

Costs of violence to the NHS in England in 2021/22



Methodological report and costing tool development

Jones L and Quigg Z

Costs of violence to the NHS in England in 2021/22

Lisa Jones and Zara Quigg

World Health Organization Collaborating Centre for Violence Prevention
Public Health Institute, School of Public and Allied Health, and Faculty of Health
Liverpool John Moores University

December 2024

Acknowledgements

The authors acknowledge NHS England as the funders of the project, and we would like to thank Anne Boyens, Sian Kitchen, Kathryn Marginson and Harriette O'Shea for their support and guidance in developing the costing model and tool. We would also like to thank Jon Sussex and Tom Ling from RAND Europe for their helpful early feedback and recommendations on the methodology underpinning the report and costing model. In addition, we would like to thank the members of the Violence Prevention Data and Oversight Group, who provided feedback on the final report and costing tool and Menna Abdelgawad (LJMU) who proof read the report.

The front cover photo is by Hush Naidoo Jade Photography on Unsplash

For further information about the report and costing tool please contact Lisa Jones (email: l.jones@ljamu.ac.uk).

Contents

Executive Summary	1
1 Introduction	3
2 Methodological considerations	8
3 Costs of community violence	11
4 Costs of violence towards NHS staff	17
5 Future recommendations.....	27
6 References.....	28
7 Data appendices	33

Tables of figures

Figure 1. Resource use domains for the costs of interpersonal violence in the community to the health system (Jones et al., 2020).....	4
Figure 2. Potential resource use domains for the costs of violence, harassment, and abuse against NHS staff.....	7
Figure 3. Analytical framework for calculating the costs of community violence	11
Figure 4. Analytical framework for calculating the costs of workplace violence.....	18

Table of tables

Table 1. Economic costs of workplace violence	5
Table 2. Estimates of community violence in England.....	12
Table 3. Sustained a physical or emotional impact following incidents of violence	13
Table 4. Prevalence of harms and medical requirements following violence	14
Table 5. Ambulance call outs and requirements for medical treatment.....	14
Table 6. Emergency department attendance and inpatient hospital stays	15
Table 7. Annual costs of community violence to the NHS in England, 2021/22	16
Table 8. Composition of the NHS workforce in England	18
Table 9. Staff experiences of physical violence	19
Table 10. Staff experiences of harassment, bullying and abuse.....	20
Table 11. Costs of medical treatment and rehabilitation	23
Table 12. Costs of sickness absence	24
Table 13. Costs of presenteeism.....	24
Table 14. Costs of staff turnover	25
Table 15. Annual costs of workplace violence to the NHS in England, 2021/22	26
Table 16. Estimated population size at national, regional and ICB level.....	34
Table 17. Estimated number of incidents of violence at national, regional and ICB level, year ending March 2022	36

Table 18. Estimated hospital resource use and medical requirements following an incident of violence at national, regional and ICB level, year ending March 2022.....	38
Table 19. NHS HCCHS workforce by staff group at national, regional and ICB level, June 2022.....	40
Table 20. General Practice workforce by staff group at national, regional and ICB level, June 2022.....	43
Table 21. NHS HCCHS staff turnover by staff group (leavers), year ending March 2022.....	45

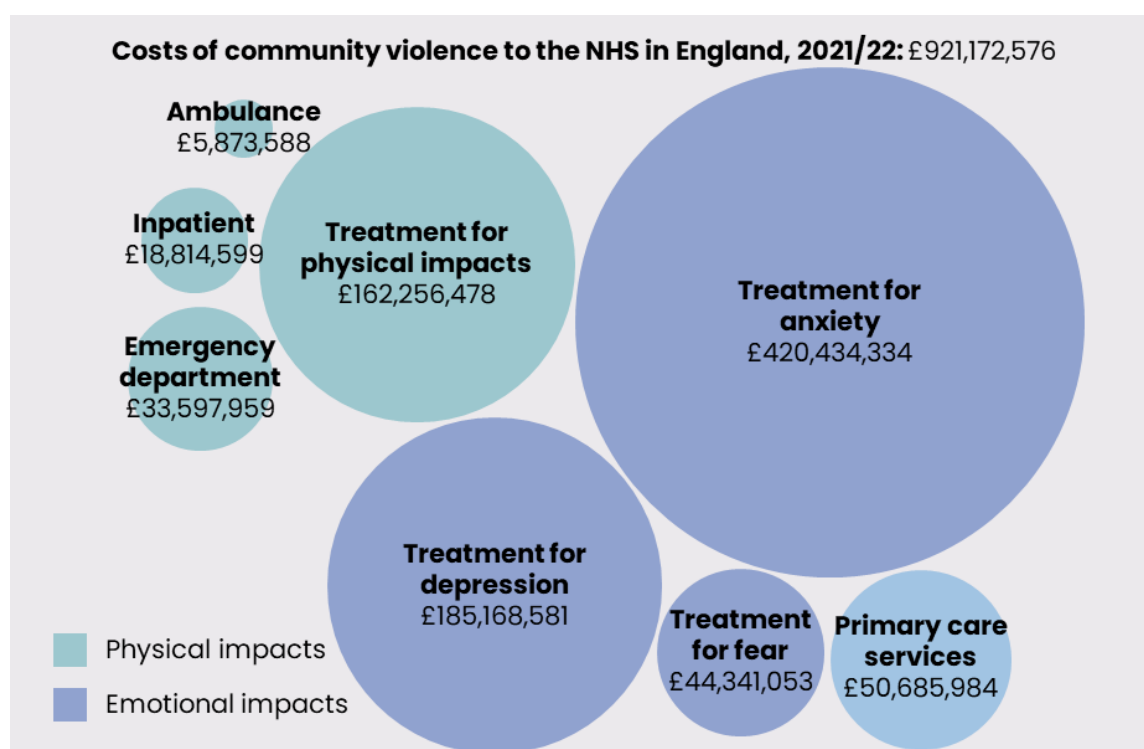
Executive Summary

Major economic costs are imposed on the health system by violence. It both increases the demand for healthcare to treat the physical and emotional injuries from violent incidents and threatens the safety, health, and wellbeing of healthcare workers. A public health approach to violence recognises that violence is a preventable problem and there is a clear public health argument for investing in violence prevention.

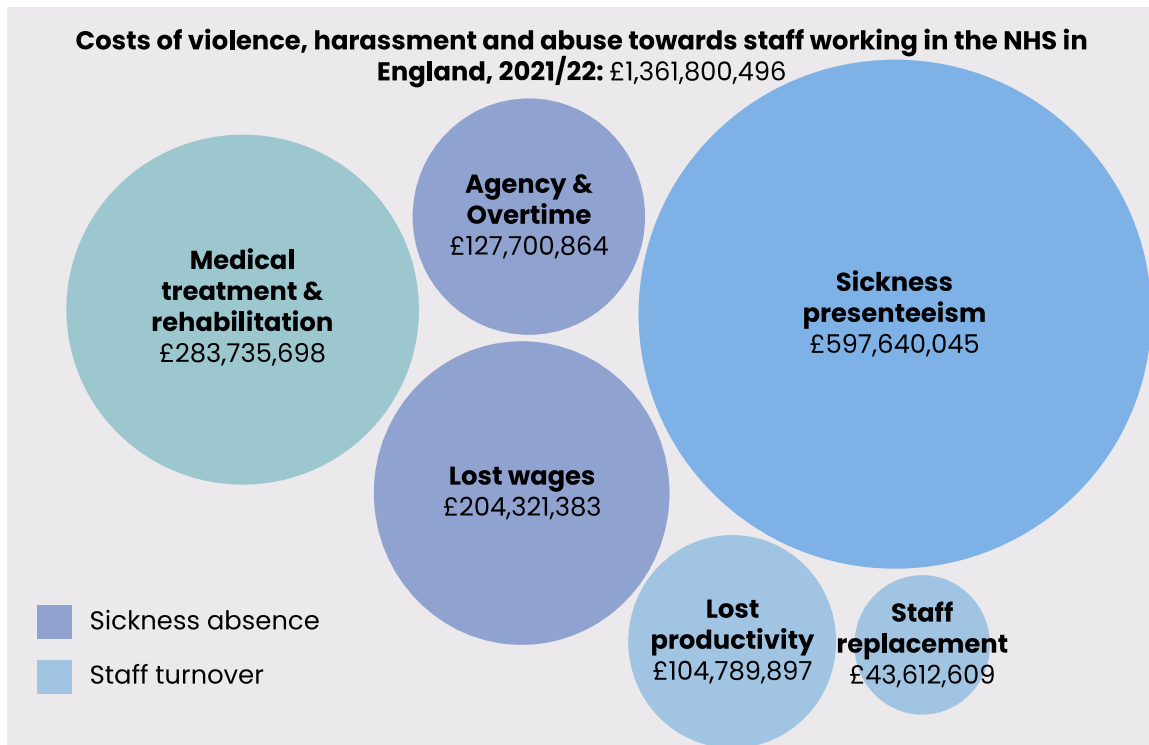
We have previously developed a framework and analytical approach based on cost of illness methods for examining the costs of community violence to the health system in Wales and the North West of England. These types of analyses are a useful starting point for demonstrating the size of the problem and can be used alongside other data and evidence to build awareness and guide opportunities for greater engagement in violence prevention across the health system.

In this report, we have taken this previous work a step forward to examine, using a range of measures, both the costs of community violence and violence, harassment, and abuse towards staff working in the NHS in England. We have also developed a costing tool that can be used by Integrated Care Boards (ICBs) to identify the costs of violence to the health system in their locality. Our analysis uses two separate costing models focused on reactive costs. In this report, we have presented data for England to demonstrate the utility of the tool and to provide a national estimate of the costs of violence to the NHS in England.

For community violence, our report has considered the direct costs incurred by the NHS in England in treating people who are victims and survivors of interpersonal violence. Cost categories relating to indirect costs, such as lost work productivity among victims and survivors of community violence, are not included.



For violence, harassment, and abuse experienced by staff working in the NHS, our report has considered the impacts of both direct and indirect costs including sickness absence, employee turnover, diminished productivity, and sickness presenteeism.



1 Introduction

Violence is a significant and complex public health problem, and a broad spectrum of economic costs are incurred across society and public services because of violence. Major economic costs are imposed on the health system by violence as it both increases the demand for healthcare to treat the physical and emotional injuries from violent incidents and threatens the safety, health, and wellbeing of healthcare workers. In 2020, the World Medical Association (WMA) declared violence against healthcare workers a global healthcare emergency and called for the World Health Organization (WHO) and member states to act (World Medical Association, 2020).

A public health approach to violence recognises that violence is a preventable problem requiring a societal response and multisectoral contributions (Krug et al., 2002; Schopper et al., 2006). The health system, however, has historically seen its role as primarily in the provision of treatment and care to the survivors and victims of violence (Schopper et al., 2006). Therefore, building awareness and creating opportunities for greater engagement in violence prevention across the health system is essential.

Establishing the size of the problem

Cost of illness (COI) studies, also known as social cost or burden-of-illness studies, are descriptive studies that investigate the direct and indirect costs incurred due to an illness or condition from a societal perspective (Rice, 2000). They typically include the private costs that are incurred by individuals and the external costs that fall on ‘third parties’ (for example, on public services). In this report, we have used COI methods to estimate the ‘size of the problem’ of violence to the NHS in England.

It is important to note that the COI approach is not a full form of economic evaluation¹, and its usefulness has been subject to debate. Although the findings of a COI study may, by implication, suggest the cost savings that would accrue from preventing an illness or condition, two key issues need to be considered (Shiell et al., 1987). Firstly, COI studies provide estimates of the monetary costs of illness rather than the true opportunity costs, and secondly, they provide estimates of the total costs, that is, those associated with entirely preventing (or eradicating) the illness or condition, rather than the marginal costs. These limitations, notwithstanding, by establishing what is known about the costs of not acting to prevent violence or of maintaining the status quo, COI studies can provide an important guide and resource for the development of violence prevention policy and be a useful starting point for demonstrating the ‘size of the problem’ to policymakers and for advocating for action.

¹ In reference to the Drummond et al. (1997) definition of an economic evaluation as the “comparative analysis of alternative courses of action in terms of both their costs and consequences”.

Rapid review of cost of illness studies and analytical frameworks

Costs of violence in the community to the NHS

Previous literature reviews (e.g., Jones et al., 2020) of the global evidence have found that most published COI studies of violence examine specific types of violence. Jones et al. (2020) identified 29 COI studies published since 2010 that examined the social and economic costs of violence; 14 studies had a societal perspective and included estimations of the direct, indirect, and 'human' costs of violence, and seven studies focused on healthcare costs only. Only one COI study, done in the USA (Van Den Bos et al., 2017), examined all types of violence. Across the other included studies, there was a focus on specific types of violence, including child abuse and neglect (9 studies), intimate partner violence (6 studies), sexual violence (2 studies), and self-directed violence (6 studies).

Because of the differences between the UK and US health systems, in our previous work we developed a costing model based on the Heeks et al. (2018) economic and social costs of crime model for the Home Office. This model (Figure 1) has subsequently been used to estimate the costs of violence to the health system in Wales (Jones et al., 2020), Lancashire (Jones, 2021), and Merseyside (Jones et al., 2021).



Figure 1. Resource use domains for the costs of interpersonal violence in the community to the health system (Jones et al., 2020).

There are several sources of data that may be used to measure violence and its impacts nationally and locally. Our previous costing work in England has used local data to inform costing analyses for Lancashire and Merseyside. Both areas collect and report data to their own local systems as well as the Trauma and Injury Intelligence Group (TIIG) Injury Surveillance System² developed by Liverpool John Moores University, which provides emergency department and ambulance data for the North West England. Working at a

² <https://tiig.ljmu.ac.uk>

national level involves considerations about the availability of data on the incidence of violence, and we have adapted the costing model accordingly.

Costs of violence, harassment, and abuse experienced by NHS staff

Our previous work to estimate the costs of violence to the health system in Wales (Jones et al., 2020) considered the costs of workplace violence against NHS staff in Wales, but it was not possible to reliably determine the size of the problem based on the data available at that time. A 2003 National Audit Office report ('A safer place to work') provided a very rough estimate of the costs of violence and aggression, determining this to be in the region of £69 million per year (National Audit Office, 2003). A further report on the economic cost of violence against NHS staff, published in 2010 by the NHS Security Management Services, estimated the costs at £60 million per year (NHS Security Management Services, 2010). The cost categories included the costs of physical assault incidents, litigation and damages, conflict resolution training, staff turnover, and anti-violence policing. More recent estimates are not available, so in this report we have also drawn on the models outlined in the US cost of illness study by Van Den Bos et al. (2017), which considered the costs of workplace violence within the health system, and by Hassard et al. (2019), which mapped out a conceptual understanding of workplace violence showing the main costs to society.

Van den Bos et al. (2017) considered the costs associated with prevention and preparedness for workplace violence and those arising post-incident. For prevention and preparedness, this included security costs and costs associated with staff training and the development of violence prevention plans. Post-incident costs were considered across three domains: staff turnover, medical care and indemnity costs, and disability and absenteeism. In their pathway, Hassard et al. (2019) accounted for costs associated with increased staff turnover, medical care, lost productivity, and a range of other issues for staff injured in the workplace (Table 1). They also considered the economic costs associated with indirect (or vicarious) exposure to violence, for example, through exposure to violence as a witness or bystander.

Table 1. Economic costs of workplace violence

Intangible costs	Indirect costs	Direct costs
Estimated monetary value prescribed to the pain and suffering and reduced quality of life experienced by the victim or survivor of violence	Estimated economic costs of productivity losses e.g., reduced workplace productivity due to staff turnover, sickness absence, and presenteeism ¹ .	Medical care expenditure for diagnosis, treatment or rehabilitation e.g., medication and counselling costs. Non-healthcare costs e.g., transportation, household expenditure, litigation.

¹Working whilst suffering a physical or mental health problem.

Adapted from Hassard et al., 2019 (Fig. 1).

As part of a programme of work to reduce violence in inpatient mental health wards (Taylor-Watt et al. 2017), the cost of an episode of violence was calculated based on the following model of costs:

- Staff sickness
- Treatment costs (medication)
- Estates costs (repairs to property damage, replacement of broken items)
- Legal costs
- Bank cover
- Response team costs

Models are also available that map out the costs of bullying and harassment in the workplace (Giga et al., 2008) and specifically to staff working in the NHS (Kline and Lewis, 2019). Kline and Lewis (2019), expanded upon the model developed by Giga et al. (2008) and included five domains of costs in their analysis:

- sickness absenteeism (including agency/overtime)
- employee turnover
- productivity losses
- sickness presenteeism
- industrial relations, compensation, and litigation costs

Like the model developed by Hassard et al. (2019), Kline and Lewis (2019) also recognised that there are economic costs associated with indirect exposure to bullying and harassment. However, they were unable to include the costs of witnessing bullying or harassment in their analysis due to a lack of reliable estimates. Figure 2 presents the potential resource domains considered during the development of the costing model for violence, harassment, and abuse against NHS staff.



Figure 2. Potential resource use domains for the costs of violence, harassment, and abuse against NHS staff

Development of the costing tool

A further objective of the work was to develop a costing tool that could be used by ICBs to identify the costs of violence in their locality. The costing tool was developed in Excel and was designed to support the identification of the costs of community violence and violence, harassment, and abuse towards staff working in the NHS at three different levels of geography: England, NHS regions, and Integrated Care Boards (ICBs).

The costing tool is pre-populated with data and the following sections of this report set out the methodological considerations that guided the development of the tool and the data sources, and key assumptions used to develop the tool.

2 Methodological considerations

Developing our frameworks and analytical approach

Our COI analysis considers two separate costing models for: (i) the direct costs incurred by the NHS in England in treating people who are victims or survivors of violence initiated in the community ('community violence'), and (ii) the direct and indirect costs that arise from violence, harassment, and abuse experienced by staff working in the NHS in England ('workplace violence').

Defining the problem and population

Following the analytic framework outlined by Van Den Bos et al. (2017), we first considered relevant cost categories by whether violence was initiated within the community or within the NHS as a workplace. For community violence, we used the WHO definition of violence shown below and applied the three broad categories of violence (self-directed violence, interpersonal violence, and collective violence) from the typology proposed in the World Report on Violence and Health (Krug et al., 2002).

The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation.

We considered the costs associated with interpersonal violence only, that is violence between family and intimate partners and violence between individuals who are unrelated and who may or may not know each other (Krug et al., 2002). The WHO definition of violence also considers four types of violent acts (physical, sexual, psychological, and deprivation or neglect) which occur within the broader category of interpersonal violence. However, it was not possible to develop separate cost categories in the model for these types of interpersonal violence. Cost categories relating to violence inflicted by an individual upon themselves (self-directed violence) and violence inflicted by larger groups (collective violence) were not included.

For workplace violence, we used the definition of physical and psychological violence from the Framework Guidelines for Addressing Workplace Violence in the Health Sector (International Labour Office et al., 2002), which are an adaptation of the WHO definition of violence:

Physical violence - the use of physical force against another person or group, that results in physical, sexual or psychological harm. It includes among others, beating, kicking, slapping, stabbing, shooting, pushing, biting and pinching.

Psychological violence - intentional use of power, including threat of physical force, against another person or group, that can result in harm to

physical, mental, spiritual, moral or social development. It includes verbal abuse, bullying/mobbing, harassment, and threats.

Proactive costs

Following Van den Bos et al. (2017), we considered the categorisation of costs according to whether they were incurred from activities that aimed to prevent violence or in preparation for violent events (proactive) or whether they were in response to a violent incident (reactive). After consideration of the estimates available both the community violence and workplace violence models focused on reactive costs only.

Community violence

Van den Bos et al. (2017) considered the costs arising from the resources spent on preparing for mass violence events (surge training) and on preventing day-to-day community violence. The number of mass violence events in England remains low compared to other countries and therefore surge training and other forms of emergency preparedness training were not considered. However, there are ongoing concerns about the risks of serious violence within communities in England and the introduction of the Serious Violence Duty³ in 2023 has given ICBs (and other specified authorities) a statutory responsibility for preventing and reducing serious violence. As part of these responsibilities, ICBs are required to produce a 5-year joint forward plan in conjunction with their partner trusts and foundation trusts. As well as providing treatment and care to the survivors and victims of violence, NHS settings can have an integral role in the primary and secondary prevention of violence. For example, the collection and sharing of violence-related data and information can inform violence prevention strategies in the community, as shown through implementation of the Cardiff Model (Florence et al., 2011) and with the use of Trauma and Injury Intelligence Group (TIIG) data in Wigan (Ford et al., 2014). As an important point of contact for victims and survivors of violence, the health system can also identify and respond to the signs of violence among patients attending for primary and secondary care. The Identification and Referral to Improve Safety (IRIS) programme, for example, is a widely used domestic violence training and support programme for general practice teams (Feder et al., 2011). Hospital settings can also provide opportunities for accessing and intervening with high-risk youth and in-hospital violence reduction services are increasingly being implemented in emergency departments across hospital sites in England (Violence Reduction Programme London, 2022).

Violence, harassment, and abuse towards NHS staff

Van den Bos et al. (2017) included security costs and costs associated with staff training and the development of violence prevention plans as proactive costs. In NHS settings, although trained security teams may be used to deal with a range of issues, a proportion of spending on security will be driven by the need to address violence, aggression and harassment from patients, other service users, their relatives, and other members of the public towards NHS staff. Specifically, within primary care settings, the special allocation scheme (a form of direct enhanced service) provides primary care services within a secure environment to deal with

³ <https://www.gov.uk/government/publications/serious-violence-duty>

patients who are violent or aggressive. In relation to staff training, training in violence prevention and de-escalation techniques is recommended for the prevention and management of violence in the workplace (e.g., Health and Safety Executive, 2023) and staff working in areas with a high risk of violence may also receive conflict management and physical interventions training. The Violence Prevention and Reduction (VPR) standard is relevant for the development of violence prevention plans and provides a risk-based framework, which all NHS commissioners and providers of NHS-funded services are required to review their status against twice a year.

Consideration of proactive costs

The resource implications for the health system of ICBs having a greater role in violence prevention are not immediately clear and it was beyond the scope of this work to explore these resource implications more thoroughly. Further, in relation to workplace violence, data on the extent of training offered across the NHS and the financial costs associated with delivering training are not easily accessible.

COI approach and perspective

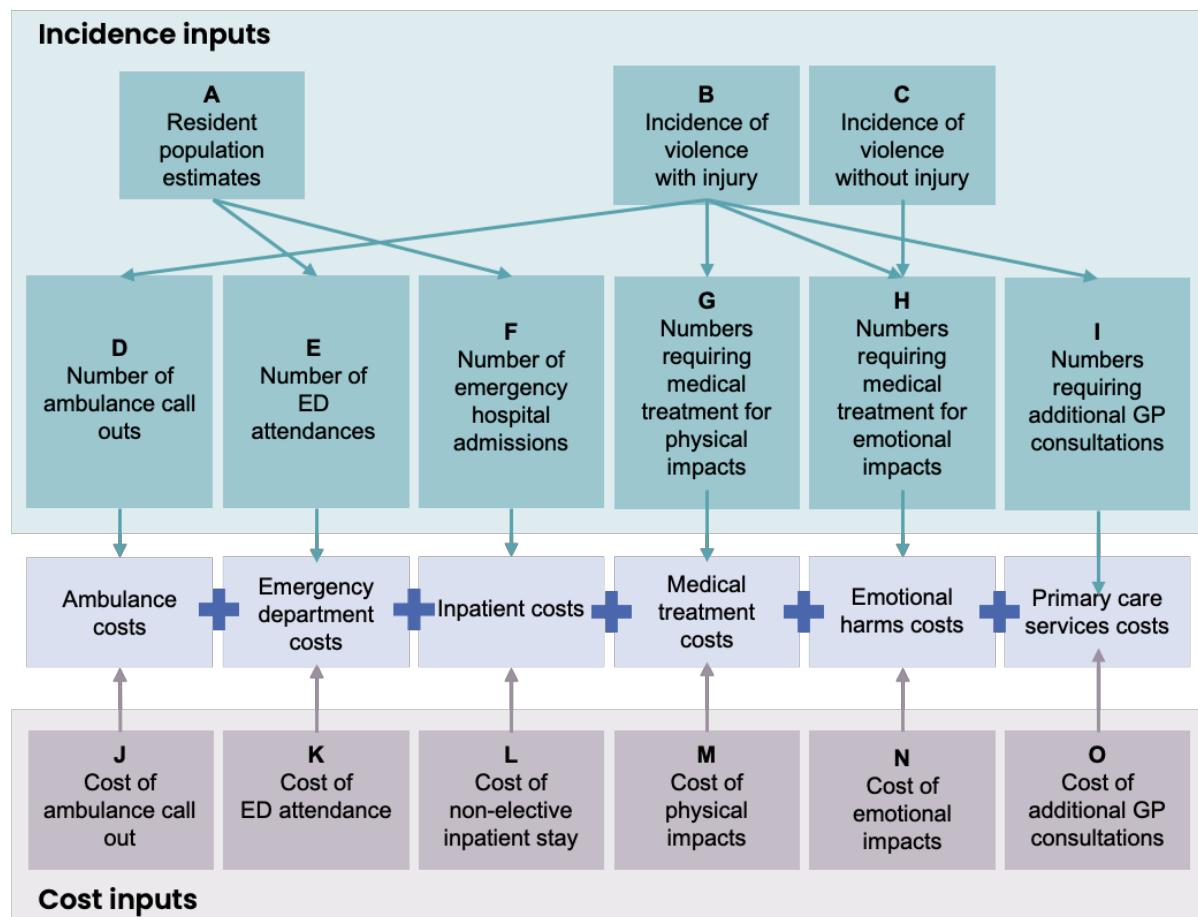
For both models, we calculated the costs of violence to the NHS in England within the 2021/22 financial year. The analysis of the costs of community violence was conducted from the health system perspective and only cost-generating components within the health system were therefore included. Our community violence model therefore does not include productivity losses, such as days lost from work following a violent incident. We acknowledge that NHS staff may also experience violence outside of the workplace and that this would have a direct impact on NHS productivity. Further, a recent review of global evidence suggests that people working in healthcare professions may be more likely to experience domestic abuse than the general population (Dheensa et al., 2022), so in future iterations of this work it may be worthwhile to explore productivity losses in the community violence model. For the analysis of workplace violence, we included both direct and indirect costs (Table 1). All our analyses were retrospective and based on data that had already been recorded (i.e., based on aggregate figures from hospital admissions, for example, and other statistical databases/registers).

Valuation of unit costs

The final step in determining the costs involved identifying the cost-generating components and attributing a monetary value to them. We sought data on costs from a range of sources including the published and grey literature. Both the data and costs included in our models vary in specificity and quality and required assumptions to be drawn. Further details about the valuation and source of unit costs are provided in the main sections of the report. The full analytical frameworks and assumptions, data sources, and valuation estimates are described in detail within the following sections of the report.

3 Costs of community violence

Analytical framework for community violence



A = ONS mid-2020 population estimates, all persons. ICB populations derived from LSOA and sub ICB location the population estimates.

B & C = Police recorded crime (rate per 1,000 population/households) applied to Community Safety Partnership areas. Year ending March 2022.

D = Estimated from 'Requirements for medical treatment' from the Crime Survey for England and Wales; extracted from Home Office Costs of crime report (Table AP1; Heeks et al. 2018).

E = Attendance rates from National Violence Surveillance Network (2021) applied to mid-year population estimates.

F = Estimated number of hospital attendances from OHID Public health profiles. Violent crime – hospital admissions for violence (external causes: ICD10 codes X85 to Y09). Directly age standardised rate per 100,000 population applied to mid-year population estimates.

G & H = Numbers who sustained a physical or emotional impact estimated from CSEW (year ending 2022). Numbers requiring medical treatment estimated from 'Requirements for medical treatment' extracted from Home Office Costs of crime report (Table AP1; Heeks et al. 2018).

I = Based on the assumption of three additional visits to the GP following physical harm (Walby, 2004).

J = Average of all ambulance service costs. Jones et al. (2022). Unit costs of health and social care 2022. PSSRU.

K = Unit cost for emergency care. Unit costs of health and social care 2022. PSSRU (Jones et al., 2022).

L = Unit cost for a non-elective - short stay. NHS Reference Costs 2021/22.

M = Costs of physical impacts from Heeks et al. 2018. Updated to 2022 prices.

N = Average unit cost for 1-hour of counselling, band 5-7 community-based scientific and professional staff. Unit costs of health and social care 2022. PSSRU (Jones et al., 2022).

O = Unit costs per surgery consultation (£32). Unit costs of health and social care 2022. PSSRU (Jones et al., 2022).

Figure 3. Analytical framework for calculating the costs of community violence

The analytical framework for calculating the costs of community violence to the NHS is shown in Figure 3 and further explanation of the assumptions, data sources, and valuation estimates is provided in the sections below. Costs were calculated for year ending March 2022 and represent costs accumulated over a single year.

Incidence inputs

Resident population estimates

To model the incidence of community violence at a national and ICB level in England, we first derived population estimates using a lookup file to match population estimates at a Lower Super Output Area (LSOA) level to sub-Integrated Care Board (ICB) locations, ICBs and Local Authority Districts in England as of 1st July 2022⁴. The most recent population estimates available from the Office for National Statistics (ONS) at an LSOA level are for mid-2020. It was not possible to match at a higher level of geography because of structural changes to local authorities in Cumbria, North Yorkshire, and Somerset in 2023. Population estimates at national, regional, and ICB level are shown in Table 16 in the Data appendices.

Incidence of violence with and without injury

The next step involved estimating the number of incidents of violence with and without injury at the national and ICB level (Table 2 and Table 17 in the Data appendices). We extracted data on the police recorded crime rate per 1,000 population/households by Community Safety Partnership (CSP) area for the year ending March 2022. CSP areas were then matched on their local authority code to an ICB area. Rates were then applied to resident population estimates at the ICB level to estimate the number of violence with injury incidents and violence without injury incidents.

Table 2. Estimates of community violence in England

	Number of incidents ^a
Homicides	664
Violence with injury ^b	527,979
Violence without injury ^b	757,210

For year ending March 2022. Key: ^aBased on mid-year population estimates at LSOA level for all persons in England, 2020.

^bPolice recorded crime (rate per 1,000 population/household) applied to Community Safety Partnership areas for year ending March 2022.

Healthcare requirements following violence

Assumptions about the prevalence of physical and emotional impacts following violence were based on data collected by the Crime Survey for England and Wales (CSEW; Table 3) on injuries sustained in incidents of violence with injury. The latest data available at the time of developing this report was for the year ending March 2020.

⁴ 'LSOA (2011) to Sub ICB Locations to Integrated Care Boards (July 2022) Lookup in England'. Available from geoportal.statistics.gov.uk.

Table 3. Sustained a physical or emotional impact following incidents of violence

Type of impact	Prevalence of harm ^a	
	Violence with injury	Violence without injury
Physical impact		
Minor bruise/black eye	57%	-
Severe bruising	33%	-
Cuts	27%	-
Scratches	21%	-
Puncture or stab wounds	4%	-
Broken bones	4%	-
Concussion or loss of consciousness	4%	-
Nosebleed	3%	-
Facial or head injuries (no bruising)	2%	-
Broken nose	2%	-
Internal injuries	2%	-
Chipped teeth	1%	-
Dislocation	1%	-
Broken or lost teeth	1%	-
Eye/face injuries due to acid/ paint, etc. thrown into face	0%	-
Other	1%	-
Emotional impact		
Fear	29%	34%
Depression	21%	8%
Anxiety	26%	23%

Key: ^a Extracted from CSEW Nature of crime tables for year ending March 2020. Injuries sustained in incidents of violence with injury and Emotional impacts of incidents of violence with/without injury.

Ambulance call outs and requirements for medical treatment

Of the respondents to the CSEW in 2020, 30% of those who had experienced violence with injury reported that they needed some form of medical attention, and 4% reported that they needed a hospital stay. Further information was not provided about the type of medical attention received, so assumptions about the requirement for medical treatment for the physical and emotional impacts of incidents of violence were based on the Home Office report on the economic and social costs of crime (Heeks et al., 2018). The report provides an estimate of the proportion of survivors/victims of the different impacts sustained who would require an ambulance and a medical procedure (Table 4, Table 5, and Table 18). The report notes that for some of the injuries sustained (for example, eye/face injuries), sample sizes were too small to capture the medical procedure required. The Home Office report (Heeks et al., 2018) also provides estimates of the emotional impact based on the resulting hours of counselling required for survivors/victims following incidents of violence with and without injury who experience fear (2 hours per survivor/victim), depression (20 hours per survivor/victim), or anxiety (25 hours per survivor/victim).

Table 4. Prevalence of harms and medical requirements following violence

Type of injury	Average medical requirements following injury ^a	
	Ambulance	Medical treatment
Minor bruise/black eye	-	-
Severe bruising	5%	29%
Cuts	-	36%
Scratches	-	-
Puncture or stab wounds	18%	68%
Broken bones	20%	85%
Concussion or loss of consciousness	57%	86%
Nosebleed	-	-
Facial or head injuries (no bruising)	-	36%
Broken nose	56%	100%
Internal injuries	-	-
Chipped teeth	-	100%
Dislocation	-	39%
Broken or lost teeth	-	84%
Eye/face injuries due to acid/ paint, etc. thrown into face	-	-
Other	-	45%

Key: ^aExtracted from Home Office report on the economic and social costs of crime (Table 16, pg. 44; Heeks et al. 2018); '-' indicates that there is assumed to be no ambulance/medical treatment required for the injury or sample sizes were too small to capture the treatment required.

Table 5. Ambulance call outs and requirements for medical treatment

	Number of patients ^a
Ambulance call outs for violence with injury	21,281
Required medical treatment for physical impacts	180,833
Required treatment for emotional impacts - Fear	410,565
Required treatment for emotional impacts – Depression	171,452
Required treatment for emotional impacts - Anxiety	311,433

For year ending March 2022. Key: ^aCalculated from CSEW Nature of crime tables for year ending March 2020 and Home Office report on the economic and social costs of crime (Table API; Heeks et al., 2018).

Emergency department and inpatient care

There is no national source of data for assault attendances to the emergency department. The most recent report from the Violence Surveillance Network (Sivarajasingam et al., 2021) brings together data from 133 emergency departments, minor injury units, and Walk-in Centres in England and Wales. Violence injury rates by age group were extracted from this report and applied to the mid-year population estimates (Table 6 and Table 18).

Emergency admissions for violence for all ages were based on Hospital Episode Statistics (external causes: ICD10 codes X85 to Y09) provided on the Office for Health Improvement and Disparities (OHID) Fingertips public health data website. We extracted the directly age

standardised rate per 100,000 population for each local authority area and matched this to the ICB mid-year population estimate (Table 6 and Table 18). It was not possible to estimate the average length of stay for an inpatient admission for violence. Of the respondents to the CSEW, 4% reported a hospital stay of at least one night following an incident of violence with injury.

Table 6. Emergency department attendance and inpatient hospital stays

	Number of patients
Emergency department attendance for violence with injury ^a	138,835
Emergency hospital admissions for violence ^b	23,489

For year ending March 2022. Key: ^aCalculated from violence injury rates by age from National Violence Surveillance Network (Sivarajasingam et al., 2021). ^bCalculated from OHID Public health profiles. Violent crime – hospital admissions for violence. Directly age standardised rate for local authority areas in England.

Primary care and community services

The use of primary care services following an incident of violence with injury has not routinely been included in studies of the costs of violence. However, in an early costing study of the impact of domestic abuse, Walby (2004) 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. Our costing tool therefore includes the costs associated with three additional GP consultations per survivor/victim of violence with injury.

Following an incident of violence with or without injury, treatment may involve the use of community prescribed medicines. However, in the absence of any information about the types and duration of prescription medication used following a violent incident, we could not include this as a cost component in our model.

Cost inputs

Several unit costs were extracted from the Personal Social Services Research Unit (PSSRU) report on the unit costs of health and social care (Jones et al., 2022), including:

- Ambulance service (£276): based on the average of all ambulance service costs (Table 6.1.1., pg. 40).
- Counselling (£54): calculated from the average unit cost for an hour of counselling for band 5-7 community-based scientific and professional staff (Table 8.2.1, pg. 59).
- Primary care (£32): based on unit costs per GP surgery consultation lasting 9.22 minutes (Table 9.4.2; pg. 66).

The costs associated with emergency care and inpatient admissions were extracted from the NHS national schedule of NHS costs for the year ending March 2022. The costs of emergency care may vary according to the type of emergency department visited and the type of treatment received. Attendance at the emergency department following an incidence of violence was based on the average unit cost of 'Emergency Care' (£242). In the absence of data on length of stay following an emergency hospital admission for violence, we conservatively used the unit cost for a non-elective inpatient short stay (£801).

The costs of the medical procedures associated with the physical impacts of incidents of violence were extracted from the Home Office report on the economic and social costs of violence (Heeks et al. 2018) and adjusted to 2021/22 prices using the GDP deflator rate. Based on the incidence of violence with injury, the average cost of these medical requirements was estimated at £854.59 for each patient who required medical treatment following an incident of violence with injury. There is a lack of information in the Home Office report (Heeks et al., 2018) about the source of the unit costs of the procedures and any assumptions. It is therefore unclear if they are costed according to procedure specific costs only or whether, for example, they include costs associated with emergency department attendance. A more conservative approach than we have followed here could involve offsetting the costs of emergency department attendances and inpatient hospital stays against the medical treatment costs.

Summary of costs of community violence

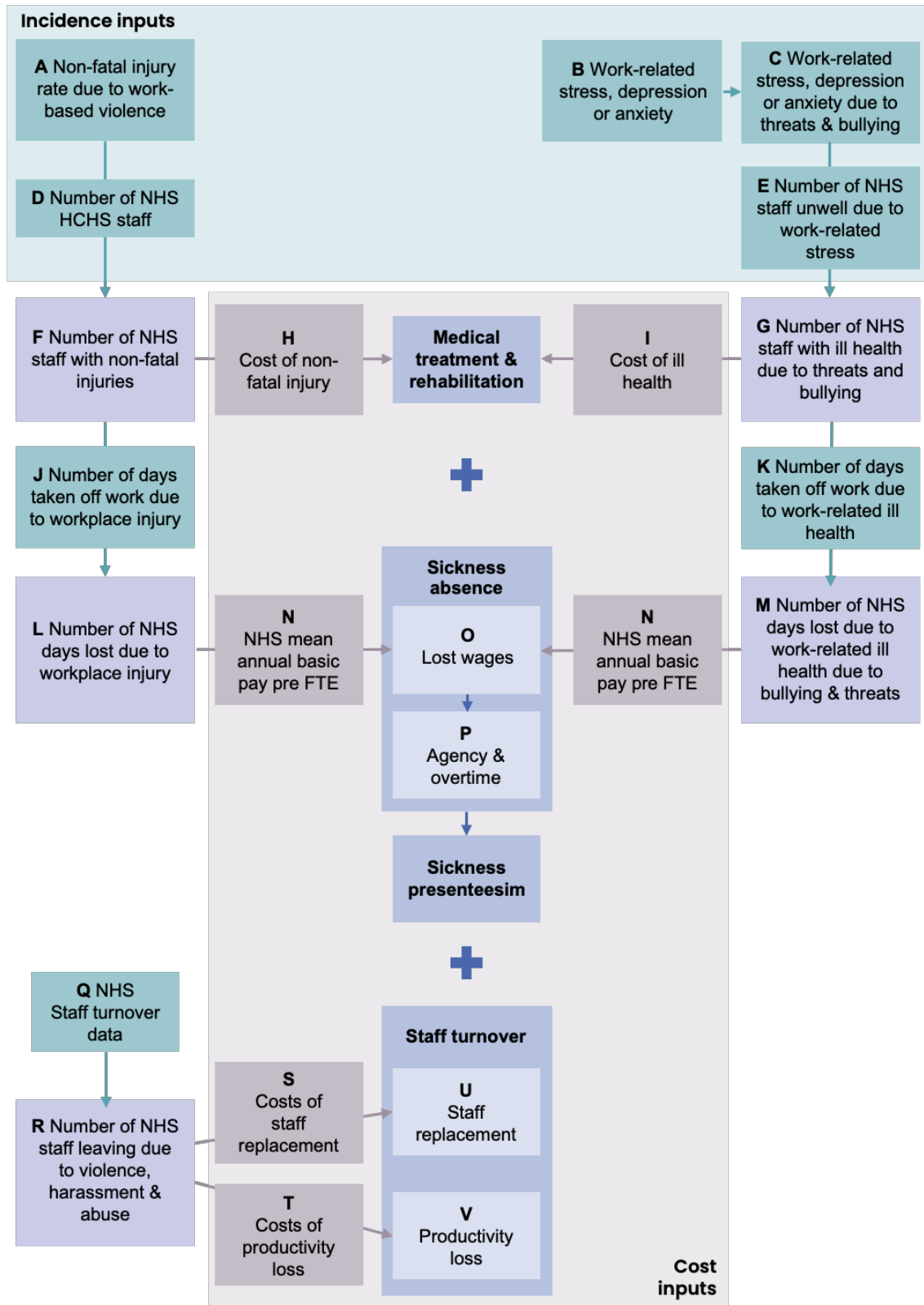
Table 7 shows the annual costs of community violence in 2021/22. The costs of the physical harms of violence were an estimated £212.8 million, comprising costs of ambulance call outs (£5.9 million), emergency department attendances (£33.6 million), inpatient hospital stays (£18.8 million), and medical treatment for physical impacts (£154.5 million). The costs of the treatment for emotional harms of violence were an estimated £649.9 million, comprising over 12 million of counselling for fear (£44.3 million), depression (£185.2 million), and anxiety (£420.4 million).

Table 7. Annual costs of community violence to the NHS in England, 2021/22

Category	Annual cost, £
Physical harms	£220,542,624
Ambulance call outs	£5,873,588
Emergency department attendances	£33,597,959
Inpatient hospital stays	£18,814,599
Medical treatment for physical impacts	£162,256,478
Treatment for emotional harms	£649,943,969
Primary care services	£50,685,984
Annual costs of community violence to the NHS	£921,172,576

4 Costs of violence towards NHS staff

Analytical framework for workplace violence



Incidence inputs

A = Estimated rate of non-fatal injury due to physical acts of violence at work (Human health and social work activities).

B = Estimated rate of self-reported stress, depression or anxiety, by how caused or made worse by work (All stress).

C = Estimated rate of self-reported stress, depression or anxiety, by how caused or made worse by work (Violence, threats or bullying).

A-C = all Health and Safety Executive from Labour Force Survey, averaged 2009/10-2011/12.

D = NHS Hospital & Community Health Service monthly workforce statistics, NHS Digital. June 2022 monthly data.

E = NHS Staff Survey 2022. NHS Hospital & Community Service workforce only.

Medical treatment & rehabilitation

F = A multiplied by D.

G = Estimated % cases due to violence, threats and bullying calculated from B and C and applied to E.

H & I = Health and Safety Executive. Cost elements include ambulance costs, hospital and clinic costs, GP costs and NHS prescription costs (Risk Solutions, 2011). 2020 prices.

Sickness absence

J & K = Health and Safety Executive from Labour Force Survey.

L = J multiplied by F.

M = K multiplied by G.

N = NHS Staff Earning estimates, end of December 2022.

O = L multiplied N plus M multiplied by N.

P = assumed to be 62.5% of the costs of lost wages (from Kline & Lewis, 2009).

Sickness presenteeism

Assumed to 1.8 times the costs of sickness absence (from Kline & Lewis, 2009).

Staff turnover

S = Full time equivalent staff. Figures for HCHS workforce only. Dec 2021 to Dec 2022.

T = 5% of staff assumed to leave due to violence, harassment and abuse (conservative estimate).

S & T = Both costs from Kline and Lewis, 2009.

U = R multiplied by S.

V = R multiplied by T.

Figure 4. Analytical framework for calculating the costs of workplace violence

The analytical framework for calculating the costs of workplace violence towards NHS staff is shown in Figure 4, and further explanation of the assumptions, data sources, and valuation estimates is provided in the sections below. Costs were calculated for the year ending March 2022 (2021/22) and represent costs accumulated over a single year.

Incidence inputs

NHS workforce data

To model the incidence of violence towards staff at a national, regional, and ICB level in England, we used NHS workforce data to calculate the number of staff working across the different workforce categories based on the composition of the NHS workforce at the mid-point of the year (i.e., June 2022; Table 8, Table 19, and Table 20).

Table 8. Composition of the NHS workforce in England

Staff category	Full time equivalent
NHS Hospital and Community Health Services	1,224,739
HCHS doctors	127,808
Nurses, health visitors, and midwives	341,022
Ambulance staff	17,847
Scientific, therapeutic, and technical staff	156,367
Support to clinical staff*	379,881
NHS infrastructure support**	201,332
Other staff	481

General practice	138,453
GPs	34,367
Practice nurses	16,254
GP support & admin staff	87,833
Total	1,363,192

Source: NHS Hospital & Community Health Service (HCHS) monthly workforce statistics, NHS Digital and General Practice Workforce statistics, NHS Digital. June 2022.

Key: *Includes support to doctors, nurses, and midwives; support to ambulance staff; support to scientific, therapeutic, & technical staff. **Includes central functions; hotel, property, and estates; senior managers; managers.

Experience of physical violence

The 2022 NHS Staff Survey reports on the experiences of over 600,000 members of NHS staff working in hospital and community services in autumn 2022. Around one in seven NHS staff (14.7%) who completed the survey (n= 608,840) had experienced at least one workplace incident of physical violence from a patient/service user, a relative of a patient/service user, or another member of the public (Table 9). A higher proportion of operational ambulance staff (37.1%) and nursing and healthcare assistants (36.6%) reported experiencing physical violence than other occupational groups. A much smaller proportion of staff had experienced at least one incident of physical violence from managers (0.8%) or other colleagues (1.8%).

Table 9. Staff experiences of physical violence

Perpetrator of physical violence	Proportion of staff	Number of staff
Physical violence from patients/service users... ^a	14.7%	176,829
Physical violence from managers ^b	0.8%	9,506
Physical violence from other colleagues ^c	1.8%	21,351

Key: ^a NHS Staff Survey 2022. Q13a - In the last 12 months how many times have you personally experienced physical violence at work from patients / service users, their relatives or other members of the public? (base n=608,840). ^b NHS Staff Survey 2022. Q13b - In the last 12 months how many times have you personally experienced physical violence at work from managers? (base n= 603,919). ^c Q13c - In the last 12 months how many times have you personally experienced physical violence at work from other colleagues? (base n= 600,327).

Experience of harassment, bullying, and abuse

Experiences of harassment, bullying or abuse were more common than experiences of physical violence, and 27.8% of NHS staff had experienced at least one workplace incident perpetrated by a patient/service user or their relatives or another member of the public. Across occupational groups, operational ambulance staff reported the highest proportion (52.1%). A smaller proportion of staff had experienced at least one incident of harassment, bullying or abuse from managers or other colleagues, with 11.1% having experience of at least one incident from managers, and 18.7% from other colleagues. Staff categorised under the medical and dental staff occupation group reported the highest proportion of experiences of harassment, bullying, and abuse from managers or other colleagues (14.7% and 22.9%, respectively).

Table 10. Staff experiences of harassment, bullying and abuse

Perpetrator of harassment, bullying and abuse	Proportion of staff	Number of staff
Harassment, bullying, and abuse from patients/service users... ^a	27.8%	335,315
Harassment, bullying, and abuse from managers ^b	11.1%	67,091
Harassment, bullying, and abuse from other colleagues ^c	18.7%	112,636

Key: ^aNHS Staff Survey 2022. Q14a - In the last 12 months how many times have you personally experienced harassment, bullying or abuse at work from patients / service users, their relatives or other members of the public? (base n=607,636). ^bNHS Staff Survey 2022. Q14b - In the last 12 months how many times have you personally experienced harassment, bullying or abuse at work from managers? (base n=603,445). ^cNHS Staff Survey 2022. Q14c - In the last 12 months how many times have you personally experienced harassment, bullying or abuse at work from other colleagues? (base n=600,906).

Experience of violence, harassment, and abuse in general practice

The 2022 NHS Staff Survey did not include staff working in general practice, but three recent surveys suggest that staff in general practice frequently experience verbal abuse. For example, a survey by the British Medical Association of more than 2,400 doctors found that 51% of GPs had experienced verbal abuse from patients in the past month (BMA, 2021). In a 2016 study of GPs practising in South-East England, 74% of male GPs and 78% of female GPs had experienced verbal abuse within the previous two years (Elston & Gabe, 2016). A recent systematic review (Willer et al., 2023) found evidence that general practice receptionists 'bear the brunt' of patient aggression and experience verbal abuse as frequent and routine. Studies suggest that experiences of physical violence in general practice are less common in comparison to verbal abuse, and annual rates of physical injury reported in the UK literature range from 0.3% (Ness et al., 2000) to 3.8% (Hobbs, 1991). In the 2016 study by Elston and Gabe (2016), 13% of male GPs and 7% of female GPs reported that they had experienced a physical assault within the last two years. Being pushed or shoved was the most common form of assault reported and 'few' assaults were reported to have resulted in physical injury (Elston and Gabe, 2016). However, a recent investigation by the BMJ found that violent incidents recorded by police forces at UK general practices had almost doubled in the five years between 2017-18 and 2020-21 (Iacobucci, 2022). In total, 1,068 incidents of violence at health centres and GP surgeries were recorded by 32 police forces in 2021-22. Within these figures, 182 assaults resulting in injury were recorded, the highest for five years. This suggests that how violence is experienced in general practice may have changed in the years following the pandemic.

Physical and psychological consequences of violence and harassment, bullying, and abuse

All forms of violence can cause harm and staff working within the NHS who face violence, harassment, and abuse may consequently experience physical injury, stress, burnout, or anxiety, and depression (Royal College of Nursing, 2021). Although it is recognised that experiencing physical violence can leave staff with long term injuries, there is a lack of direct evidence available to quantify the scale of the impact from physical injuries for staff working in the NHS.

The Health and Safety Executive (HSE) publishes statistics about violence at work based on data from the Crime Survey for England and Wales (Health & Safety Executive, 2020). Based on the latest figures (for 2019 to 2020), 38% of adults who experienced work-based violence received an injury, with most injuries classified as minor. The HSE also reports on the extent of work-based violence using figures from the Labour Force Survey and RIDDOR (Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations). Based on the Labour Force Survey, between 2017/18-2019/20 about 8% of workplace non-fatal injuries were found to be the result of physical violence at work. Based on RIDDOR, 9% of all reported non-fatal injuries were attributable to work-based violence. The estimated rate of non-fatal injury due to work-based physical violence in the human health and social work activities sector was 0.5% (equivalent to 460 cases per 100,000 workers). Based on the composition of the workforce in 2022 (Table 4), we estimated that 5,634 staff working across the NHS experienced a non-fatal injury because of work-based physical violence.

Work-related stress, anxiety, and depression are major causes of ill health and the 2022 NHS staff survey showed that a high proportion of staff working in the NHS report feeling unwell because of work-related stress (44.8%; n= 544,420). A recent systematic review found a consistent association between physical violence and bullying and harassment in the workplace and poor mental health outcomes (Nyberg et al., 2021), confirming that violence and bullying are a cause of work-related stress, anxiety, and depression. However, as for physical injury, there is a lack of evidence to directly quantify the number of NHS staff who experience work-related stress, anxiety, and depression because of experiencing violence, harassment, and abuse.

Data from the Labour Force Survey (Health & Safety Executive, 2022) reports a prevalence of 3,320 cases per 100,000 workers of self-reported work-related stress, depression or anxiety among staff working in human health and social work activities. This is equivalent to an estimated 40,661 NHS staff in 2022, and a much lower figure than that suggested by the responses to the NHS Staff Survey (n= 544,420). The predominant cause of stress, anxiety, and depression across all industries was reported to be workload (based on data reported between 2009/10-2011/12). Work-based violence, threats, and bullying were reported to be the precipitating event in an estimated 180 cases of stress, depression or anxiety per 100,000 workers; equivalent to 12.9% of all cases of stress, anxiety, and depression.

Based on the composition of the NHS workforce in 2022 (Table 5) and using this assumption (12.9%), we estimated that 69,997 staff working in the NHS may be experiencing stress, anxiety, and depression because of work-based violence, harassment, and abuse in 2021/22.

Sickness absence and presenteeism

Sickness absence is a considerable economic burden both to the NHS and the economy. It is a complex phenomenon which may reflect both physical and psychological health and non-health related issues such as motivation. The NHS has seen a high sustained average level of sickness absence since the pandemic (Palmer & Rolewicz, 2023; NHS Digital, 2022). In 2022, sickness absence rates ranged from a high of 6.7% in January 2022 to a low

of 4.9% in May 2022. There was also a large rise in absences related to stress, anxiety and depression, and other psychiatric illnesses, which accounted for around a quarter (22.4%) of all sick days across the year.

Several reviews suggest that there is an association between experiencing violence, harassment, and abuse, and taking sick leave (Lanctot and Guay, 2014; Nielsen et al., 2016). For example, a Finnish study of workplace bullying among hospital staff (Kivimäki et al., 2000) found that among staff who had experienced bullying, rates of medically certified sickness absence were 51% greater and self-certified sickness absence rates were 23% greater. Research done in the UK by Hoel and Cooper (2000) found that employees from a range of organisations who had experienced bullying took seven days more sick leave on average each year than employees who had not been bullied.

Nyberg et al. (2021) found consistent evidence of an association between sickness absence and bullying and harassment. They noted that the evidence was too limited to draw conclusions about the association with physical violence. Consequently, estimates to quantify the proportion of sickness absence related to violence specifically within healthcare settings are difficult to find within the literature. One study (Taylor-Watt et al., 2017) of a violence reduction intervention implemented in NHS specialist mental health services reported that violence and aggression on wards was a major contributor to staff sickness with around 40% of sickness absence estimated to be attributable to violence and aggression. A longitudinal study done in Denmark (Rugulies et al., 2007) found that human service employees who had been exposed to violence and threats in the last 12 months had 60% more sickness absence days than non-exposed employees. Rugulies et al. (2007) also estimated that elimination of exposure to violence and threats would reduce sickness absence days by 10%.

In the absence of NHS specific data on the number of days lost to workplace injury and ill health, we have used estimates from the Labour Force Survey. The average number of days taken off work is 9 for a workplace injury and 18 for work-related ill health (Health & Safety Executive, 2022).

Staff turnover

Staff turnover is commonly used in reference to the number or percentage of employees who leave an organisation and are replaced by new employees. The NHS Workforce Statistics (NHS Digital) show that in 2021/22, 138,660 FTE staff in hospital and community services left the NHS (Table 21). It was not possible to determine the number of staff leaving general practice as joiner and leaver statistics are only reported for general practitioners. However, there is a lack of direct evidence available about the impact of violence, harassment, and abuse on the turnover of NHS staff.

Being directly exposed to bullying in the workplace has been associated with greater intentions to leave (Carter et al., 2013; Deery et al., 2011). For example, a 2011 study of nurses in six NHS trusts found that nurses who experienced bullying or harassment from a manager were over four times more likely to intend to quit than nurses who did not have this experience (Deery et al., 2011). Harassment from managers or other colleagues was found

to have a much greater effect on intention to leave than bullying and harassment from patients or their relatives. Studies have confirmed that there is a relationship between exposure to bullying and turnover among healthcare employees (Hogh et al., 2011), but a range of estimates specific to the NHS were not identified. We identified one estimate from respondents to the 2022 Nursing and Midwifery Council (NMC) Leaver's survey. Just under 5% of respondents cited bullying as the reason for leaving their post (Nursing and Midwifery Council, 2022). Taking account of the global evidence base, a longitudinal study done in Denmark found that compared with non-bullied employees, the risk of turnover was three times higher among healthcare employees who experienced frequent bullying and 1.6 times higher among employees who experienced occasional bullying (Hogh et al., 2011). In their costing study, Kline and Lewis (2009) assumed that 15% of NHS staff who reported being bullied left. This was based on the lower of three estimates quoted in their article and based on a survey of over 3,500 adults in Ireland (O'Connell et al., 2007). As a conservative approach, we have assumed that 5% of staff who left the NHS in 2022 did so because of violence, harassment, and abuse (n= 6,933).

Cost inputs

Costs of medical treatment and rehabilitation

The costs of medical treatment and rehabilitation following incidents of violence, harassment, and abuse towards staff are also borne by the NHS. The HSE Costs to Britain model (Health & Safety Executive, 2022) estimates that each case of non-fatal injury costs an average of £12,000 and each case of ill health costs an average of £18,100 (based on 2020 prices). These estimates comprise costs to the individual, employer and government, and NHS treatment and rehabilitation costs accounted for around 20.1% of the overall total costs in the Costs to Britain model (Health & Safety Executive, 2011). To calculate the costs of medical treatment and rehabilitation, we multiplied our estimate of the number of NHS staff with non-fatal injuries due to work-based physical violence (£5,634) by the costs of a non-fatal injury (adjusted to 2021/22 prices; £12,678) multiplied by 20.1% to ascertain the costs to the NHS.

Table 11. Costs of medical treatment and rehabilitation

	Estimated number of cases ^a	Cost to society per case ^b	Cost to the NHS ^c
Physical injuries	5,634	£12,678	£14,373,475
Stress, anxiety, and depression	69,997	£19,122	£269,362,223

For year ending March 2022. Key: ^aEstimated from HSE analysis of Labour Force Survey data about the incidence of non-fatal injury due to work-based physical violence and self-reports of work-related stress, depression or anxiety due to threats and bullying. ^bExtracted from HSE Costs to Britain model (Table 1, pg. 20; Health & Safety Executive, 2022) and adjusted to 2021/2022 prices using the GDP deflator rate (March 2022). ^cBased on HSE estimates for the proportion of costs of non-fatal injury and work-related ill health that fall on the NHS (20.1%). Cost elements include ambulance costs, hospital and clinic costs, GP costs and NHS prescription costs (Health & Safety Executive, 2011).

Costs of sickness absence and presenteeism

Table 12 shows the estimated costs of sickness absence due to physical violence and harassment, bullying, and abuse in 2022. Following Kline and Lewis (2009), an estimated

62.5% of the total salary costs of sickness absence have been included for the additional cost of paying agency staff and/or overtime to cover staff absences.

Table 12. Costs of sickness absence

	Days of sickness absence ^{a,b}	Cost in lost wages ^c	Cost of agency & overtime
Physical injuries from violence	50,704	£7,904,445	£4,940,278
Ill health due to violence, harassment, and abuse	1,259,944	£196,416,938	£122,760,586

For year ending March 2022. Key: ^aStaff who experienced non-fatal physical injuries from physical violence x average days of sickness absence per staff member (average 9 days from Labour Force Survey). ^bStaff who experienced ill health due to violence, harassment, and abuse x average days of sickness absence per staff member (average 18 days from Labour Force Survey). ^cBased on mean basic pay per FTE in the 12-month period up to the end of December 2022 from NHS Staff Earning Estimates (£161.43).

Costs of sickness presenteeism

The costs of presenteeism are more difficult to calculate than the costs of days lost to sickness absence (Hassan et al., 2009). In their costing study, Kline and Lewis (2019) assumed that presenteeism due to bullying was twice that of sickness absence due to bullying. The figures underpinning this can be traced back to a report by the Sainsbury Centre for Mental Health (2007) that calculated the costs of presenteeism attributable to mental ill health. They estimated that the total costs of presenteeism were 1.8 times higher than the costs of absenteeism.

In the absence of more recent figures on the costs of presenteeism, we have therefore assumed that presenteeism due to physical violence and due to harassment, bullying, and abuse is 1.8 times the costs of sickness absenteeism to the NHS (Table 13).

Table 13. Costs of presenteeism

	Cost of presenteeism
Physical injuries from violence	£23,120,501
Ill health due to violence, harassment, and abuse	£574,519,544

For year ending March 2022.

Costs of staff turnover and replacement costs

The costs to the NHS are from the replacement costs of recruitment, including induction, training, and development (Table 14). We have used the figure of £5,614 quoted in Kline and Lewis adjusted to 2021/22 prices using the GDP deflators (£6,291). New staff may also take a few weeks to reach an 'optimal' level of productivity and we have also used the figure quoted in Kline and Lewis to calculate the costs of the productivity loss associated with staff turnover due to violence, harassment, and abuse (£13,489 per person adjusted to 2021/22 prices using the GDP deflators, £15,115).

Table 14. Costs of staff turnover

	Replacement costs	Productivity costs
Staff turnover due to work-based violence, harassment, and abuse ^a	£43,612,609	£104,789,897

For year ending March 2022. Key: ^aBased on the assumption that 5% of HCHS staff leaving the NHS was due to violence, harassment, and abuse (n= 6,933).

Other cost categories

There are other categories of costs that it was not possible to include in our model. They include legal consequences, estate costs, and responses. An initial consideration of these costs is provided below.

Legal consequences

NHS Resolution (2019) has estimated that between 2013 and 2018, £53.4 million was spent on settling claims made for assault. The average payment for claims that resulted in a damages payment in that period (39% of claims) was £23,000. For cases of bullying and harassment between staff, Kline and Lewis (2019) used a cost estimate from a study of bullying within local government and the assumption that organisations within the NHS each experience 8.5 cases of bullying and harassment. It is worth noting that compensation and legal damages are transfer payments and not resource costs. So, while they feature in other costing analyses (e.g., Kline & Lewis, 2019) they are not considered in our workplace violence model.

Estate costs

The study of a violence reduction intervention by Taylor-Watt et al. (2017) included an estimate of the estate costs for repairs to property damage due to violence against staff (e.g., the replacement of broken items). These costs were estimated by ward managers, and we have not found other costing studies which consider estate costs in their analyses. While we therefore acknowledge that estate costs may be incurred following an incidence of violence, we have not included this cost category in our workplace violence model.

Staff and managerial administration costs

Following an incident of violence, harassment or abuse, administrative costs will arise from the allocation of staff and managerial time to post-incident health and safety, security, investigation, and reporting processes. While we acknowledge that these types of administration costs may be incurred following an incidence of violence (de Weerd et al., 2014), it was not possible to include this cost category in our workplace violence model due to a lack of evidence about the time taken on reporting incidents.

Summary of costs of workplace violence against NHS staff

Table 15 shows the annual costs of violence, harassment, and abuse towards NHS staff in England for 2021/22. The overall cost of £1.4 billion comprises costs for medical treatment

and rehabilitation (£283.7 million), sickness absence (£332.0 million), sickness presenteeism (£597.6 million), and staff turnover (£148.4 million).

Table 15. Annual costs of workplace violence to the NHS in England, 2021/22

Category	2021/22 cost, £		
	Physical injuries	Stress, anxiety & depression	All violence, harassment & abuse
Medical treatment and rehabilitation	£14,373,475	£269,362,223	£283,735,698
Sickness absence			
Cost in lost wages	£7,904,445	£196,416,938	£204,321,383
Cost to the employer in agency/overtime	£4,940,278	£122,760,586	£127,700,864
Sickness presenteeism	£23,120,501	£574,519,544	£597,640,045
Staff turnover			
Replacement costs	-	-	£43,612,609
Productivity costs	-	-	£104,789,897
Annual costs of violence, harassment, and abuse against NHS staff in England			£1,361,800,495

5 Future recommendations

This report has examined the costs of community violence and violence, harassment, and abuse towards staff working in the NHS in England in 2021/22.

There are several limitations and assumptions associated with the data used to underpin our costing models, below we have outlined some key recommendations for potential future work in this area that have been developed in consultation with members of the Violence Prevention Data and Oversight Group.

- It is likely that different types of interpersonal violence have different cost impacts on the NHS. In future iterations of the model, we would recommend research on whether data on the different types of interpersonal violence (physical, sexual, psychological, and deprivation or neglect) can be separated out for analysis.
- Like other costing studies, including Kline and Lewis (2019), our model of violence, harassment, and abuse towards NHS staff does not consider the cost impacts arising from staff witnessing incidents. We would recommend that future iterations of the model consider if and how it is possible to consider these cost implications, as there is evidence that witnessing violence, harassment, and abuse can impact staff wellbeing (Thompson et al., 2020).
- Our model does not consider the cost impacts of patient harm ultimately arising from violence, harassment, and abuse towards staff, but evidence suggests that disruptive and uncivil behaviours between healthcare workers are associated with impacts to patient safety and reduced quality of patient care (Guo et al., 2022; Hicks et al., 2022). We would recommend that future iterations of the model consider the impacts of violence, harassment, and abuse on safety culture.
- Violence, harassment, and abuse towards staff may be a contributing factor or the sole triggering factor for a staff member to leave the NHS. However, there is currently a lack of direct evidence available about the impact of violence, harassment, and abuse on NHS staff leaver rates, and much of the current evidence focuses on intentions to leave. We recommend that future versions of this model consider both contributing factors and sole triggering factors in determining staff turnover, but this will only be possible if there is an increased understanding of the consequences of violence, harassment, and abuse for staff turnover from local, regional, and/or national data collection.

6 References

- Admasachew, L., & Dawson, J. (2011). The association between presenteeism and engagement of National Health Service staff. *Journal of Health Services Research & Policy*, 16, 29-33.
- BMA. (2021). 'BMA urges public to be kind as survey reveals worrying levels of abuse against doctors and colleagues', BMA, 10 August. Available from: <https://www.bma.org.uk/bma-media-centre/bma-urges-public-to-be-kind-as-survey-reveals-worrying-levels-of-abuse-against-doctors-and-colleagues>.
- Carter, M., Thompson, N., Crampton, P., Morrow, G., Burford, B., et al. (2013). Workplace bullying in the UK NHS: a questionnaire and interview study on prevalence, impact and barriers to reporting. *BMJ Open*, 3, e002628.
- De Weerd, M., Tierney, R., van Duuren-Stuurman, B., & Bertranou, E. (2014). Estimating the cost of accidents and ill-health at work: a review of methodologies. *European Risk Observatory*. Luxembourg: Publications Office of the European Union.
- Deery, S., Walsh, J., & Guest, D. (2011). Workplace aggression: the effects of harassment on job burnout and turnover intentions. *Work, Employment & Society*, 25(4), 742-759.
- Dheensa, S., McLindon, E., Spencer, C., Pereira, S., Shrestha, S., et al. (2022). Healthcare professionals' own experiences of domestic violence and abuse: a meta-analysis of prevalence and systematic review of risk markers and consequences. *Trauma, Violence & Abuse*, 24(3), 1282-1299.
- Drummond, M.F., O'Brien, B.J., Torrance, G.W., & Stoddart, G.L. (1997). *Methods for the Economic Evaluation of Health Care Programmes*. 2nd edn. Oxford: Oxford University Press.
- Elston, M. A. & Gabe, J. (2016) Violence in general practice: a gendered risk? *Sociology of Health and Illness*, 38, 426-441.
- Feder, G., Davies, R.A., Baird, K., Dunne, D., Eldridge, S., et al. (2011). Identification and Referral to Improve Safety (IRIS) of women experiencing domestic violence with a primary care training and support programme: a cluster randomised controlled trial. *Lancet*, 378(9805), 1788-95.
- Florence, C., Shepherd, J., Brennan, I., Simon, T. (2011). Effectiveness of anonymised information sharing and use in health service, police and local government partnership for preventing violence related injury: experimental study and time series analysis. *BMJ*, 342, d3313.
- Ford, K., Wood, S., Hughes, K., & Quigg, Z. (2014). *Accident and Emergency department data sharing to support violence prevention in Wigan*. Liverpool: Centre for Public Health, Liverpool John Moores University.

Giga, S.I., Hoel, H., & Lewis, D. (2008). *The costs of workplace bullying*. Bradford: University of Bradford.

Guo, L., Ryan, B., Leditschke, I.A., Haines, K.J., Cook, K., et al. (2022). Impact of unacceptable behaviour between healthcare workers on clinical performance and patient outcomes: a systematic review. *BMJ Quality & Safety*, 31, 679-687.

Hassan, E., Austin, C., Celia, C., Disley, E., Hunt, P., et al. (2009). *Health and wellbeing at work in the United Kingdom*. London: RAND Europe.

Hassard, J., Teoh, K.R.H. & Cox, T. (2019). Estimating the economic burden posed by work-related violence to society: a systematic review of cost-of-illness studies. *Safety Science*, 116, 208-221

Health and Safety Executive. (2011) HSE Research Report RR897. *The costs to Britain of workplace injuries and work-related ill health in 2006/07 - Workplace fatalities and self-reports*. Prepared by Risk Solutions for the Health and Safety Executive. Available from: <https://www.hse.gov.uk/research/rrhtm/rr897.htm>.

Health & Safety Executive. (2020). *Violence at work statistics, 2020*. Available from: <https://www.hse.gov.uk/statistics/causinj/violence/work-related-violence-report.pdf>.

Health and Safety Executive. (2022). *Costs to Britain of workplace fatalities and self-reported injuries and ill health, 2019/20*. Available from: <https://www.hse.gov.uk/statistics/pdf/cost-to-britain.pdf>.

Heeks, M., Reed, S., Tafsiri, M., & Prince, S. (2018). *The economic and social costs of crime*. Second edition. London: Home Office.

Hicks, S., & Stavropoulou, C. (2022). The effect of health care professional disruptive behavior on patient care: a systematic review. *Journal of Patient Safety*, 18, 138-143.

Hobbs, F. D. (1991). Violence in general practice: a survey of general practitioners' views. *BMJ*, 302, 329-332.

Hoel, H., & Cooper, C. L. (2000). *Destructive conflict & bullying at work*. Manchester: Manchester School of Management, University of Manchester, Institute of Science and Technology.

Hogh, A., Hoel, H., & Carneiro, I.G. (2011). Bullying and employee turnover among healthcare workers: a three-wave prospective study. *Journal of Nursing Management*, 19, 742-751.

Iacobucci, G. (2022). 'Violent incidents at GP practices double in five years, BMJ investigation finds', *BMJ*, 31 May. Available at: <https://www.bmj.com/content/bmj/377/bmj.o1333.full.pdf>.

International Labour Office, International Council of Nurses, World Health Organization, & Public Services International. (2002). *Framework guidelines for addressing workplace violence in the health sector*. Geneva: International Labour Office.

Jones, L., Bigland, C., & Quigg, Z. (2020). Costs of violence to the healthcare system in Wales. Liverpool: Public Health Institute, Liverpool John Moores University.

Jones, L. (2021). Demonstrating the costs of violence to the healthcare system. Development of a costing tool. Liverpool: Public Health Institute, Liverpool John Moores University.

Jones, L., Bates, R., Butler, N., & Quigg, Z. (2021). Economic and social costs of violence on Merseyside. Liverpool: Public Health Institute, Liverpool John Moores University.

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

Kivimäki, M., Elovainio, M., & Vahtera, J. (2000). Workplace bullying and sickness absence in hospital staff. *Occupational and Environmental Medicine*, 57, 656–660.

Kline, R., Lewis, D. (2019). The price of fear: estimating the financial cost of bullying and harassment to the NHS in England. *Public Money & Management*, 39(3), 166-174.

Krug, E.G., Dahlberg, L.L., Mercy, J.A., Zwi, A.B., & Lozano, R. (eds). (2002). World report on violence and health. Geneva: World Health Organization.

Lanctôt, N., & Guay, S. (2014). The aftermath of workplace violence among healthcare workers: a systematic literature review of the consequences. *Aggression and Violent Behavior*, 19(5), 492-501.

National Audit Office. (2003). A safer place to work: protecting NHS hospital and ambulance staff from violence and aggression. London: The Stationery Office.

Nielsen, M.B., Indregard, A.M., & Øverland, S. (2016). Workplace bullying and sickness absence: a systematic review and meta-analysis of research literature. *Scandinavian Journal of Work, Environment & Health*, 42(5), 359-370.

Ness, G. J., House, A., & Ness, A. R. (2000). Aggression and violent behaviour in general practice: population based survey in the north of England. *BMJ*, 320, 1447-1448.

NHS Security Management Service. (2010). Cost of violence against NHS staff: A report summarising the economic cost to the NHS of violence against staff 2007/8. London: NHS Counter Fraud Service.

NHS Resolution. (2019). Insights from assault claims. Available from: <https://resolution.nhs.uk/resources/insights-from-assault-claims/>

Nursing and Midwifery Council. (2022). Leaver's survey 2022. London: Nursing and Midwifery Council.

Nyberg, A., Kecklund, G., Magnusson Hanson, L., & Rajaleid, K. (2021). Workplace violence and health in human service industries: a systematic review of prospective and longitudinal studies. *Occupational and Environmental Health*, 78, 69-81.

O'Connell, P. J., Calvert, E., & Watson, D. (2007). *Bullying in the workplace: Survey reports, 2007*. Dublin: Economic and Social Research Institute.

Palmer, W., & Rolewicz, L. (2023). *All is not well: sickness absence in the NHS in England*. Briefing. Nuffield Trust.

Rantanen, I., & Tuominen, R. (2011). Relative magnitude of presenteeism and absenteeism and work-related factors affecting them among health care professionals. *International Archives of Occupational and Environmental Health*, 84, 225–30.

Rice, D.P. (2000). Cost of illness studies: what is good about them? *Injury Prevention*, 6, 177-179.

Risk Solutions. (2011). *The costs to Britain of workplace injuries and work-related ill health in 2006/07. Workplace fatalities and self reports*. Available from: <https://www.hse.gov.uk/research/rrhtm/rr897.htm>

Royal College of Nursing. (2021). 'RCN position on work-related violence in health and social care'. Available at: www.rcn.org.uk/About-us/Our-Influencing-work/Position-statements/rcn-position-on-work-related-violence-in-health-and-social-care.

Rugulies, R., Christensen, K. B., Borritz, M., Villadsen, E., Bültmann, U., & Kristensen, T. S. (2007). The contribution of the psychosocial work environment to sickness absence in human service workers: Results of a 3-year follow-up study, *Work & Stress*, 21, 293-311.

Sainsbury Centre for Mental Health. (2007). *Mental Health at Work: Developing the business case*. Policy Paper 8. London: Sainsbury Institute for Mental Health.

Schopper, D., Lormand, J.D. & Waxweiler, R. (eds) (2006). *Developing policies to prevent injuries and violence: guidelines for policy-makers and planners*. Geneva: World Health Organization.

Shiell, A., Gerard, K., & Donaldson, C. (1987). Cost of illness studies: an aid to decision-making? *Health Policy*, 8, 317-323.

Sivarajasingam, V., Guan, B., Page, N., Moore, S., & Shepherd, J. P. (2022). *Violence in England and Wales in 2021: An accident and emergency perspective*. Cardiff: Violence Research Group.

Slawomirski, L., Aaraaen, A., & Klazinga, N. (2017). *The economics of patient safety. Strengthening a value-based approach to reducing patient harm at national level*. Paris: OECD Publishing. Available from: <https://www.oecd.org/els/health-systems/The-economics-of-patient-safety-March-2017.pdf>

Speroni, K.G., Fitch, T., Dawson, E., Dugan, L., & Atherton, M. (2014). Incidence and cost of nurse workplace violence perpetrated by hospital patients or patient visitors. *Journal of Emergency Nursing*, 40(3), 218-228.

Taylor-Watt, J., Cruickshank, A., Innes, J., Brome, B., & Shah, A. (2017). Reducing physical violence and developing a safety culture across wards in East London. *British Journal of Mental Health Nursing*, 6(1), 35-43.

Thompson, N.J., Carter, M., Crampton, P., Burford, B., Illing, J., & Morrow, G. (2020). Workplace bullying in healthcare: a qualitative analysis of bystander experiences. *The Qualitative Report*, 25, 3993-4028.

Van Den Bos, J., Creten, N., Davenport, S. & Roberts, M. (2017). Cost of community violence to hospitals and health systems. Milliman, Denver: Report for the American Hospital Association.

Violence Reduction Programme London. (2022). In-Hospital Violence Reduction Services: A Guide to Effective Implementation March 2022. London: NHS England and Improvement.

Walby, S. (2004) The cost of domestic violence. London: Women and Equality Unit, Department of Trade and Industry.

World Medical Association. (2020). Agenda item 3: Covid-19 pandemic response. [Online] Available at: <https://www.wma.net/wp-content/uploads/2020/05/WHA73-WMA-statement-on-Covid-19-pandemic-response-.pdf>

Willer, F., Chua, D., & Ball, L. (2023). Patient aggression towards receptionists in general practice: a systematic review. *Family Medicine and Community Health*, 11, e002171.

7 Data appendices

Table 16. Estimated population size at national, regional and ICB level

	Estimated population (based on mid-2020 population estimates)					
	All ages	0 to 10 y	11 to 17 y	18 to 30 y	31 to 50 y	51+ y
ENGLAND	56,550,138	7,481,992	4,611,296	9,253,046	14,664,744	20,539,060
North East and Yorkshire	8,520,726	1,082,812	684,256	1,443,073	2,079,498	3,231,087
NHS Humber and North Yorkshire ICB	1,708,723	201,687	133,572	255,735	402,206	715,523
NHS North East and North Cumbria ICB	3,000,432	361,878	231,801	494,823	717,070	1,194,860
NHS South Yorkshire ICB	1,415,054	181,058	113,776	264,314	349,493	506,413
NHS West Yorkshire ICB	2,396,517	338,189	205,107	428,201	610,729	814,291
North West	7,053,843	935,215	577,299	1,184,765	1,769,585	2,586,979
NHS Cheshire and Merseyside ICB	2,503,902	314,694	195,177	401,365	614,221	978,445
NHS Greater Manchester ICB	2,848,286	406,069	242,521	519,734	751,968	927,994
NHS Lancashire and South Cumbria ICB	1,701,655	214,452	139,601	263,666	403,396	680,540
Midlands	10,827,512	1,422,105	892,120	1,825,310	2,678,008	4,009,969
NHS Birmingham and Solihull ICB	1,358,012	207,161	127,293	285,927	340,496	397,135
NHS Black Country ICB	1,202,528	177,914	107,101	190,114	313,725	413,674
NHS Coventry and Warwickshire ICB	963,173	124,520	75,440	191,559	240,075	331,579
NHS Derby and Derbyshire ICB	1,063,997	129,955	84,493	158,554	262,764	428,231
NHS Herefordshire and Worcestershire ICB	791,685	93,961	61,421	106,264	188,083	341,956
NHS Leicester, Leicestershire and Rutland ICB	1,107,597	143,723	91,539	205,795	271,998	394,542
NHS Lincolnshire ICB	766,333	90,325	57,007	110,249	175,283	333,469
NHS Northamptonshire ICB	757,181	107,089	65,998	105,623	200,061	278,410
NHS Nottingham and Nottinghamshire ICB	1,170,475	146,859	90,907	227,077	284,259	421,373
NHS Shropshire, Telford and Wrekin ICB	506,737	60,744	41,195	69,174	121,841	213,783
NHS Staffordshire and Stoke-on-Trent ICB	1,139,794	139,854	89,726	174,974	279,423	455,817
East of England	6,545,948	884,406	542,688	943,406	1,693,620	2,481,828
NHS Bedfordshire, Luton and Milton Keynes ICB	959,098	148,864	86,302	136,137	272,262	315,533
NHS Cambridgeshire and Peterborough ICB	879,655	122,016	72,304	138,683	230,432	316,220
NHS Hertfordshire and West Essex ICB	1,488,061	211,532	129,574	210,385	408,304	528,266
NHS Mid and South Essex ICB	1,199,296	162,411	101,036	166,531	314,963	454,355
NHS Norfolk and Waveney ICB	1,032,661	118,453	76,241	148,699	234,438	454,830
NHS Suffolk and North East Essex ICB	987,177	121,130	77,231	142,971	233,221	412,624
London	9,002,488	1,316,328	731,267	1,656,052	2,832,074	2,466,767
NHS North Central London ICB	1,526,582	211,494	124,371	307,943	466,661	416,113

	Estimated population (based on mid-2020 population estimates)					
	All ages	0 to 10 y	11 to 17 y	18 to 30 y	31 to 50 y	51+ y
NHS North East London ICB	2,036,470	320,217	172,696	396,432	659,749	487,376
NHS North West London ICB	2,111,469	308,386	169,008	370,530	643,911	619,634
NHS South East London ICB	1,818,226	255,695	142,507	337,160	583,338	499,526
NHS South West London ICB	1,509,741	220,536	122,685	243,987	478,415	444,118
South East	8,933,822	1,163,554	746,693	1,341,489	2,266,305	3,415,781
NHS Buckinghamshire, Oxfordshire and Berkshire West ICB	1,723,447	235,339	150,582	263,326	450,008	624,192
NHS Frimley ICB	746,739	107,630	68,984	105,059	212,517	252,549
NHS Hampshire and Isle Of Wight ICB	1,831,473	224,852	143,607	302,023	440,505	720,486
NHS Kent and Medway ICB	1,868,199	251,649	160,363	275,485	469,008	711,694
NHS Surrey Heartlands ICB	1,052,425	143,084	91,491	144,388	277,253	396,209
NHS Sussex ICB	1,711,539	201,000	131,666	251,208	417,014	710,651
South West	5,665,799	677,572	436,973	858,951	1,345,654	2,346,649
NHS Bath and North East Somerset, Swindon and Wiltshire ICB	929,964	118,822	76,520	141,304	232,952	360,366
NHS Bristol, North Somerset and South Gloucestershire ICB	969,256	124,914	73,240	197,991	252,007	321,104
NHS Cornwall and The Isles Of Scilly ICB	575,525	65,854	43,439	75,172	127,573	263,487
NHS Devon ICB	1,209,773	137,447	89,404	182,402	270,314	530,206
NHS Dorset ICB	776,780	85,579	58,471	104,675	178,480	349,575
NHS Gloucestershire ICB	640,650	78,539	51,023	88,415	157,286	265,387
NHS Somerset ICB	563,851	66,417	44,876	68,992	127,042	256,524
NHS Region						
North East and Yorkshire	8,520,726	1,082,812	684,256	1,443,073	2,079,498	3,231,087
North West	7,053,843	935,215	577,299	1,184,765	1,769,585	2,586,979
Midlands	10,827,512	1,422,105	892,120	1,825,310	2,678,008	4,009,969
East of England	6,545,948	884,406	542,688	943,406	1,693,620	2,481,828
London	9,002,488	1,316,328	731,267	1,656,052	2,832,074	2,466,767
South East	8,933,822	1,163,554	746,693	1,341,489	2,266,305	3,415,781
South West	5,665,799	677,572	436,973	858,951	1,345,654	2,346,649

Table 17. Estimated number of incidents of violence at national, regional and ICB level, year ending March 2022

	Police recorded crime		
	Violence with injury	Violence without injury	Homicides
ENGLAND	527,979	757,210	664
North East and Yorkshire			
NHS Humber and North Yorkshire ICB	17,521	20,187	19
NHS North East and North Cumbria ICB	31,376	41,557	29
NHS South Yorkshire ICB	15,372	20,109	19
NHS West Yorkshire ICB	28,961	45,632	30
North West			
NHS Cheshire and Merseyside ICB	25,444	42,012	19
NHS Greater Manchester ICB	30,525	54,041	57
NHS Lancashire and South Cumbria ICB	19,168	24,393	15
Midlands			
NHS Birmingham and Solihull ICB	19,929	30,428	32
NHS Black Country ICB	15,591	22,790	16
NHS Coventry and Warwickshire ICB	8,649	13,364	13
NHS Derby and Derbyshire ICB	9,101	14,352	18
NHS Herefordshire and Worcestershire ICB	6,724	8,209	12
NHS Leicester, Leicestershire and Rutland ICB	12,948	11,110	15
NHS Lincolnshire ICB	6,192	8,559	13
NHS Northamptonshire ICB	7,504	10,951	11
NHS Nottingham and Nottinghamshire ICB	11,111	12,613	9
NHS Shropshire, Telford and Wrekin ICB	4,349	5,357	7
NHS Staffordshire and Stoke-on-Trent ICB	8,501	10,401	9
East of England			
NHS Bedfordshire, Luton and Milton Keynes ICB	7,682	12,089	17
NHS Cambridgeshire and Peterborough ICB	5,652	11,960	5
NHS Hertfordshire and West Essex ICB	10,852	16,608	15
NHS Mid and South Essex ICB	9,902	18,180	17
NHS Norfolk and Waveney ICB	9,069	13,900	15
NHS Suffolk and North East Essex ICB	8,435	14,225	11
London			
NHS North Central London ICB	12,189	15,959	23

	Police recorded crime		
	Violence with injury	Violence without injury	Homicides
NHS North East London ICB	17,435	22,732	29
NHS North West London ICB	19,210	25,989	24
NHS South East London ICB	16,065	18,764	33
NHS South West London ICB	11,119	13,947	15
South East			
NHS Buckinghamshire, Oxfordshire and Berkshire West ICB	11,223	16,790	16
NHS Frimley ICB	5,625	8,521	4
NHS Hampshire and Isle of Wight ICB	19,403	25,506	14
NHS Kent and Medway ICB	18,301	36,038	15
NHS Surrey Heartlands ICB	6,361	10,351	3
NHS Sussex ICB	13,657	18,095	8
South West			
NHS Bath and North East Somerset, Swindon and Wiltshire ICB	7,217	9,062	4
NHS Bristol, North Somerset and South Gloucestershire ICB	7,934	13,836	8
NHS Cornwall and The Isles of Scilly ICB	4,755	4,639	6
NHS Devon ICB	11,229	12,694	11
NHS Dorset ICB	6,179	7,696	7
NHS Gloucestershire ICB	5,422	6,446	17
NHS Somerset ICB	4,096	7,118	4
NHS Region			
North East and Yorkshire	93,230	127,485	97
North West	75,137	120,446	91
Midlands	110,599	148,134	155
East of England	51,592	86,962	80
London	76,018	97,391	124
South East	74,571	115,301	60
South West	46,832	61,491	57

Table 18. Estimated hospital resource use and medical requirements following an incident of violence at national, regional and ICB level, year ending March 2022

	Ambulance call outs	Emergency department attendance	Emergency hospital admissions	Requirements for medical treatment			
				Physical impacts	Emotional impacts – Fear	Emotional impacts – Depression	Emotional impacts - Anxiety
ENGLAND	21,281	138,835	23,489	180,833	410,565	171,452	311,433
North East and Yorkshire							
NHS Humber and North Yorkshire ICB	706	3,962	584	6,001	11,944	5,294	9,198
NHS North East and North Cumbria ICB	1,265	7,213	1,768	10,746	23,229	9,914	17,716
NHS South Yorkshire ICB	620	3,598	789	5,265	11,295	4,837	8,622
NHS West Yorkshire ICB	1,167	6,053	1,254	9,919	23,914	9,732	18,025
North West							
NHS Cheshire and Merseyside ICB	1,026	5,998	1,980	8,715	21,663	8,704	16,278
NHS Greater Manchester ICB	1,230	7,315	1,678	10,455	27,226	10,734	20,366
NHS Lancashire and South Cumbria ICB	773	4,007	849	6,565	13,852	5,977	10,594
Midlands							
NHS Birmingham and Solihull ICB	803	3,658	807	6,826	16,125	6,619	12,180
NHS Black Country ICB	628	2,933	506	5,340	12,270	5,097	9,295
NHS Coventry and Warwickshire ICB	349	2,510	328	2,962	7,052	2,885	5,322
NHS Derby and Derbyshire ICB	367	2,497	371	3,117	7,519	3,059	5,667
NHS Herefordshire and Worcestershire ICB	271	1,775	175	2,303	4,741	2,069	3,636
NHS Leicester, Leicestershire and Rutland ICB	522	2,811	294	4,435	7,532	3,608	5,922
NHS Lincolnshire ICB	250	1,733	192	2,121	4,706	1,985	3,578
NHS Northamptonshire ICB	302	1,779	288	2,570	5,900	2,452	4,470
NHS Nottingham and Nottinghamshire ICB	448	3,001	468	3,806	7,511	3,342	5,790
NHS Shropshire, Telford and Wrekin ICB	175	1,150	115	1,490	3,083	1,342	2,363
NHS Staffordshire and Stoke-on-Trent ICB	343	2,694	293	2,912	6,002	2,617	4,602
East of England							
NHS Bedfordshire, Luton and Milton Keynes ICB	310	2,315	428	2,631	6,338	2,580	4,778
NHS Cambridgeshire and Peterborough ICB	228	2,136	299	1,936	5,706	2,144	4,220
NHS Hertfordshire and West Essex ICB	437	3,551	575	3,717	8,794	3,607	6,641
NHS Mid and South Essex ICB	399	2,805	420	3,391	9,053	3,534	6,756
NHS Norfolk and Waveney ICB	366	2,332	212	3,106	7,356	3,016	5,555

	Ambulance call outs	Emergency department attendance	Emergency hospital admissions	Requirements for medical treatment			
				Physical impacts	Emotional impacts – Fear	Emotional impacts – Depression	Emotional impacts - Anxiety
NHS Suffolk and North East Essex ICB	340	2,263	216	2,889	7,283	2,909	5,465
London							
NHS North Central London ICB	491	4,236	589	4,175	8,961	3,836	6,840
NHS North East London ICB	703	5,669	978	5,971	12,785	5,480	9,761
NHS North West London ICB	774	5,548	1,134	6,579	14,407	6,113	10,972
NHS South East London ICB	648	4,949	779	5,502	11,039	4,875	8,493
NHS South West London ICB	448	3,911	571	3,808	7,966	3,451	6,099
South East							
NHS Buckinghamshire, Oxfordshire and Berkshire West ICB	452	4,161	340	3,844	8,963	3,700	6,780
NHS Frimley ICB	227	1,809	248	1,927	4,528	1,863	3,422
NHS Hampshire and Isle of Wight ICB	782	4,413	493	6,646	14,299	6,115	10,911
NHS Kent and Medway ICB	738	4,404	743	6,268	17,560	6,726	13,047
NHS Surrey Heartlands ICB	256	2,461	281	2,179	5,364	2,164	4,035
NHS Sussex ICB	550	3,976	563	4,677	10,113	4,316	7,713
South West							
NHS Bath and North East Somerset, Swindon and Wiltshire ICB	291	2,209	283	2,472	5,174	2,241	3,961
NHS Bristol, North Somerset and South Gloucestershire ICB	320	2,575	492	2,717	7,005	2,773	5,245
NHS Cornwall and The Isles of Scilly ICB	192	1,253	195	1,629	2,956	1,370	2,303
NHS Devon ICB	453	2,764	307	3,846	7,572	3,374	5,839
NHS Dorset ICB	249	1,727	284	2,116	4,409	1,913	3,377
NHS Gloucestershire ICB	219	1,464	118	1,857	3,764	1,654	2,892
NHS Somerset ICB	165	1,214	201	1,403	3,608	1,430	2,702
NHS Region							
North East and Yorkshire	3,758	20,826	4,396	31,931	70,382	29,777	53,561
North West	3,029	17,321	4,507	25,734	62,741	25,414	47,238
Midlands	4,458	26,541	3,838	37,880	82,439	35,077	62,827
East of England	2,080	15,404	2,149	17,670	44,529	17,791	33,415
London	3,064	24,312	4,051	26,036	55,158	23,755	42,165
South East	3,006	21,224	2,667	25,541	60,828	24,884	45,908
South West	1,888	13,206	1,881	16,040	34,488	14,754	26,319

Table 19. NHS HCHS workforce by staff group at national, regional and ICB level, June 2022

Organisation	Total	HCHS Total	HCHS Doctors	Nurses & health visitors	Midwives	Ambulance staff	Scientific, therapeutic & technical staff	Support to clinical staff*	NHS infrastructure support**	Other staff
North East and Yorkshire	222,213	199,694	19,205	51,586	3,240	2,391	25,719	63,797	33,705	52
NHS Humber and North Yorkshire ICB	66,786	28,611	3,019	7,586	523	18	3,475	8,354	5,632	4
NHS North East and North Cumbria ICB	163,058	73,391	7,387	21,190	1,195	50	9,929	23,038	10,597	6
NHS South Yorkshire ICB	81,264	37,133	3,580	9,643	548	9	5,003	11,985	6,330	36
NHS West Yorkshire ICB	117,335	52,569	5,218	13,017	974	40	7,305	16,136	9,873	6
Yorkshire Ambulance Service NHS Trust	10,459	5,229	2	70	-	1,468	5	2,743	942	-
North East Ambulance Service NHS Foundation Trust	5,523	2,761	0	80	-	807	1	1,542	330	-
North West	204,779	186,675	17,267	49,832	2,934	2,405	23,803	57,634	32,784	16
NHS Cheshire and Merseyside ICB	148,505	67,627	6,369	18,821	970	10	8,989	20,034	12,428	7
NHS Greater Manchester ICB	166,056	76,064	7,597	20,602	1,342	12	10,237	22,855	13,412	7
NHS Lancashire and South Cumbria ICB	82,421	36,697	3,299	10,310	623	5	4,574	11,586	6,299	1
North West Ambulance Service NHS Trust	12,575	6,288	2	99	-	2,378	4	3,160	645	-
Midlands	254,095	226,945	21,929	58,783	3,993	3,908	27,694	74,394	36,180	63
NHS Birmingham and Solihull ICB	88,183	40,670	4,669	10,744	774	1	5,525	11,106	7,823	27
NHS Black Country ICB	49,533	21,899	2,232	5,983	445	42	2,674	7,188	3,331	3
NHS Coventry and Warwickshire ICB	41,514	18,688	2,008	5,174	389	4	2,450	6,303	2,355	6
NHS Derby and Derbyshire ICB	48,613	21,485	2,052	6,086	447	25	2,837	6,817	3,202	18
NHS Herefordshire and Worcestershire ICB	29,914	12,761	1,181	3,602	266	11	1,721	4,126	1,853	-
NHS Leicester, Leicestershire and Rutland ICB	43,990	19,367	2,185	5,029	334	9	2,376	6,137	3,297	-
NHS Lincolnshire ICB	28,273	11,782	1,070	2,935	200	39	1,330	4,312	1,896	1
NHS Northamptonshire ICB	30,486	13,304	1,294	3,804	268	21	1,438	4,260	2,219	1
NHS Nottingham and Nottinghamshire ICB	63,084	28,660	2,812	7,753	458	7	3,457	8,999	5,167	6
NHS Shropshire, Telford and Wrekin ICB	20,153	8,821	843	2,282	200	7	1,070	2,758	1,660	1
NHS Staffordshire and Stoke-on-Trent ICB	43,995	19,282	1,573	5,235	211	2	2,782	6,893	2,585	1
East Midlands Ambulance Service NHS Trust	7,383	3,691	-	28	-	1,286	2	2,167	208	-
West Midlands Ambulance Service University NHS Foundation Trust	13,071	6,535	10	127	-	2,455	31	3,327	585	-
East of England	131,861	115,767	12,649	29,971	2,261	1,829	13,416	36,060	19,460	120

Organisation	Total	HCHS Total	HCHS Doctors	Nurses & health visitors	Midwives	Ambulance staff	Scientific, therapeutic & technical staff	Support to clinical staff*	NHS infrastructure support**	Other staff
NHS Bedfordshire, Luton and Milton Keynes ICB	25,860	10,775	1,586	2,853	346	2	1,129	3,012	1,846	1
NHS Cambridgeshire and Peterborough ICB	55,030	25,145	2,909	7,303	357	18	3,291	7,783	3,481	3
NHS Hertfordshire and West Essex ICB	45,937	19,745	2,303	5,196	445	4	2,514	5,482	3,762	38
NHS Mid and South Essex ICB	43,235	19,176	2,126	5,165	420	12	1,944	6,219	3,290	1
NHS Norfolk and Waveney ICB	49,149	21,307	2,159	5,655	349	8	2,676	6,674	3,783	3
NHS Suffolk and North East Essex ICB	33,939	14,335	1,566	3,777	344	9	1,863	4,175	2,525	75
East of England Ambulance Service NHS Trust	10,571	5,285	1	21	-	1,776	-	2,714	773	-
London	229,309	211,325	27,275	57,831	4,144	2,548	30,405	57,663	31,267	192
NHS North Central London ICB	101,220	47,663	6,181	12,984	773	17	7,473	13,475	6,717	43
NHS North East London ICB	86,819	39,436	4,914	11,083	926	17	6,274	10,945	5,267	10
NHS North West London ICB	94,571	42,942	5,888	12,521	896	2	5,629	11,088	6,802	115
NHS South East London ICB	104,851	48,793	6,792	14,149	905	1	7,501	11,619	7,805	23
NHS South West London ICB	58,021	25,923	3,499	7,059	644	13	3,525	7,687	3,495	2
London Ambulance Service NHS Trust	13,137	6,569	2	35	-	2,499	2	2,849	1,181	-
South East	187,637	166,908	17,686	42,926	3,010	2,629	20,427	53,086	27,128	16
NHS Buckinghamshire, Oxfordshire and Berkshire West ICB	65,059	28,398	3,585	7,990	549	37	4,022	8,658	3,552	5
NHS Frimley ICB	29,759	13,300	1,377	3,511	301	7	1,635	3,905	2,564	-
NHS Hampshire and Isle Of Wight ICB	85,007	38,079	4,224	10,762	597	108	4,736	12,275	5,372	5
NHS Kent and Medway ICB	70,962	31,219	3,327	7,978	727	30	3,765	9,377	6,011	4
NHS Surrey Heartlands ICB	36,240	15,967	2,057	3,925	327	25	2,010	4,768	2,854	1
NHS Sussex ICB	72,432	32,039	3,113	8,643	507	14	4,240	10,075	5,446	2
South Central Ambulance Service NHS Foundation Trust	8,214	4,107	1	111	-	1,032	6	2,485	472	-
South East Coast Ambulance Service NHS Foundation Trust	7,599	3,800	2	7	1	1,376	13	1,543	857	-
South West	133,298	117,424	11,796	28,553	1,960	2,137	14,903	37,247	20,808	21
NHS Bath and North East Somerset, Swindon and Wiltshire ICB	40,086	17,480	1,913	4,653	353	23	2,237	5,433	2,867	2
NHS Bristol, North Somerset and South Gloucestershire ICB	42,287	18,569	2,525	4,672	423	1	2,429	5,216	3,303	-

Organisation	Total	HCHS Total	HCHS Doctors	Nurses & health visitors	Midwives	Ambulance staff	Scientific, therapeutic & technical staff	Support to clinical staff*	NHS infrastructure support**	Other staff
NHS Cornwall and The Isles Of Scilly ICB	23,339	9,814	860	2,394	156	7	1,229	3,216	1,951	1
NHS Devon ICB	63,799	28,424	2,960	6,630	374	22	3,884	9,078	5,472	4
NHS Dorset ICB	36,965	16,415	1,497	4,332	229	32	2,174	5,490	2,652	8
NHS Gloucestershire ICB	25,733	11,175	1,024	2,946	224	32	1,520	3,470	1,955	3
NHS Somerset ICB	25,470	11,088	1,017	2,893	200	21	1,429	3,482	2,043	3
South Western Ambulance Service NHS Foundation Trust	8,917	4,459	1	34	-	1,999	1	1,860	565	-
England	1,363,192	1,224,739	127,808	319,481	21,541	17,847	156,367	379,881	201,332	481

Key: *Includes support to doctors, nurses and midwives; support to ambulance staff; support to scientific, therapeutic & technical staff. **Includes central functions; hotel, property and estates; senior managers; managers.

Table 20. General Practice workforce by staff group at national, regional and ICB level, June 2022

Organisation	General Practice Total	GP Total	GP Nurses Total	GP DPC Total	GP Admin Total
North East and Yorkshire	22,519	5,282	3,030	2,637	11,569
NHS Humber and North Yorkshire ICB	4,783	1,015	615	776	2,376
NHS North East and North Cumbria ICB	8,138	1,898	1,143	859	4,239
NHS South Yorkshire ICB	3,499	853	478	357	1,812
NHS West Yorkshire ICB	6,099	1,517	794	646	3,142
Yorkshire Ambulance Service NHS Trust	-	-	-	-	-
North East Ambulance Service NHS Foundation Trust	-	-	-	-	-
North West	18,104	4,718	2,079	1,546	9,761
NHS Cheshire and Merseyside ICB	6,625	1,816	755	499	3,556
NHS Greater Manchester ICB	6,964	1,876	738	565	3,785
NHS Lancashire and South Cumbria ICB	4,514	1,026	586	482	2,420
North West Ambulance Service NHS Trust	-	-	-	-	-
Midlands	27,150	6,887	3,240	2,921	14,103
NHS Birmingham and Solihull ICB	3,422	956	329	338	1,798
NHS Black Country ICB	2,868	745	337	222	1,563
NHS Coventry and Warwickshire ICB	2,069	635	228	150	1,057
NHS Derby and Derbyshire ICB	2,822	713	365	268	1,475
NHS Herefordshire and Worcestershire ICB	2,196	521	277	292	1,105
NHS Leicester, Leicestershire and Rutland ICB	2,628	677	270	313	1,369
NHS Lincolnshire ICB	2,355	431	332	441	1,151
NHS Northamptonshire ICB	1,939	463	267	205	1,004
NHS Nottingham and Nottinghamshire ICB	2,882	773	349	253	1,507
NHS Shropshire, Telford and Wrekin ICB	1,256	307	160	151	637
NHS Staffordshire and Stoke-on-Trent ICB	2,715	665	326	288	1,437
East Midlands Ambulance Service NHS Trust	-	-	-	-	-
West Midlands Ambulance Service University NHS Foundation Trust	-	-	-	-	-
East of England	16,094	3,687	1,979	2,126	8,303
NHS Bedfordshire, Luton and Milton Keynes ICB	2,155	499	264	258	1,135
NHS Cambridgeshire and Peterborough ICB	2,370	512	344	386	1,128
NHS Hertfordshire and West Essex ICB	3,224	913	311	252	1,748

NHS Mid and South Essex ICB	2,442	596	290	255	1,300
NHS Norfolk and Waveney ICB	3,268	615	432	555	1,665
NHS Suffolk and North East Essex ICB	2,635	553	337	419	1,326
East of England Ambulance Service NHS Trust	-	-	-	-	-
London	17,984	5,251	1,474	1,528	9,730
NHS North Central London ICB	2,947	912	202	239	1,594
NHS North East London ICB	3,973	1,115	330	326	2,202
NHS North West London ICB	4,344	1,266	340	427	2,311
NHS South East London ICB	3,633	1,013	330	269	2,020
NHS South West London ICB	3,087	944	273	268	1,603
London Ambulance Service NHS Trust	-	-	-	-	-
South East	20,728	4,904	2,368	2,433	11,025
NHS Buckinghamshire, Oxfordshire and Berkshire West ICB	4,132	1,085	423	549	2,075
NHS Frimley ICB	1,579	418	169	143	849
NHS Hampshire and Isle Of Wight ICB	4,425	1,026	574	479	2,347
NHS Kent and Medway ICB	4,262	857	502	557	2,346
NHS Surrey Heartlands ICB	2,153	609	214	177	1,153
NHS Sussex ICB	4,177	910	486	527	2,254
South Central Ambulance Service NHS Foundation Trust	-	-	-	-	-
South East Coast Ambulance Service NHS Foundation Trust	-	-	-	-	-
South West	15,875	3,639	2,085	2,108	8,043
NHS Bath and North East Somerset, Swindon and Wiltshire ICB	2,563	582	350	342	1,289
NHS Bristol, North Somerset and South Gloucestershire ICB	2,574	611	353	275	1,336
NHS Cornwall and The Isles Of Scilly ICB	1,855	387	211	336	921
NHS Devon ICB	3,476	827	438	460	1,751
NHS Dorset ICB	2,068	466	281	264	1,057
NHS Gloucestershire ICB	1,692	420	215	219	838
NHS Somerset ICB	1,647	347	237	212	851
South Western Ambulance Service NHS Foundation Trust	-	-	-	-	-
England	138,453	34,367	16,254	15,299	72,534

Table 21. NHS HCHS staff turnover by staff group (leavers), year ending March 2022

Organisation	HCHS staff total	HCHS doctors	Nurses & health visitors	Midwives	Ambulance staff	Scientific, therapeutic & technical staff	Support to clinical staff	NHS infrastructure support	Other staff
North East and Yorkshire	21,549	2,679	4,904	392	149	2,592	7,431	3,398	3
NHS Humber and North Yorkshire ICB	3,098	421	721	63	1	350	973	568	0
NHS North East and North Cumbria ICB	7,946	1,031	2,014	145	3	1,001	2,684	1,068	0
NHS South Yorkshire ICB	4,024	500	917	66	1	504	1,396	638	2
NHS West Yorkshire ICB	5,697	728	1,237	118	2	736	1,880	995	0
Yorkshire Ambulance Service NHS Trust	513	0	7	-	91	1	319	95	-
North East Ambulance Service NHS Foundation Trust	271	0	8	-	50	0	180	33	-
North West	20,180	2,527	4,917	336	155	2,320	6,892	3,024	10
NHS Cheshire and Merseyside ICB	7,323	932	1,857	111	1	876	2,395	1,147	4
NHS Greater Manchester ICB	8,271	1,112	2,033	154	1	998	2,733	1,237	4
NHS Lancashire and South Cumbria ICB	3,985	483	1,017	71	0	446	1,385	581	1
North West Ambulance Service NHS Trust	601	0	10	-	153	0	378	60	-
Midlands	24,402	3,131	5,843	489	306	2,772	8,358	3,488	15
NHS Birmingham and Solihull ICB	4,391	666	1,068	95	0	553	1,248	754	6
NHS Black Country ICB	2,368	319	595	55	3	268	808	321	1
NHS Coventry and Warwickshire ICB	2,031	287	514	48	0	245	708	227	1
NHS Derby and Derbyshire ICB	2,318	293	605	55	2	284	766	309	4
NHS Herefordshire and Worcestershire ICB	1,375	169	358	33	1	172	464	179	-
NHS Leicester, Leicestershire and Rutland ICB	2,099	312	500	41	1	238	690	318	-
NHS Lincolnshire ICB	1,272	153	292	25	3	133	484	183	0
NHS Northamptonshire ICB	1,434	185	378	33	2	144	479	214	0
NHS Nottingham and Nottinghamshire ICB	3,086	401	771	56	1	346	1,011	498	1
NHS Shropshire, Telford and Wrekin ICB	949	120	227	24	1	107	310	160	0
NHS Staffordshire and Stoke-on-Trent ICB	2,073	225	520	26	0	278	774	249	0
East Midlands Ambulance Service NHS Trust	367	-	3	-	101	0	244	20	-
West Midlands Ambulance Service University NHS Foundation Trust	639	1	13	-	192	3	374	56	-
East of England	13,836	1,850	3,123	308	207	1,473	4,768	2,098	9
NHS Bedfordshire, Luton and Milton Keynes ICB	1,298	232	297	47	0	124	398	199	0
NHS Cambridgeshire and Peterborough ICB	3,003	425	761	49	2	361	1,029	375	0
NHS Hertfordshire and West Essex ICB	2,349	337	542	61	0	276	725	406	3

Organisation	HCHS staff total	HCHS doctors	Nurses & health visitors	Midwives	Ambulance staff	Scientific, therapeutic & technical staff	Support to clinical staff	NHS infrastructure support	Other staff
NHS Mid and South Essex ICB	2,298	311	538	57	1	213	822	355	0
NHS Norfolk and Waveney ICB	2,538	316	589	48	1	294	883	408	0
NHS Suffolk and North East Essex ICB	1,705	229	394	47	1	204	552	272	6
East of England Ambulance Service NHS Trust	645	0	2	-	201	-	359	83	-
London	24,106	3,770	6,173	491	308	3,713	6,682	2,952	18
NHS North Central London ICB	5,446	854	1,386	92	2	913	1,561	634	4
NHS North East London ICB	4,507	679	1,183	110	2	766	1,268	497	1
NHS North West London ICB	4,882	814	1,336	106	0	687	1,285	642	11
NHS South East London ICB	5,558	939	1,510	107	0	916	1,346	737	2
NHS South West London ICB	2,966	484	753	76	2	430	891	330	0
London Ambulance Service NHS Trust	748	0	4	-	302	0	330	112	-
South East	20,086	2,411	4,388	413	287	2,314	7,218	3,049	6
NHS Buckinghamshire, Oxfordshire and Berkshire West ICB	3,419	489	817	75	4	456	1,177	399	2
NHS Frimley ICB	1,593	188	359	41	1	185	531	288	-
NHS Hampshire and Isle Of Wight ICB	4,581	576	1,100	82	12	537	1,669	604	2
NHS Kent and Medway ICB	3,751	454	815	100	3	427	1,275	676	1
NHS Surrey Heartlands ICB	1,926	280	401	45	3	228	648	321	0
NHS Sussex ICB	3,842	424	883	69	2	480	1,370	612	1
South Central Ambulance Service NHS Foundation Trust	516	0	11	-	112	1	338	53	-
South East Coast Ambulance Service NHS Foundation Trust	459	0	1	0	150	1	210	96	-
South West	14,501	1,698	3,243	266	206	1,642	5,165	2,280	1
NHS Bath and North East Somerset, Swindon and Wiltshire ICB	2,168	275	528	48	2	246	753	314	0
NHS Bristol, North Somerset and South Gloucestershire ICB	2,305	363	531	57	0	268	723	362	-
NHS Cornwall and The Isles Of Scilly ICB	1,213	124	272	21	1	135	446	214	0
NHS Devon ICB	3,519	426	753	51	2	428	1,259	600	0
NHS Dorset ICB	2,034	216	492	31	3	240	761	291	0
NHS Gloucestershire ICB	1,379	147	335	30	3	167	481	214	0
NHS Somerset ICB	1,368	146	329	27	2	157	483	224	0
South Western Ambulance Service NHS Foundation Trust	516	0	4	-	193	0	258	62	-
England	138,660	18,065	32,591	2,696	1,616	16,825	46,515	20,289	62