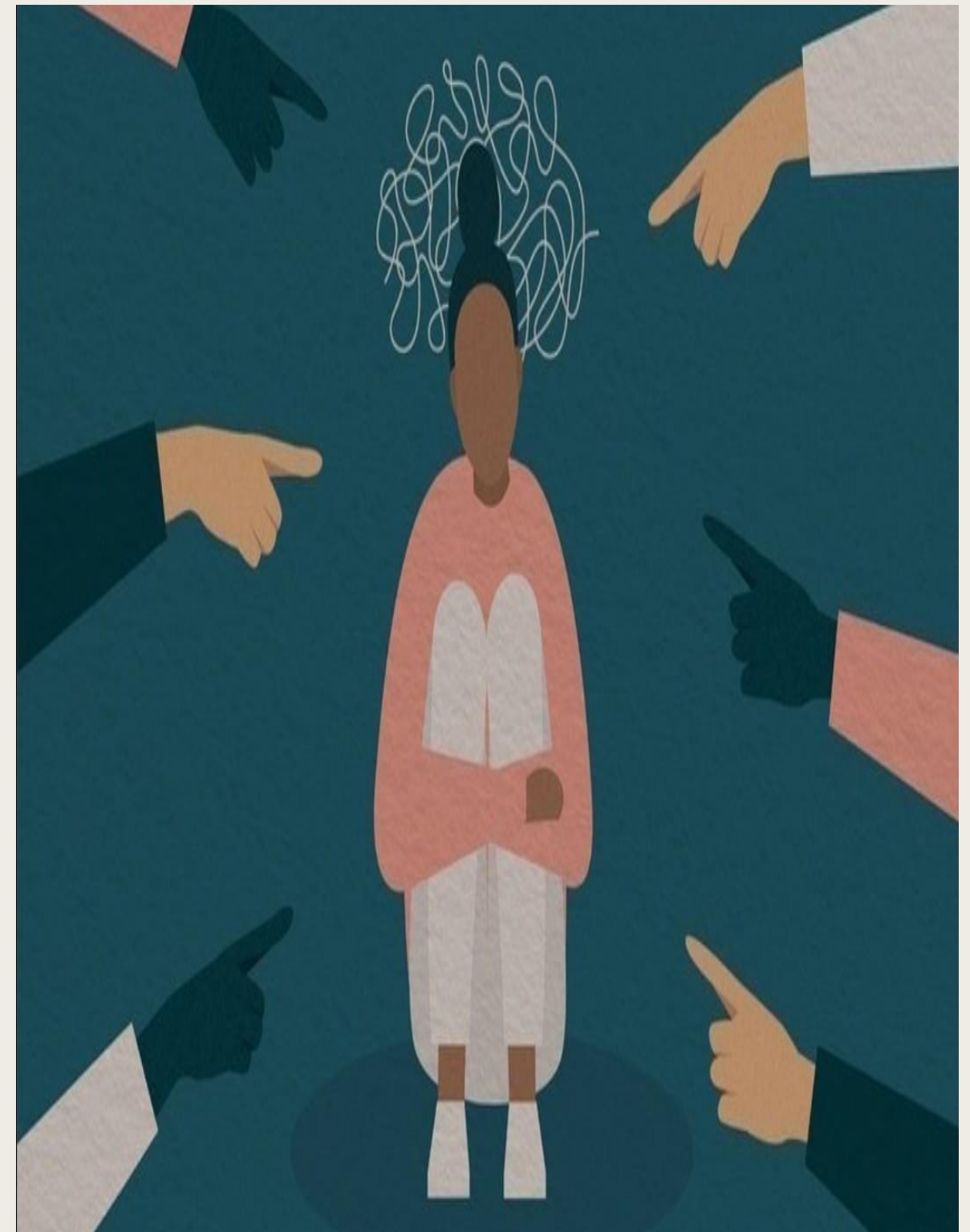# Estimating the Impact of Hate Crime on Mental Health Service Use and Its Costs to the NHS England (2016–2023)

Early findings

A longitudinal ecological panel study at local authority level

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Disclaimer

This presentation reports on an MSc Public Health Project at London School of Hygiene and Tropical Medicine.

The findings have yet to be submitted to peer review (we plan to do so).

The findings should therefore be regarded at this stage as early and exploratory. They may change as a result of the peer review process.

What We Studied

Research Aim

To estimate the impact of police-recorded racially and religiously aggravated hate crimes on secondary mental health service utilisation in England and to quantify the associated incremental NHS cost from 2016 to 2023.

Study Design

Longitudinal ecological panel of **296 local authorities** observed annually, analysed using **fixed-effects model** with Driscoll–Kraay standard errors. The analytical sample comprised 2,365 local authority–year observations after data standardisation and panel construction.

Key Variables

Outcome: People in contact with NHS secondary mental health services per 100,000 population.

Exposure: Police-recorded racially and religiously aggravated hate crime offences per 100,000 population.

Controls: Socioeconomic and demographic factors, year effects, with winsorisation applied to reduce the influence of extreme values.

What This Lets Us Conclude *After accounting for stable local differences, national-level shocks, and key socioeconomic and demographic factors, we ask a focused question: when hate crime increases within an area, does mental health service use increase in that area in that year? We then separately quantify the hate-crime-related increase in service use and translate it into additional NHS cost.*

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Why This Matters

Mental Health Burden

Mental health conditions are leading contributors to ill health in England. Around **one in four adults** experiences a diagnosable mental health problem.

Social Determinants

Hate crime harms victims' mental health and, as a **message crime**, signals risk to the wider group, causing chronic stress and reduced safety in targeted communities and **increasing demand** for mental health services even without direct victimisation.

Evidence Gap

Most studies focus on individual victims' outcomes. **Few examine population-level impacts** of hate crime, and even fewer estimate the associated NHS costs, leaving commissioners without critical data for resource planning.

Under-Reporting Challenge

Only around **one in four** hate crime incidents are reported to the police (Essex Hate Crime Project), meaning recorded offences likely understate true incidence. Any measured association is therefore conservative.

Policy Relevance

If higher hate crime corresponds to higher secondary mental health service use in the same year, **then prevention becomes both a public health priority** and a route to reducing avoidable NHS expenditure.

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What We Found

2.755
Additional Service Users

Per 100,000 population in contact with NHS secondary mental health services for each additional hate crime offence per 100,000 (p < 0.001).

£15.7K
Incremental NHS Cost

Estimated increase in NHS mental health service expenditure per additional racially or religiously aggravated offence (95% CI: £8,017–£23,346), based on 2023 cost estimates.

£8.78M
Extrapolated National Cost

Annual NHS expenditure associated with racially and religiously aggravated hate crime across England (95% CI: £4.490M–£13.074M), based on 2023 cost estimates.

Model Performance

The within R-squared value of **0.816** indicates that the model explained approximately 82% of the year-to-year variation in mental health service contact rates within each local authority district.

Robustness

The headline result remained robust across multiple sensitivity analyses, including alternative specifications, lag structures, and exclusion of outliers, strengthening confidence in the findings.

Strengths and Limitations

Strengths

Comprehensive Coverage

First population-level longitudinal analysis examining the relationship between racially or religiously aggravated hate crime and mental health service usage in England, covering all 296 local authority districts over eight years (2016–2023).

Robust Methodology

Two-way fixed effects model controlled for both unobserved, time-invariant differences between districts (such as historical service capacity or baseline demographics) and national shocks (such as Brexit or COVID-19 pandemic).

Isolation of Local Dynamics

By examining year-to-year changes within districts, the study **isolated the association between** local hate crime fluctuations and corresponding changes in mental health service usage, strengthening confidence in observed relationships.

Limitations

→ **Ecological Design**

Cannot establish individual-level causality- it remains unclear whether exposed individuals are the same people using mental health services.

→ **Potential Confounding**

Whilst unemployment, ethnic composition, and median age were controlled for, **unmeasured factors** such as housing insecurity or local policing practices may influence results.

→ **Scope of Hate Crime Data**

Includes only racially or religiously aggravated offences, **excluding disability- or sexuality-based hate crimes** that may also affect mental health.

→ **Cost Estimation**

Applied average unit cost per service user, **masking variation** between low-cost outpatient appointments and resource-intensive inpatient stays.

Implications for Further Research

The findings highlight several important directions for future research to strengthen understanding of the relationship between hate crime and mental health outcomes.

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Individual-Level Data

Access to individual longitudinal data would help **clarify causal pathways** and distinguish between effects on direct victims and those experienced by wider communities, moving beyond ecological associations.

Temporal Granularity

More granular temporal data - such as monthly or weekly records would allow **closer examination of the timing of impacts** and whether hate crime generates both immediate and delayed effects on service demand.

Refined Costing Methods

Future research should move beyond average unit costs and **incorporate activity-specific estimates** that distinguish between various levels of care, such as outpatient consultations, community support, and inpatient admissions.

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Implications for Policy and Practice

Public Health Priority

Recognize hate crime as a **public health concern** requiring coordinated multi-agency responses and preventive interventions, not solely a criminal justice issue.

Surveillance Integration

Incorporate hate crime indicators into **Joint Strategic Needs Assessments**, enabling commissioners and Integrated Care Systems to anticipate demand surges.
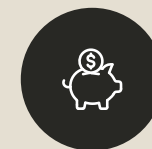
Prevention Investment

Each additional racially or religiously aggravated offense costs over **£15,000** in NHS expenditure per 100,000 population - prevention generates substantial savings.

Key Takeaways....

1. Treat hate crime as a **social determinant** of mental health and a public health priority requiring coordinated multi-agency action.

2. Invest in prevention and trauma informed, culturally competent support in hotspots; **prevention is cost saving**, with each additional aggravated offence associated with more than £15,000 in NHS spend per 100,000 population.

3. Integrate **hate crime metrics into routine surveillance** and planning across police, the NHS, and local authorities to forecast demand and target resources to the most affected communities.

4. Note our disclaimer: these are early findings that require peer review.