

# **Economic and social costs of violence on Merseyside**

Update for year ending March 2023

Lisa Jones, Charley Wilson & Zara Quigg

WHO Collaborating Centre for Violence Prevention Liverpool John Moores University

March 2024

# CONTENTS

ACKNOWLEDGEMENTS
SUMMARY2
INTRODUCTION
Cost of illness approach
Scope of impacts
FINDINGS
Police and criminal justice system6
Healthcare system
Lost productivity9
Physical and emotional harms10
REFERENCES12
APPENDIX
Data and valuation estimates13

### Table of figures

Figure 1. Impacts of a violent incident on survivors and victims and the scope of the	societal
costs	5

### Table of tables

Table 1. Costs of violence to the police	. 6
Table 2. Costs of violence to the criminal justice system: courts	. 7
Table 3. Costs of violence to the criminal justice system: custody and offender managemen	nt
	. 7
Table 4. Costs of violence to the healthcare system	. 8
Table 5. Costs of physical and emotional harms of violence to the individual	10

# ACKNOWLEDGEMENTS

We would like to thank the Merseyside VRP for funding this project to update the costs of violence to Merseyside and in particular, Geraldine O'Driscoll who supported the completion of the project. We are also grateful for the assistance of the Merseyside Office of the Police & Crime Commissioner.

**Suggested reference:** Jones L, Wilson C, Quigg Z (2024). *Economic and social costs of violence on Merseyside. Update for year ending March 2023.* Liverpool, Liverpool John Moores University.

# SUMMARY

Overall, for year ending March 2023, violence cost an estimated **£209.6 million** on Merseyside through costs to the healthcare system, police and criminal justice system, and in lost productivity as shown below.

Please note that figures may not add up due to rounding.

### Police & Criminal Justice System

Violent incidents that are reported to the police may require an investigation but only a small proportion of incidents will result in a suspect being charged or summonsed. Cases are then passed to magistrates' courts, with serious criminal cases sent to the Crown Court.

### Support services for survivors/victims

Commissioned at a local level for survivors and victims of violence by the Merseyside Office of the Police and Crime Commissioner and other local third sector organisations. Survivors and victims who do not report incidents to the police may also request help from support services.

### Police



£0.33 million Homicide



£20.1 million Violence with injury  $\bigcup$ 

### **£28.5** million Violence

without injury

£90.7 million

### **Criminal Justice System**

Courts



£11.1 million Homicide



£19.4 million Violence with injury Þ

£31.3 million Violence without injury

### Custody and offender management



£11.2 million Homicide



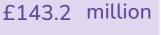
£5.3 million Violence with injury



£12.3 million Violence without injury

# £49.0 million

£3.5 million



#### Incidents of violence that result in physical injuries may require medical attention, or the need for treatment for the emotional impacts and follow-up in primary care. In the year ending March 2023, almost 6,000 A&E attendances for assault were recorded across Merseyside. Interpersonal violence £27.2 million £0.93 million £1.2 million £0.16 million Ambulance A&E Emergency hospital call outs attendances admissions £21.5 million £1.4 million £2.0 million

Treatment for physical injuries

Lost productivity

Healthcare System



Counselling for anxiety & depression



### Follow-up in primary care

Self-directed violence (including A&E attendances, hospital treatment, and hospital ward/critical care unit stays)

£6.3 million

The physical and emotional impacts on survivors and victims of violence may mean that they are not able to carry out their usual day-to-day activities to their full potential. They may need to take time off work and their participation in unpaid activities such as household work, caring and volunteering may be affected. We estimated that just over 10,500 people in employment (2% of people in employment in Merseyside) were survivors/victims of violence in the year ending March 2023.



£12.8 million Lost paid work



# £6.9 million

Lost unpaid work



### £13.2 million

Premature mortality

# **Physical & Emotional Harms**

### £245.5 million

In addition to the cost burden on the health service, we estimated the so-called 'intangible' or human costs of the violent incident. These costs represent the burden of the physical injuries and emotional impacts directly to the survivor/victim and on their quality of life. As these costs may overlap with others, to avoid double counting, these costs are not included in the final total.



£3.2 million Physical injuries



### £242.3 million

Emotional harms

3

#### million £33.5

f32.9 million

# INTRODUCTION

# Cost of illness approach

This report uses cost-of-illness (COI) methods to provide an updated estimate of the economic burden of violence on public services and social and health resources on Merseyside for the year ending March 2023. Our estimates represent the costs accumulated over a single year. This involves the estimation of the costs to the healthcare system and the police and criminal justice system, the costs of lost productivity from work-related absences, impaired performance at work and lost unpaid work, and the costs associated with the physical and emotional impacts on a victim's quality of life.

## Scope of impacts

For the purposes of applying COI methods, we have used estimates of the harms that the average person would suffer following a violent incident. As shown in the Figure, these harms include the direct impacts of a violent incident in terms of: (i) the physical injuries sustained, which may range from minor to severe and vary in their impacts over time; and (ii) the emotional and psychological effects, which may include fear, anxiety and depression.

Emotional responses to a violent incident may be short-term or may evolve into longer-term depressive symptoms. These physical injuries and emotional effects in turn may have an impact on a survivor or victim's quality of life and affect their ability to work and carry out day-to-day activities. As well as the burden placed on individuals and their families, there is a societal burden. Survivors and victims may seek help from support services and report the incident to the police, with direct societal costs associated with the police work required to investigate the violence incident, courts, offender management and custody. Survivors or victims who sustain injuries may require treatment in A&E or they may need a longer stay in hospital as an inpatient. Survivors and victims may also seek treatment for the emotional impacts of violence and make use of primary care services following a violent incident. The impact of the incident may also mean that survivors and victims need to take time off work, or they may find that their performance at work is affected. This also has a societal cost, termed lost productivity. Data and valuation sources are provided in the Appendix.

# Comparison with the 2019/20 report

We previously calculated that the costs of violence to Merseyside were over £185 million per year in 2019/20 (Jones et al., 2021). While we would caution against the direct comparison of the costs calculated for 2022/23 with those from 2019/20, we have provided a commentary in each section explaining the differences between the costs reported in the original report and this update.

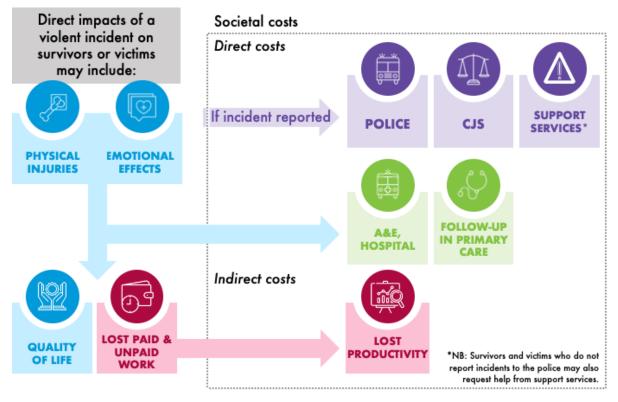


Figure 1. Impacts of a violent incident on survivors and victims and the scope of the societal costs

# FINDINGS

# Police and criminal justice system

Merseyside Police recorded over 44,000 instances of violence against the person in the year ending March 2023. Violence with injury accounted for 14,664 offences and violence without injury for 29,045 offences. However, not all incidents of violence are known to or reported to the police, so these figures are likely to be an underestimate of the true extent of violence on Merseyside.

Unit costs included under police and criminal justice system costs included police work related to investigation of incidents of violence against the person, courts, offender management and custody. Violent incidents that are reported to the police may require an investigation but only a small proportion of incidents will result in a suspect being charged or summonsed. Cases are then passed to magistrates' courts, with serious criminal cases sent to the Crown Court.

### Victim services

Services for victims and survivors of violence are provided at a local level by the Merseyside Office of the Police and Crime Commissioner and other local third sector organisations. Victims and survivors who do not report incidents to the police may also receive help from victim services. In 2022/23, the Merseyside OPCC supported 32,347 victims and survivors across their funded victim support services and restorative justice. Total spending for the year ending March 2023 was **£3.5 million**.

### Police

In the absence of police force specific unit cost data for Merseyside, unit costs from the Home Office report on the economic and social costs of crime (Heeks et al., 2018) were used and adjusted to 2022/23 prices. Unit costs were estimated for homicide, violence with injury and violence without injury. The total cost figures in Heeks et al. (2018) included direct costs for staff, operational support and business support as well as a proportion of the expenditure from costing associated with the domains of 'investigating crime' and 'providing assistance'. The annual burden of violence on the police in Merseyside for the year ending March 2023 was estimated at **£49.0 million** (Table 1).

Crime category	Incidents of violence	Unit costs	Costs
Homicide	23	£14,504	£333,595
Violence With Injury	14,664	£1,370	£20,095,150
Violence Without Injury	29,045	£982	£28,530,984
Total costs for year ending March 2023:			£48,959,729

Table 1. Costs of violence to the	police
-----------------------------------	--------

NB: Police recorded incidents of stalking and harassment were not included in this update. Figures may not add up due to rounding.

### **Criminal Justice System**

CJS costs included those relating to the courts, custody and offender management. Our unit costs are based on the best currently available estimates, which continue to be from the Home Office report on the economic and social costs of crime (Heeks et al., 2018). The annual burden of violence on the CJS in Merseyside for the year ending March 2023 was estimated at **£90.7 million** (Tables 2 and 3).

Cost category	Homicide	Violence with Injury	Violence without Injury
Prosecution	£631,487	£711,333	£1,761,172
Magistrates' court	£12,552	£177,833	£1,056,703
Crown court	£371,250	£1,066,999	£352,234
Jury service	£181,580	£533,500	£0
Legal Aid	£4,163,242	£533,500	£5,987,984
Non-legal aid defence	£5,747,817	£16,360,653	£22,190,766
Total costs for year ending March 2023:	£11,107,928	£19,383,817	£31,348,859

Table 2. Costs of violence to the criminal justice system: courts

NB: Police recorded incidents of stalking and harassment were not included in this update. Figures may not add up due to rounding.

#### Table 3. Costs of violence to the criminal justice system: custody and offender management

Cost category	Homicide	Violence with Injury	Violence without Injury
Probation services	£1,002,179	£1,066,999	£8,101,391
Prison service	£8,876,525	£3,378,831	£1,056,703
NOMS HQ	£1,268,274	£533,500	£1,056,703
Youth Justice Board	£86,188	£355,666	£2,113,406
Total costs for year ending March 2023:	£11,233,166	£5,334,996	£12,328,203

NB: Police recorded incidents of stalking and harassment were not included in this update. Figures may not add up due to rounding.

### Comparison with 2019/20 costs

In the 2019/20 report, the costs of violence to the police and criminal justice system were  $\pounds$ 130.2 million comprising costs for support services for survivors/victims ( $\pounds$ 1.6 million), the police ( $\pounds$ 48.2 million) and the criminal justice system ( $\pounds$ 80.3 million). In the update, we have seen an increase in the funding for Merseyside OPCC support services for victims and survivors of crime. The costs to the police and criminal justice system have stayed broadly similar with the difference in costs largely driven by the increase in unit costs (taken from Heeks et al., 2018) in line with inflation.

## Healthcare system

Incidents of violence that result in physical injuries may require medical attention, and survivors and victims of violence may seek treatment for the emotional impacts. The costs to the healthcare system were therefore estimated by examining treatment for the physical injuries from assault, treatment for the emotional impacts of violence and the use of primary care services following a violent incident.

Estimates of the average costs of (i) the types of medical procedures required to treat the physical harms of violence with injury; and (ii) treatment for the emotional impact on survivors and victims of violence were taken from the Home Office report on the economic and social costs of crime (Heeks et al., 2018). Costs were based on assumptions about the types of treatment needed and the prevalence of injury among survivors and victims of violence based on interviews from the Crime Survey for England and Wales (CSEW). Costs associated with the use of primary care services following a violent incident have not routinely been included in studies of the costs of violence. We followed the methods used in a costing study of the impact of domestic abuse (Walby 2004) and included costs for GP consultation based on the assumption that victims would make an average of three additional visits to their GP following physical harm.

Data on the number of emergency admissions for intentional self-harm was uplifted to estimate the number of self-harm episodes presenting to A&Es on Merseyside. The costs of self-directed violence were based on a retrospective analysis of hospital resource use and care (Tsiachristas et al., 2017).

The annual burden of violence to the healthcare system in Merseyside for the year ending March 2023 was estimated at **£33.5 million** (Table 4).

Cost categories		Total
Interpersonal violence		£27,226,462
Physical harms		£4,292,089
Ambulance*		£160,632
A&E		£930,490
Inpatient		£1,155,042
Medical treatment		£2,045,925
Emotional harms		£21,526,629
Primary care services		£1,407,744
Self-directed violence		£6,269,580
	Total costs for year ending March 2023:	£33,496,042

Table 4. Costs of violence to the healthcare system

\*This report is based on North West Ambulance Service (NWAS) data from April 2022 to March 2023. Data within this extract combines information from NHS Pathways, Electronic Patient Record and flags provided by

NWAS to identify assault related callouts. Because of the changes in NWAS recording systems, care should be taken when interpreting trends and changes in this data.

#### Comparison with 2019/20 costs

In the 2019/20 report, the costs of violence to the healthcare system were £25.3 million comprising costs arising from interpersonal violence (£17.8 million including physical harms, £5.9 million; emotional harms, £10.5 million; and primary care services, £1.2 million) and self-directed violence (£7.6 million). In the update, we have seen costs for interpersonal violence increase, and these are largely driven by an increase in the costs associated with counselling for anxiety and depression. In our costing model, we have updated the figures for the proportion of victims and survivors that seek counselling following incidents of violence with and without injury (for example, from 22% to 26% for anxiety/panic attacks following an incident of violence with injury). There were also a greater number of incidents of violence without injury in 2020/23 compared to 2019/20. Conversely, costs for self-directed violence have decreased based on our 2022/23 estimates, as there were fewer episodes of self-harm recorded in 2022/23 compared to 2019/20.

### Lost productivity

The physical and emotional impacts on victims and survivors of violence may mean that they are not able to carry out their usual day-to-day activities to their full potential. They may need to take time off work and their participation in unpaid activities such as household work, caring and volunteering may be affected.

#### Lost paid and unpaid work

Our modelled Merseyside working age population included an estimated 10,519 people in employment who had been victims of violence in the year ending March 2023 (Table 5). Victims and survivors of violence with injury lost an average of 112 hours of productivity due to taking short-term sick leave (short-term absenteeism) and having reduced performance at work (presenteeism). The equivalent loss in productivity for victims of violence without injury was 37 hours.

	Total	Violence with injury	Violence without injury
All people aged 16-64	889,100	6,571	8,393
In employment	646,000	4,688	5,831
Unemployed	26,400	227	297
Economically inactive	216,700	1,638	2,248
Males aged 16-64	439,200	3,874	4,817
In employment	331,400	2,863	3,394
Unemployed	16,500	164	215
Economically inactive	91,300	849	1,212
Females aged 16-64	449,900	2,678	3,557
In employment	314,600	1,825	2,437

#### Table 5. Modelled Merseyside working age population

Economic and social costs of violence on Merseyside

Unemployed	12,600	115	126
Economically inactive	125,400	789	1,036

In total for the year ending March 2023, it was estimated that lost productivity due to violence cost **£12.8 million** and productivity losses for unpaid work were **£6.9 million**.

### **Premature mortality**

In addition to the cost burden on the health service, the so-called 'intangible' or human costs of the violent incident may be estimated. These costs represent the burden of the physical injuries and emotional impacts directly to victims and survivors of violence and the impact on their quality of life. There were 23 cases of homicide recorded in Merseyside for the year ending March associated with an estimated 613 years of working life lost. The estimated productivity costs in Merseyside for the year ending March 2023 was **£13.2 million**.

### Comparison with 2019/20 costs

In the 2019/20 report, the costs of lost productivity were £29.9 million comprising costs for lost paid work (£15.1 million), lost unpaid work (£7.9 million) and premature mortality (£7.0 million). In the update, the costs for premature mortality have increased because of the greater number of homicides in 2022/23 compared to 2019/20. Conversely, the costs for productivity losses for paid and unpaid work have decreased. As our costing model uses data from Nomis and the CSEW to model the number of working-age victims and survivors of violence, the difference in costs reflects changes in both the size of the working-age population and in the prevalence of violence estimated by the CSEW.

### Physical and emotional harms

In addition to the direct costs that fall on the healthcare system, the costs of the physical and emotional harms to the victim of a violent incident may also be estimated. These are the so-called 'intangible' or human costs, costs associated with pain and suffering and a reduced quality of life. This approach may overlap with (and possibly double count) the costs associated with lost productivity, and therefore the intangible costs are not included in the final total of the costs of violence.

The annual burden of the physical and emotional harms of violence in Merseyside for the year ending March 2023 was estimated at **£245.5 million** (Table 6).

	Unit costs	Total
Violence with injury		£146,534,545
Physical harms	£218	£3,200,997
Emotional harms	£9,775	£143,333,548
Violence without injury		£98,977,859
Physical harms	-	-

Table 6. Costs of the physical and emotional harms of violence to the individual

	Total costs for year e	nding March 2023:	£245.512.404
Emotional harms		£3,408	£98,977,859

### Comparison with 2019/20 costs

In the 2019/2020 report, the costs of physical and emotional harms were an estimated  $\pounds$ 196.8 million comprising costs of  $\pounds$ 132.3 million associated with violence with injury and costs of  $\pounds$ 62.5 million associated with violence without injury. In the update, the greater costs for this category are largely driven by the increase in unit costs (taken from Heeks et al., 2018) in line with inflation and because of the greater number of incidents of violence without injury in 2020/23 compared to 2019/20.

# REFERENCES

Heeks, M., Reed, S., Tafsiri, M. & Prince, S. (2018). The economic and social costs of crime. Second edition, Home Office, London. Available from: www.gov.uk/government/publications/the-economic-and-social-costs-of-crime.

Jones, L., Bates, R., Butler, N. & Quigg, Z. (2021). Economic and social costs of violence on Merseyside. A report for the Merseyside VRP. Public Health Institute, Liverpool John Moores University, Liverpool. Available from: <u>https://www.merseysidevrp.com/wp-</u>content/uploads/2023/10/ljmu\_costs-of-violence\_mvrp\_final.pdf

Jones, K. Weatherly H., Birch, S., et al. (2022). Unit Costs of Health and Social Care 2022. Kent: Personal Social Services Research Unit (PSSRU), University of Kent.

Tsiachristas, A., McDaid, D., Casey, D., et al. (2017), General hospital costs in England of medical and psychiatric care for patients who self-harm: a retrospective analysis. Lancet Psychiatry, 4, 759-767.

Walby, S. (2004), The cost of domestic violence, Women and Equality Unit, Department of Trade and Industry, London. Available from: https://openaccess.city.ac.uk/id/eprint/21681/



# Data and valuation estimates

### Police and CJS

Resource use	Data sources	Valuation sources
Support services for survivors and victims of crime	Merseyside PCC's Office	
Police activity	Trauma and Injury Intelligence Group, LJMU	Home Office report on the economic and social costs of crime (Heeks et al., 2018) (Table 22)
Crown Prosecution Service		
Magistrates' court	Home Office report on the economic and social costs of crime (Heeks et al., 2018) (Table 23)	
Crown court		
Legal aid		
Probation service		
Prison service		
NOMS		
Youth Justice Board		
Jury service		
Non-legal aid defence		

### Healthcare

Resource use	Data sources	Valuation sources
Ambulance call outs	Trauma and Injury Intelligence Group, LJMU*	Average of all ambulance service costs. Unit costs of health and social care 2022. PSSRU (Jones et al., 2022).
A&E attendances	Trauma and Injury Intelligence Group, LJMU	Unit cost for emergency care. Unit costs of health and social care 2022. PSSRU (Jones et al., 2022).
Hospital admissions	Hospital Episode Statistics via PHE Fingertips; Heeks et al., 2018	Unit cost for a non-elective - short stay. NHS Reference Costs 2021/22.
Medical treatment	Crime Survey for England & Wales. Nature of crime tables for year ending 2022.	Home Office report on the economic and social costs of crime (Heeks et al., 2018)
Counselling for emotional impacts	Home Office report on the economic and social costs of crime (Heeks et al., 2018)	Average unit cost hour of counselling for band 5-7 community-based scientific and professional staff. Unit costs of health and social care 2022. PSSRU (Jones et al., 2022).

Resource use	Data sources	Valuation sources
Follow-up in primary care	Walby, 2004	Unit costs per surgery consultation. Unit costs of health and social care 2022. PSSRU (Jones et al., 2022).

\*This report is based on North West Ambulance Service (NWAS) data from April 2022 to March 2023. Data within this extract combines information from NHS Pathways, Electronic Patient Record and flags provided by NWAS to identify assault related callouts. Because of the changes in NWAS recording systems, care should be taken when interpreting trends and changes in this data.

### Intangible costs

Resource use	Data sources	Valuation sources
Physical & emotional impacts	Home Office report on the economic and social costs of crime (Heeks et al., 2018)	Home Office report on the economic and social costs of crime (Heeks et al., 2018)

### Lost productivity

Resource use	Data sources	Valuation sources
Premature mortality	Home Office report on the economic and social costs of crime (Heeks et al., 2018)	Annual Survey of Hours & Earnings
Absenteeism		
Presenteeism	Time Use in the UK 2022	2023
Lost unpaid work	Labour Force Survey 2022/23	





#### For further information contact:

**Lisa Jones**, Reader in Public Health: <u>I.jones1@ljmu.ac.uk;</u> or **Zara Quigg**, Professor in Behavioural Epidemiology and Director of the WHO Collaborating Centre for Violence Prevention: <u>z.a.quigg@ljmu.ac.uk</u>

Public Health Institute and School of Public and Allied Health Faculty of Health Liverpool John Moores University