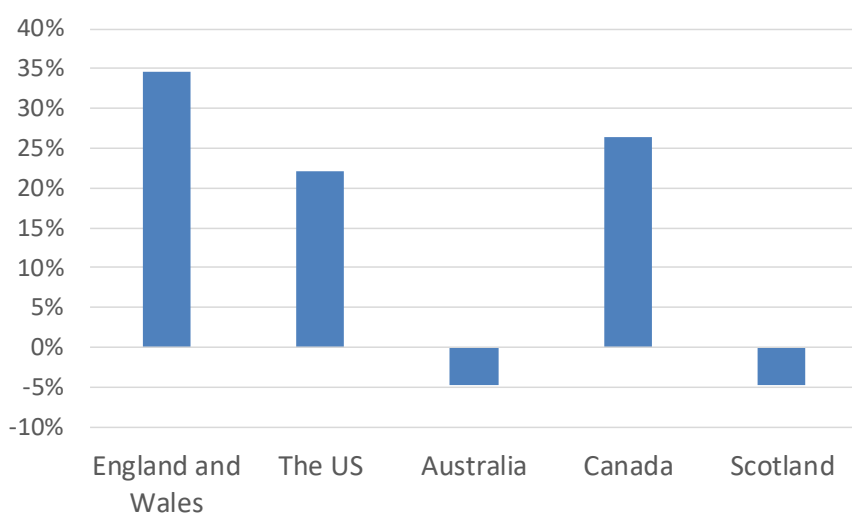
they work or, crucially, whether they really reach the right people. Using data on institutions that work with the most vulnerable, like care homes and pupil referral units, would likely help.

These policy conclusions reflect the fact that, generally speaking, it makes sense for the treatment to match the diagnosis. But this should not rule out other interventions if they are proven to be effective. For example, data suggest that alcohol-related homicides have not risen in England and Wales since 2014. They are not a driver of the trend, yet they still make up about a third of homicides. So a policy that reduced alcohol-related homicides could still play a part in reversing the upward trend. Studies are clear that – all else being equal – reducing the levels of hazardous drinking (both binge drinking and dependency) is likely to put downward pressure on homicide rates (Parker *et al.*, 2011; Norström, 2011; Rossow, 2001).

9.4. Suggestions for further research

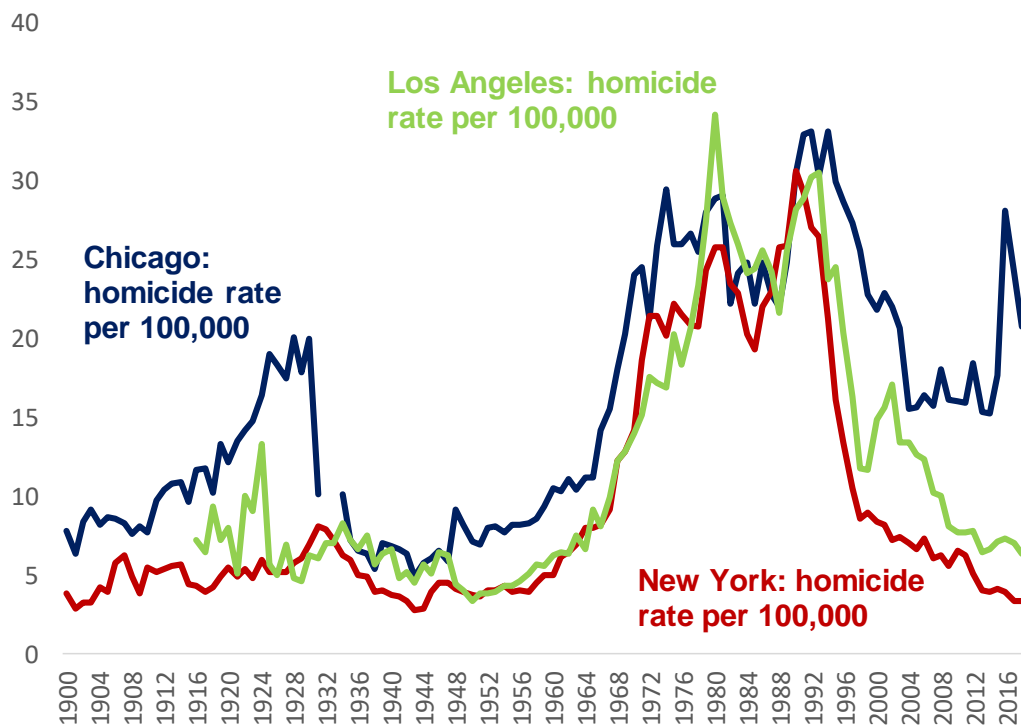
Research can also play a role in honing the policy approaches. There is still much to learn and variation in short-wave patterns seems a fruitful place to start. Just as there is probably much to learn from Japan and other South East Asian countries in terms of avoiding the long wave, there are many more examples of short-wave variation from which we can perhaps extract useful knowledge.

Figure 27: Homicide volume changes from 2014 to 2017 in selected countries



Sources: Home Office HI; FBI UCR data; Statistics Canada; Victims of crime Australia (excluding attempted murder victims); Scottish Government: Homicide in Scotland 2017-2018: statistics

Figure 28: Long-term homicide trends in three US cities⁴⁶



Source: Data supplied by Jens Ludwig and Max Kapustin from the Chicago Crime Data Lab, University of Chicago.

For example, what are the protective factors that have prevented Australia and Scotland from suffering the same recent rise in homicide as England and Wales, the US and Canada? And what are the protective factors that New York and Los Angeles have currently that Chicago does not? (See Figure 26 and Figure 27.) Understanding these seems very important given that, in the absence of another long wave, homicide trends seem to be increasingly driven by these short, sharp surges of male-driven homicide.

Other research projects suggested by this study include:

- Further work on the disparities in homicide rates by ethnicity; in particular, multi-variate analysis may help to untangle the reasons alongside deprivation.
- Although drug-related homicides have risen from years ending March 2015 to 2018, the definition used is broad; individual casefile analysis might help to determine which aspects of illicit drug use or market involvement really drive homicide trends.
- The 'risk factor' hypothesis could potentially be strengthened or disproven by age-period-cohort analysis of both homicide data and crime data more generally.
- Further work to confirm or deny links between gangs, organised crime and homicide trends; currently there is very little quantitative analysis in this area, both in England and Wales and other nations. The development of metrics to track these things would be particularly useful.
- Unpicking the paradox that homicide trends correlate strongly with homicide

⁴⁶ Note that the chart shows all three US cities following the same homicide trend during the long wave increase from the 1960s and the decrease in the 1990s. But Chicago has a different trend recently and during the prohibition era, another possible sign that illicit markets are key to understanding short waves.

geographically but not temporally (see Annex 8).

While this final section has aimed to offer some conclusions and recommendations, it is important to end it with a caveat and an invitation. By definition, reports like this have to simplify. A full reading of all the annexes will reveal exceptions and nuances to almost every finding mentioned here. Much further testing and verification is therefore required. One of the main aims for this study was to put more data and information on homicide into the public domain. We hope this will be useful in that testing and verification process, and we look forward to modifying and developing our conclusions as new insights emerge.

10. References

- Aebi, M. F. & Linde, A. (2014) 'The persistence of lifestyles: Rates and correlates of homicide in Western Europe from 1960 to 2010'. *European Journal of Criminology*, vol. 11(5), pp. 552-577.
- Amato, P. R. (2001). Children of divorce in the 1990s: an update of the Amato and Keith (1991) meta-analysis. *Journal of family psychology*, 15(3), 355.
- Anderson, E. (2000) *Code of the street: Decency, violence, and the moral life of the inner city*. WW Norton & Company.
- Anderson, P. & Baumberg, B. (2006) *Alcohol in Europe*. London: Institute of Alcohol Studies.
- Andresen, M. A. (2007) 'Homicide and medical science: Is there a relationship?' *Canadian Journal of Criminology and Criminal Justice*, vol. 49(2), pp. 185-204.
- Andresen, M. A. (2013) 'International immigration, internal migration, and homicide in Canadian provinces'. *International Journal of Offender Therapy and Comparative Criminology*, vol. 57(5), pp. 632-657.
- Bandura, A. (1978) 'Social learning theory of aggression'. *Journal of Communication*, vol. 28(3), pp. 12-29.
- Baumer, E. P. (2008) 'An empirical assessment of the contemporary crime trends puzzle: A modest step toward a more comprehensive research agenda', in *Understanding crime trends: Workshop report* (pp. 127-176). Natl Academy Pr.
- Baumer, E. P. & Wolff, K. T. (2014) 'The breadth and causes of contemporary cross-national homicide trends'. *Crime and Justice*, vol. 43(1), pp. 231-287.
- Beaulieu, M. & Messner, S. F. (2009) *Assessing changes in the effect of divorce rates on homicide rates across large US cities, 1960-2000: Revisiting the Chicago school*. Homicide Studies.
- Blessing, C. & Wolf, N. (2019) *Long-term trends in UK employment: 1861 to 2018*. Office for National Statistics, 2019.
- Blumstein, A. (1995a) 'Youth violence, guns, and the illicit-drug industry'. *Journal of Criminal Law and Criminology*, vol. 86(1), p. 10.
- Blumstein, A. (1995b) 'Violence by young people: Why the deadly nexus'. *National Institute of Justice Journal*, vol. 229(August,), pp. 2-9.
- Blumstein, A. & Rosenfeld, R. (1998) *Explaining Recent Trends in US Homicide Rates*.

- Braga, A. A. & Weisburd, D. L. (2012) 'The effects of focused deterrence strategies on crime: A systematic review and meta-analysis of the empirical evidence'. *Journal of Research in Crime and Delinquency*, vol. 49(3), pp. 323-358.
- Braga, A. A., Papachristos, A. V. & Hureau, D. M. (2014) 'The effects of hot spots policing on crime: An updated systematic review and meta-analysis'. *Justice Quarterly*, vol. 1(4), pp. 633-663.
- Braga, A. A., Weisburd, D. & Turchan, B. (2018) 'Focused deterrence strategies and crime control: An updated systematic review and meta-analysis of the empirical evidence'. *Criminology & Public Policy*, vol. 17(1), pp. 205-250.
- Brookman, F. (2005) *Understanding homicide*. Sage.
- Bullock, K. & Tilley, N. (2008) 'Understanding and tackling gang violence'. *Crime Prevention & Community Safety*, vol. 10(1), pp. 36-47.
- Butt, S., Chou, S. & Browne, K. (2011) 'A rapid systematic review on the association between childhood physical and sexual abuse and illicit drug use among males'. *Child Abuse Review*, vol. 20 (2011), pp. 6-38.
- Bye, E. K. (2012) 'Alcohol and homicide in Europe', in *Handbook of European Homicide Research*, pp. 231-245. Springer New York.
- Cheatwood, D. (1995) 'Drug policy as a cause of violence: The drug war in America and implications for Europe'. *European Journal for Crime, Criminal Law and Criminal Justice*, vol. 3, p. 54.
- Cohen, J. & Tita, G. (1999) 'Diffusion in homicide: Exploring a general method for detecting spatial diffusion processes'. *Journal of Quantitative Criminology*, vol. 15(4), pp. 451-493.
- Cohen, L. E. & Felson, M. (1979) 'Social change and crime rate trends: A routine activity approach'. *American Sociological Review*, pp. 588-608.
- Collishaw, S., Gardner, F., Maughan, B., Scott, J. & Pickles, A. (2012) 'Do Historical Changes in Parent-Child Relationships Explain Increases in Youth Conduct Problems?' *Journal of Abnormal Child Psychology* vol. 40(1), pp. 119–32.
- Cook, P. J. & Laub, J. H. (2002) 'After the epidemic: Recent trends in youth violence in the United States'. *Crime and Justice*, vol. 29, pp. 1-37.
- Cragg, A. (2003) *Crack Cocaine in London*, COI and Home Office. Available at: <http://www.canadianharmreduction.com/readmore/crack+cocaine+in+London.pdf>
- Davies *et al.*, (2016) *Group Violence Intervention London: An Evaluation of the Shield Pilot*. MOPAC, 2016.
- Donohue III, J. J. & Levitt, S. D. (2001) 'The impact of legalized abortion on crime'. *The Quarterly Journal of Economics*, vol. 116(2), pp. 379-420.
- Dorling, D. (2006) 'Murder in Britain'. *Prison Service Journal*, vol. 166, pp. 3.
- Dorn, N., Murji, K. & South, N. (2002) *Traffickers: Drug markets and law enforcement*. Routledge.

- Easterlin, R. A. & Schapiro, M. O. (1979) 'Homicide and fertility rates in the United States: a comment'. *Social Biology*, vol. 26(4), pp. 341-343.
- Eisner, M. (2001) 'Modernization, self-control and lethal violence. The long-term dynamics of European homicide rates in theoretical perspective'. *British Journal of Criminology*, vol. 41(4), pp. 618-638.
- Eisner, M. (2008) 'Modernity strikes back? A historical perspective on the latest increase in interpersonal violence (1960–1990)'. *International Journal of Conflict and Violence (IJCV)*, vol. 2(2), pp. 288-316.
- Eisner, M. (2013) 'What causes large-scale variation in homicide rates?' *Aggression in Humans and Other Primates: Biology, Psychology, Sociology*, pp. 137-63.
- Eisner, M. (2014) 'From swords to words: Does macro-level change in self-control predict long-term variation in levels of homicide?' *Crime and Justice*, vol. 43(1), pp. 65-134.
- Elias, N. (2000) *The Civilising Process*. Blackwell: London.
- Fagan, J. (2002) 'Policing guns and youth violence'. *The Future of Children*, vol. 12, pp. 133-151.
- Farrell, G., Laycock, G., & Tilley, N. (2015). Debuts and legacies: The crime drop and the role of adolescence-limited and persistent offending. *Crime Science*, 4(1), 1-10.
- Farrell, G., Tilley, N., Tseloni, A. & Mailley, J. (2011) 'The crime drop and the security hypothesis'. *Journal of Research in Crime and Delinquency*, ISBN: 0022427810391539.
- Farrington, D. P., Loeber, R. & Berg, M. T. (2012) 'Young Men Who Kill: A Prospective Longitudinal Examination from Childhood'. *Homicide Studies*, vol. 16(2), pp. 99-128.
- Francis, B.J., Soothill, K.L. & Ackerley, E. (2004) 'Multiple Cohort Data, Delinquent Generations, and Criminal Careers'. *Journal of Contemporary Criminal Justice*, vol. 20(2), pp. 103-126.
- François, A., Magni-Berton, R. & Weill, L. (2014) 'Abortion and crime: Cross-country evidence from Europe'. *International Review of Law and Economics*, vol. 40, pp. 24-35.
- Fryer, R., Heaton, P, Levitt, S. & Murphy, K. (2005) *Measuring the impact of crack cocaine* (No. w11318). National Bureau of Economic Research.
- Garius, L. L. (2016) *Opportunities for physical assault in the night-time economy in England and Wales, 1981-2011/12* (Doctoral dissertation, Loughborough University).
- Gerritzen, B. & Kirchgässner, G. (2013) 'Facts or ideology: What determines the results of econometric estimates of the deterrence effect of death penalty? A meta-analysis'. *Open Journal of Social Sciences*, vol. 04(6).
- Gibson, E., and Klein A. (1969) *Murder: 1957 to 1968. A Home Office Statistical Division Report on Murder in England and Wales*. London, 1969.
- Goldstein, P. J. (1985) 'The drugs/violence nexus: A tripartite conceptual framework'. *Journal of Drug Issues*, vol. 15(4), pp. 493-506.
- Gottfredson, M. R. & Hirschi, T. (1990) *A general theory of crime*. Stanford University Press.

- Gunnell, D., Middleton, N., Whitley, E., Dorling, D. & Frankel, S. (2003) 'Influence of cohort effects on patterns of suicide in England and Wales, 1950–1999'. *The British Journal of Psychiatry*, vol. 182(2), pp. 164-170.
- Hagedorn, J. M. (2015) *The insane Chicago way: The daring plan by Chicago gangs to create a Spanish mafia*. University of Chicago Press.
- Hales, G., Lewis, C. & Silverstone, D. (2006) *Gun crime: the market in and use of illegal firearms*. Home Office Research Study 298. Home Office, London.
- Hallworth, J. (2016) *County lines: an exploratory analysis of migrating drug gang offenders in North Essex*. Master's degree thesis, Selwyn College.
- Hayatbakhsh, M. R., Mamun, A. A., Najman, J. M., O'Callaghan, M. J., Bor, W. & Alati, R. (2008) 'Early childhood predictors of early substance use and substance use disorders: prospective study'. *Australian and New Zealand Journal of Psychiatry*, vol. 42(8), pp. 720-731.
- Heaton, P. (2010) *Hidden in plain sight*. RAND Corporation.
- Hepburn, L. M. & Hemenway, D. (2004) 'Firearm availability and homicide: A review of the literature'. *Aggression and Violent Behavior*, vol. 9(4), pp. 417-440.
- Hasegawa, M. (2005) 'Homicide by men in Japan, and its relationship to age, resources and risk taking'. *Evolution and Human Behavior*, vol. 26(4), pp. 332-343.
- Home Office (2016) *Modern Crime Prevention Strategy*, London 2016.
- Hopkins, M., Tilley, N. & Gibson, K. (2013) 'Homicide and organized crime in England'. *Homicide Studies*, vol. 17(3), pp. 291-313.
- Hunt, J. (2006) 'Do teen births keep American crime high?' *The Journal of Law and Economics*, vol. 49(2), pp. 533-566.
- Jones, A., Hayhurst, K.P., Jahr, S., White, M. & Millar, T. (Under review) *Estimates of the incidence of crack cocaine use among the treatment amenable population 2005-2018*.
- Jejeebhoy, S. J. (1995) *Women's Education, Autonomy, and Reproductive Behaviour: Experience from Developing Countries*. Oxford: Clarendon Press.
- Jenkins, P. (1992) 'A Murder "Wave"? Trends in American Serial Homicide 1940-1990'. *Criminal Justice Review*, vol. 17(1), pp. 1-19.
- Jolliffe, D. & Farrington, D. P. (2004) 'Empathy and offending: A systematic review and meta-analysis'. *Aggression and Violent Behavior*, vol. 9(5), pp. 441-476.
- Joyce, T. (2009) 'A simple test of abortion and crime'. *The Review of Economics and Statistics*, vol. 91(1), pp. 112-123.
- Kahane, L. H., Paton, D. & Simmons, R. (2008) 'The abortion–crime link: Evidence from England and Wales'. *Economica*, vol. 75(297), pp. 1-21.
- Kates, D. B. & Polsby, D. D. (2000) 'Long-term nonrelationship of widespread and increasing firearm availability to homicide in the United States'. *Homicide Studies*, vol. 4(2), pp. 185-201.

- Kim, J., Bushway, S., & Tsao, H. S. (2016). Identifying classes of explanations for crime drop: Period and cohort effects for New York State. *Journal of Quantitative Criminology*, 32(3), 357-375.
- Kubrin, C. E. & Herting, J. R. (2003) 'Neighborhood Correlates of Homicide Trends: An Analysis Using Growth-Curve Modeling'. *The Sociological Quarterly*, vol. 44(3), pp. 329-350.
- LaFree, G. (1998) *Losing legitimacy: Street crime and the decline of social institutions in America*. Boulder, CO: Westview Press.
- LaFree, G. (1999) 'Declining violent crime rates in the 1990s: Predicting crime booms and busts'. *Annual Review of Sociology*, vol. 25(1), pp. 145-168.
- Lane, R. (1997) *Murder in America: A history*. The Ohio State University Press.
- Lappi-Seppälä, T. & Lehti, M. (2014) 'Cross-comparative perspectives on global homicide trends'. *Crime and Justice*, vol. 43(1), pp. 135-230.
- Large, M., Smith, G., Swinson, N., Shaw, J. & Nielssen, O. (2008) 'Homicide due to mental disorder in England and Wales over 50 years'. *The British Journal of Psychiatry*, vol. 193(2), pp. 130-133.
- Lattimore, P. K. (1997) *Homicide in eight US cities: trends, context, and policy implications: an intramural research project*. US Dept. of Justice, Office of Justice Programs, National Institute of Justice.
- Latzer, B. (2016) *The rise and fall of violent crime in America*. Encounter Books.
- Levitt, S. D. (2002) 'Using electoral cycles in police hiring to estimate the effects of police on crime: Reply'. *The American Economic Review*, vol. 92(4), pp. 1244-1250.
- Levitt, S. D. (2004) 'Understanding why crime fell in the 1990s: Four factors that explain the decline and six that do not'. *Journal of Economic Perspectives*, vol. 18(1), pp. 163-190.
- Leyton, E. (2011) *Men of blood: Murder in everyday life*. McClelland & Stewart.
- Lloyd, C. (1998) 'Risk factors for problem drug use: identifying vulnerable groups'. *Drugs: Education, Prevention and Policy*, vol. 5(3), pp. 217-232.
- Lupton, R., Wilson, A., May, T., Warburton, H. & Turnbull, P. J. (2002) *A rock and a hard place: drug markets in deprived neighbourhoods*. Home Office Research Study 240. Home Office, London.
- Lyman, M. D. (1989) *Gangland: Drug Trafficking by Organized Criminals*. Charles C Thomas Pub. Ltd, Springfield, Illinois, USA.
- Machin, S. J. & Marie, O. (2005) 'Crime and police resources: the Street Crime Initiative'. *Journal of European Economic Association*, vol. 9(4), pp. 678-701.
- Martinez, R., Iwama, J. A. & Stowell, J. I. (2015) 'Race, immigration, and homicide in contemporary Europe and the United States: an urban comparison'. *Crime, Law and Social Change*, vol. 64(4-5), pp. 291-304.
- Matthews, B., & Minton, J. (2018). Rethinking one of criminology's 'brute facts': The age-crime curve and the crime drop in Scotland. *European journal of criminology*, 15(3), 296-320.

- McCall, P. L. & Brauer, J. R. (2014) 'Social welfare support and homicide: Longitudinal analyses of European countries from 1994 to 2010'. *Social Science Research*, vol. 48, pp. 90-107.
- McCall, P. L. & Land, K. C. (2004) 'Trends in environmental lead exposure and troubled youth, 1960–1995: an age-period-cohort-characteristic analysis'. *Social Science Research*, vol. 33(2), pp. 339-359.
- McCall, P. L., Land, K. C. & Parker, K. F. (2010) 'An empirical assessment of what we know about structural covariates of homicide rates: A return to a classic 20 years later'. *Homicide Studies*, vol. 14(3), pp. 219-243.
- McCall, P. L., Land, K. C. & Parker, K. F. (2011) 'Heterogeneity in the rise and decline of city-level homicide rates, 1976–2005: a latent trajectory analysis'. *Social Science Research*, vol. 40(1), pp. 363-378.
- McCall, P. L., Parker, K. F. & MacDonald, J. M. (2008) 'The dynamic relationship between homicide rates and social, economic, and political factors from 1970 to 2000'. *Social Science Research*, vol. 37(3), pp. 721-735.
- McKenzie, L. (2015) *Getting by: Estates, class and culture in austerity Britain*. Policy Press.
- Merriman, D. (1988) 'Homicide and deterrence: The Japanese case'. *International Journal of Offender Therapy and Comparative Criminology*, vol. 32(1), pp. 1-16.
- Messner, S., Pearson-Nelson, B., Raffalovich, L. & Miner, Z. (2011) 'Cross-National Homicide Trends in the Latter Decades of the Twentieth Century: Losses and Gains in Institutional Control?' In *Control of Violence: Historical and International Perspectives on Violence in Modern Societies*, edited by Wilhelm Heitmeyer, Heinz-Gerhard Haupt, Stefan Malthaner, and Andrea Kirschner. New York: Springer Science Business Media.
- Miles, C. (2012) 'Intoxication and homicide: A context-specific approach'. *The British Journal of Criminology*, vol. 52, pp. 870-888.
- Ministry of Justice and Department for Education (2016) *Understanding the educational background of young offenders*. London.
- Moffitt, T. E., Poulton, R. and Caspi, A. (2013) 'Lifelong Impact of Early Self-Control'. *American Scientist*, vol. 101(5).
- Morgan, N., Shaw, O., Feist, A. & Byron, C. (2016) *Reducing criminal opportunity: Vehicle security and vehicle crime*. Home Office.
- Muchembled, R. (2012) *Une histoire de la violence*. Le Seuil.
- National Crime Agency (2018) *County Lines Violence, Exploitation & Drug Supply 2017*.
- National Institute on Alcohol Abuse and Alcoholism (1997) *Alcohol Alert* No.38. Available at: <http://pubs.niaaa.nih.gov/publications/aa38.htm> Accessed on: 18/01/2020.
- Needleman, H. L. (2004) 'Low level lead exposure and the development of children'. *Southeast Asian Journal of Tropical Medicine and Public Health*, vol. 35, pp. 252-254.

- Needleman, H. L., Riess, J. A., Tobin, M. J., Biesecker, G. E. & Greenhouse, J. B. (1996) 'Bone lead levels and delinquent behavior'. *Jama*, vol. 275(5), pp. 363-369.
- Nevin, R. (2007) 'Understanding international crime trends: the legacy of preschool lead exposure'. *Environmental Research*, vol. 104(3), pp. 315-336.
- Norström, T. (2011) 'Alcohol and homicide in the United States – is the link dependent on wetness?' *Drug Alcohol Review*, vol. 30(5) pp. 458-465.
- O'Brien, R. M. & Stockard, J. (2009) 'Can cohort replacement explain changes in the relationship between age and homicide offending?' *Journal of Quantitative Criminology*, vol. 25(1), pp. 79.
- O'Connor, R., Public Health England (2019) *What the latest estimates on opiate and crack use tell us*. London, 2019.
- Ouimet, M. (2004) *Explaining the American and Canadian crime drop in the 1990s*. Champ pénal/Penal field, 1.
- Pampel, F. C. & Gartner, R. (1995) 'Age structure, socio-political institutions, and national homicide rates'. *European Sociological Review*, vol. 11(3), pp. 243-260.
- Parker, R. N., Williams, K. R., McCaffree, K. J., Acensio, E. K., Browne, A., Strom, K. J. & Barrick, K. (2011) 'Alcohol availability and youth homicide in the 91 largest US cities, 1984-2006'. *Drug and Alcohol Review*, vol. 30(5), pp. 505-514.
- Perry, D. K. (2007) 'Does television kill? Testing a period-characteristic model'. *Media Psychology*, vol. 9(3), pp. 567-594.
- Phillips, B. J. (2015) 'How does leadership decapitation affect violence? The case of drug trafficking organizations in Mexico'. *The Journal of Politics*, vol. 77(2), pp. 324-336.
- Pinker, S. (2011) *The better angels of our nature: The decline of violence in history and its causes*. Penguin UK.
- Pinker, S. (2018) *Enlightenment now: The case for reason, science, humanism, and progress*. Penguin, UK.
- Popova, S., Rehm, J., Patra, J. & Zatonski, W. (2007) 'Comparing alcohol consumption in central and Eastern Europe to other European countries'. *Alcohol and Alcoholism*, vol. 42(5), pp. 465-473.
- Porter, L. C., Bushway, S. D., TSAO, H. S., & Smith, H. L. (2016). How the US prison boom has changed the age distribution of the prison population. *Criminology*.
- Presser, Harriet B. & Gita Sen (eds.) *Women's Empowerment and Demographic Processes: Moving Beyond Cairo*. New York: Oxford University Press, 2000.
- Pridemore, W. (2006) 'Weekend effects on binge drinking and homicide: the connection between alcohol and violence in Russia'. *Addiction*, vol. 99(8), pp. 1034-1041.
- Prime, J., White, S., Liriano, S., & Patel, K. (2001). *Criminal careers of those born between 1953 and 1978*. Great Britain, Home Office, Research, Development and Statistics Directorate.

- Public Health England (2019) *Opiate and crack cocaine use: prevalence estimates by local area*. London, 2019.
- Reyes, J. W. (2007) 'Environmental policy as social policy? The impact of childhood lead exposure on crime'. *The BE Journal of Economic Analysis & Policy*, vol. 7(1).
- Ríos, V. (2013) 'Why did Mexico become so violent? A self-reinforcing violent equilibrium caused by competition and enforcement'. *Trends in Organized Crime*, vol. 16(2), pp. 138-155.
- Roberts, A. & LaFree, G. (2004) 'Explaining Japan's postwar violent crime trends'. *Criminology*, vol. 42(1), pp. 179-210.
- Robinson, P.L., Boscardin, W.J., George, S.M., Teklehaimanot, S., Heslin, K.C. & Bluthenthal, R.N. (2009) 'The Effect of Urban Street Gang Densities on Small Area Homicide Incidence in a Large Metropolitan County, 1994–2002'. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, vol. 86(4), pp. 511-523.
- Rogers, M. L. & Pridemore, W. A. (2016) 'A Comprehensive Evaluation of the Association between Percent Young and Cross-National Homicide Rates'. *British Journal of Criminology*, vol.57(5), pp. 1080-1100.
- Rosenfeld, R. (2016) Documenting and explaining the 2015 homicide rise: Research directions. US Department of Justice, Washington, USA.
- Rosling, H. (2019) *Factfulness*. Flammarion.
- Rossow, I. (2001) 'Alcohol and homicide: A cross-cultural comparison of the relationship in 14 European countries'. *Addiction*, vol. 96(1s1), pp. 77-92.
- Rossow, I. (2004) 'Alcohol consumption and homicides in Canada, 1950-1999'. *Contemp. Drug Probs.*, vol. 31, p. 541.
- Roth, Randolph. (2009) *American Homicide*. Cambridge, MA: Harvard University Press.
- Rutter, M. & Smith, D. J. (1997) Psychosocial disorders in young people: time trends and their causes.
- Sapolsky, R. M. (2017) *Behave: The biology of humans at our best and worst*. Penguin.
- Schifano, F., & Corkery, J. (2008) 'Cocaine/crack cocaine consumption, treatment demand, seizures, related offences, prices, average purity levels and deaths in the UK (1990-2004)'. *Journal of Psychopharmacology*, vol. 22(1), pp. 71-79.
- Shaw, J., Hunt, I. M., Flynn, S., Amos, T., Meehan, J., Robinson, J. & Kapur, N. (2006) 'The role of alcohol and drugs in homicides in England and Wales'. *Addiction*, vol. 101(8), pp. 1117-1124.
- Silverman, J. (1994) *Crack of Doom*. Headline Bk. Pub.
- Small, Geoff (1995) *Ruthless: The Global Rise of the Yardies*. Warner.
- Smith, M. D. (1986) 'The era of increased violence in the United States: Age, period, or cohort effect?' *Sociological Quarterly*, vol. 27(2), pp. 239-251.

- Soothill, K. L., Francis, B., Ackerley, E. & Fligelstone, R. (2002) *Murder and serious sexual assault: what criminal histories can reveal about future serious offending*. Police Research Series Paper 144. Home Office, London.
- Spelman, W. (2016) 'The Murder Mystery: Police Effectiveness and Homicide'. *Journal of Quantitative Criminology*, vol. 33(4), pp. 859-886.
- Spierenburg, P. C. & Spierenburg, P. (2008) *A history of murder: Personal violence in Europe from the middle ages to the present*. Polity.
- Stevenson, B., & Wolfers, J. (2003). Bargaining in the shadow of the law: Divorce laws and family distress (No. w10175). National Bureau of Economic Research.
- Taylor, P. J. & Gunn, J. (1999) 'Homicides by people with mental illness: myth and reality'. *The British Journal of Psychiatry*, vol. 174(1), pp. 9-14.
- Taylor, V. & Rupp, L. (1987) *Survival in the doldrums: The American women's rights movement, 1945 to the 1960s*. New York, NY: Oxford University Press.
- Teachman, J. D. (2002) 'Stability across cohorts in divorce risk factors'. *Demography*, vol. 39(2), pp. 331-351.
- Teitler, J. O. (2002) 'Trends in youth sexual initiation and fertility in developed countries: 1960-1995'. *The Annals of the American Academy of Political and Social Science*, vol. 580(1), pp. 134-152.
- Trifan, T. A., Stattin, H. & Tilton-Weaver, L. (2014) 'Have authoritarian parenting practices and roles changed in the last 50 years?' *Journal of Marriage and Family*, vol. 76(4), pp. 744-761.
- United Nations Office on Drugs and Crime (UNODC) (2019a) *World Drug Report: 2019*. UNODC.
- United Nations Office on Drugs and Crime (UNODC) (2019b) *Global Study on Homicide 2019: trends, contexts, data*. UNODC.
- Vronsky, P. (2018) *Sons of Cain: A History of Serial Killers from the Stone Age to the Present*. Penguin.
- Whaley, R. B., Messner, S. F. & Veysey, B. M. (2013) 'The relationship between gender equality and rates of inter-and intra-sexual lethal violence: An exploration of functional form'. *Justice Quarterly*, vol. 30(4), pp. 732-754.
- Wikström, P. O. H., Oberwittler, D., Treiber, K. & Hardie, B. (2012) *Breaking rules: The social and situational dynamics of young people's urban crime*. OUP Oxford.
- Wilbanks, W. (1984) *Murder in Miami: An analysis of homicide patterns and trends in Dade County (Miami) Florida, 1917-1983*. Lanham, MD: University Press of America.
- Wilson, M. & Daly, M. (1997) 'Life expectancy, economic inequality, homicide, and reproductive timing in Chicago neighbourhoods'. *BMJ*, vol. 314, p. 1271.

Yousefi, N., Etemadi, A. Z. R. A., Bahrami, F., Ahmadi, A. & Fatehi-Zadeh, M. (2010) 'Comparing of early maladaptive schemas among divorced and non-divorced couples as predictors of divorce'. *Iranian Journal of Psychiatry and Clinical Psychology*, vol. 16(1), pp. 21-33.

Zimring, W. D. S. F. E. (2006) *The great American crime decline*. Oxford University Press, USA.

ISBN: 978-1-78655-988-3

ISSN: 1756-3666



© Crown copyright 2020

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3 or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.