A Public Health Approach to Knife Violence Reduction: Immunize, Protect & Rescue

London Major Trauma System, February 2019

Overview

Knife violence is endemic in London, accounting for more than a third of UK knife crime.

Knife violence is concentrated in violent environments associated with socioeconomic deprivation.

Criminal acts are an issue of law and order, but the reasons why children and young people carry knives and resort to violence is a societal and public health issue.

Children and young people who have been stabbed or who carry knives are a small segment of those who are at risk from knife violence.

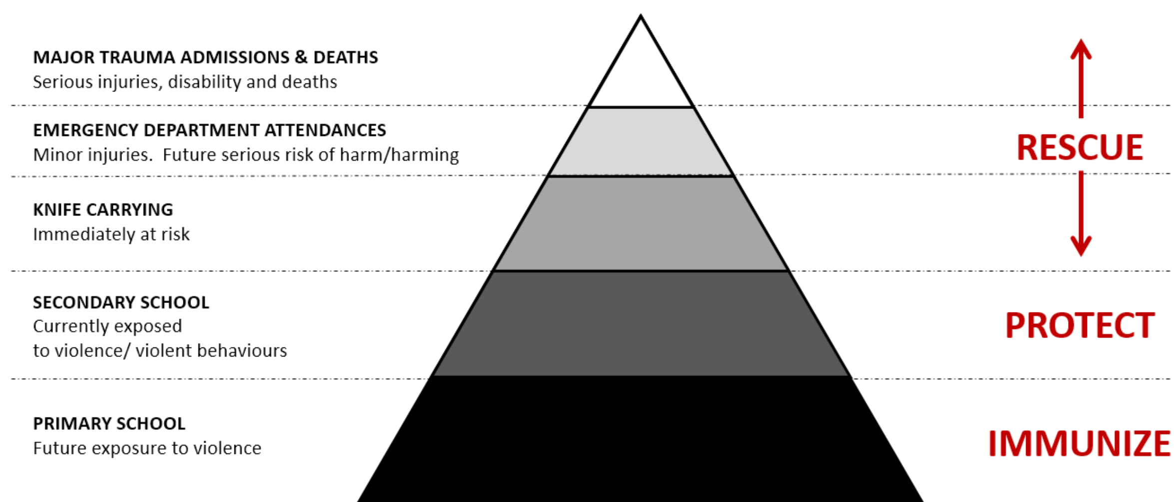
Many secondary school children are exposed to violent behaviours every day, often in the immediate vicinity of their home and school.

Children experiencing adversity from a young age, including exposure to all forms of violence, are themselves more likely to be at risk of violence as both victim and perpetrator in later life.

Primary school children are a future at risk group as they transition to secondary school.

A Public Health Model of Knife Violence Prevention

IMMUNIZE the general population; PROTECT those exposed, RESCUE those at risk.



Karim Brohi, Paul Vulliamy, Max Marsden, Richard Carden, Martin Griffiths, Duncan Bew, Michael Carver.
k.brohi@qmul.ac.uk. London Major Trauma System 2019, v10

Public Health Interventions for Knife Violence

Public health interventions approach violence as preventable not inevitable.

Violence behaves like a disease with features of clustering, transmission and spread. Prevention strategies for contagious diseases have many parallels with violence prevention.

A common feature of successful initiatives is a multi-agency approach aimed at providing sustained protection and resilience in the wider community.

Effective prevention strategies involve education, social care, community groups, public health and trauma systems.

Different interventions are targeted at each at-risk population (Examples in Appendix 2):

EARLY YEARS & PRIMARY SCHOOLS
The largest at-risk population and a key focus of primary intervention to achieve long-term reductions in areas of endemic violence.

Interventions focus on developing positive parent-child relationships, future role models and resilience from risky behaviours.

Reducing exposure to adverse childhood events is an imperative through screening and support for new parents and families.

SECONDARY SCHOOLS
Secondary school children in areas of high endemic knife violence exposed to violent behaviours and/or violence regularly.

Interventions focus on community-based violence reduction campaigns, aiming to protect and build resilience in schools and communities, including transition to employment opportunities.

Establishing consistently available role-models for schoolchildren who may otherwise lack a strong support structure at this stage is especially valuable.

KNIFE CARRYING AND GANG BEHAVIOURS
Children and young people already carrying knives or involved in negative cultures leading to violent behaviours.

Interventions focus on reducing the perceived need to carry weapons and policing to deter and reduce weapons carriage.

EMERGENCY DEPARTMENT ATTENDANCES
Children and young people who have suffered minor injuries in psychologically traumatic circumstances.

Interventions focus on emergency-department based brief interventions in the 'reachable moment' and safeguarding of the victims as well as potential siblings at risk.

MAJOR TRAUMA HOSPITAL ADMISSIONS
Children and young people admitted to hospital with life-threatening or life-changing injuries

Interventions focus on 'rescuing' those with the highest risk of further injury or death from at-risk environments, behaviours and groups.

Screening & treating underlying mental health needs is important, as is managing those developing as a result of the trauma.

MAJOR TRAUMA SYSTEMS AND VIOLENCE REDUCTION

Major Trauma Systems are designed and delivered as a public health model managing trauma as a disease for a geographically defined population.

Major Trauma Systems have a responsibility to reducing the overall burden of the disease of trauma through injury prevention, focusing on the local needs of their population.

In England, Major Trauma Systems are commissioned to engage in injury prevention activities in their service specification, and this forms part of the national quality surveillance process.

Major Trauma Centres are the host for the regional Major Trauma System and provide a visible, strong and neutral focal point for engagement with local communities, education and law enforcement.

Worldwide, engagement of Major Trauma Systems with violence reduction has been shown to be effective in reducing rates of violence and recidivism in communities (eg. the National Network of Hospital Violence Intervention Programmes in the USA).

Major Trauma Centres can support and deliver multiple aspects of a violence reduction programme including:

- Advocacy and leadership for violence reduction
- As a politically and socially neutral voice
- As a focal point for the local community
- As a base for local violence reduction units
- Support partners' outreach programmes with doctors, nurses and medical students
- Support partners' educational programmes for violence reduction
- Deliver 'reachable moment' interventions in the emergency or ward environments
- Work with community partners to support and signpost victims out of violence
- Work with community partners to reduce retaliation and recidivism
- Collect and analyse data to refine understanding of local violence issues
- Work with public health and mental health academics to understand drivers of violence
- Research and innovate effective interventions for violence reduction

APPENDICES

Appendix 1: London Major Trauma System Facts & Figures

Appendix 2: Strategies for Violence Reduction – Immunize, Protect & Rescue

Appendix 1: London Major Trauma System Knife Violence Facts & Figures

The London Trauma System managed over 15,000 injured patients each year, across four major trauma centres and 30 trauma units.

In 2018, the system managed over 2,500 people with stab injuries that were potentially life-threatening or life-changing.

Over 1,600 people were taken by the London Ambulance Service to one of the four major trauma centres. Injuries from knives are now the most common reason for London's Air Ambulance to be dispatched.

The number of patients being treated for stab injuries has increased by at least 50% over the last 5 years.

The London Major Trauma System has halved the mortality from knife violence over the last decade. Homicide rates would be much higher in London without this effect.

Over 50% of patients are under the age of 25; and one quarter are of school age.

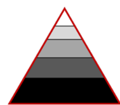
In school age children, more than 80% of all injuries happen within 5km of home and the majority occur after school hours.

In a survey of 2,200 children and young people aged 8 to 24 years old, over 70% stated they are exposed to serious violence in real life at least once a month.

More than two thirds are from communities classified amongst the most deprived in the country.

Injuries from knives have deep long-term psychological and social effects on the individual, the family, friends, witnesses, and the wider community.

Strategies for violence reduction - IMMUNIZE



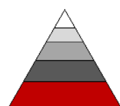
WHOLE COMMUNITY

Intervention: Focus on Social and Community Improvement

Deprivation is associated with high rates of violence, particularly in urban areas. This category encompasses broad-based social interventions to improve living conditions, improve both actual and perceived social mobility, and modify environmental contributors to anti-social behaviour.

Examples and evidence base:
The Medellin project (Columbia): Improvements in buildings, transport, street-lighting and police access in communities were delivered in deprived communities. Homicide rates declined by 66% and resident-reported attitudes to the community improved significantly.

Californian urban improvement programmes: Urban upgrade interventions in Los Angeles and surrounding communities were delivered by the business community in these areas. This resulted in a reduced rate of violent crime, particularly in young people.



EARLY YEARS & PRIMARY SCHOOLS

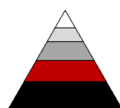
Target Population: Younger children and parents in 'at risk' communities

Intervention: Focus on Positive Parent-Child Relationships
These strategies target the root causes of violence and disaffection and have general societal benefits beyond violence reduction.

Examples and evidence base:
The Incredible Years programme (Wales): Funded through the Sure Start initiative, this 12-week group-based basic parenting programme was targeted at parents of 3-5 year-olds from socially deprived communities. The intervention aims to develop key parenting skills and behaviours. In a randomised controlled trial, this intervention had a positive impact on both child and parent behaviour at 6 months.

The Nurse-Family Partnership (New York): This nurse-led programme offered regular home visits to women during pregnancy and infancy, promoting positive maternal health-related behaviours, competent childcare practices and maternal personal development. At 15 years follow-up of a randomized trial of this intervention, antisocial behaviour in a broad range of categories (including interpersonal violence) was reduced compared to standard perinatal care. Significant beneficial effects on maternal health and well-being were also observed.

Strategies for violence reduction – PROTECT



SECONDARY SCHOOL & COLLEGE -

Target Population: Secondary school children in areas of high endemic knife violence exposed to violent behaviours and/or violence regularly

Intervention: Community-based violence reduction campaigns
These strategies aim to raise awareness of the consequence of violence – both in relation to physical harm and law enforcement.

Examples and evidence base:
City of Chicago's Youth Violence Prevention Plan: A comprehensive suite of strategies targeting youth violence. The plan is split into three themes; prevention, intervention, and response. Initiatives range from engaging with gangs to creating 'community watchers' and social emotional learning initiatives. Chicago has witnessed a reduction in violence of up to 70%.

Medics against Violence (Scotland): In this WHO backed initiative, senior doctors visit secondary school and use their experiences of youth violence to try to influence attitudes to knife carrying and gang membership. In Glasgow, this strategy has been employed as part of a multi-level approach and has resulted in a 27% reduction in assault-related ED attendance.

Growing Against Violence: An evidence based public health education programme from year 6 to year 10, pupil referral units and FE colleges addressing physical and sexual peer on peer interpersonal violence, reduction of exclusions, relationships with the police, criminal exploitation, online literacy and safeguarding and support of teachers and parents.

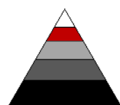
Strategies for violence reduction – RESCUE

KNIFE CARRYING AND GANG BEHAVIOURS

Target Population: Children and young people already carrying knives or involved in negative cultures leading to violent behaviours.

Intervention: Focus on reducing the perceived need to carry weapons and policing to deter and reduce weapons carriage.

Examples and evidence base:
Operation Ceasefire (the 'Boston miracle'): Multimodal, multiagency intervention involving law enforcement and community groups which aimed to deliver credible deterrence message to gang members. This initiative resulted in massive and sustained reductions in youth homicide.
A similar approach was adopted in Glasgow (the 'Community Initiative to Reduce Violence' programme) in 2008 leading to a 46% reduction in offending in those recruited.



EMERGENCY DEPARTMENT ATTENDANCES

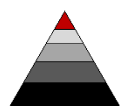
Target Population: Children and young people who have suffered minor injuries in psychologically traumatic circumstances.

Intervention: ED based interventions in the 'reachable moment'
A major event like trauma provides a reachable moment, which is a period of self-reflection brought on by a tangible sense of mortality and vulnerability.

Examples and evidence base:
SafERteens (Minnesota): 'At risk' Teenagers (14-18) presenting to ED were randomly allocated to receive written information ('control'), computerised brief intervention or therapist-assisted brief intervention. Reductions in alcohol- and violence related behaviour at 12 months in the intervention groups.

Boston violence reduction initiative: Adolescent victims of violence (12-17). 1-2hr intervention discussing non-violent alternatives to conflict resolution, coping strategies etc + written information. Long term results are not reported but the authors advocate this 'empowering' approach as acceptable to participants.

RedThread (London): In London, organisations such as RedThread have established a presence in many emergency departments, with trained staff delivering short interventions and establishing the basis for community outreach.



MAJOR TRAUMA HOSPITAL ADMISSIONS

Target Population: Children and young people admitted to hospital with serious injuries. Approximately 1,000 cases/year.

Intervention: In-hospital support for victims of knife violence

Examples and evidence base:
Wraparound Project (San Francisco): The Wraparound project is based at San Francisco's Level 1 trauma centre and works in partnership with community-based organizations to create social capital in individuals and communities affected by violence. Case workers identify at risk individuals in their hospital admission and work to extract them from the violence enabling environment, growing victim's social capital, by fostering life skills, confidence, empowerment, and a sense of advocacy for their community.

St Giles Trust (London): A service based at the Royal London Hospital Major Trauma Centre and modelled on the San Francisco Wraparound project. Members of the St Giles trust currently approach every young person who has been admitted having been stabbed. Early data shows a high level of engagement, with a high level of voluntary involvement in the scheme. Re-offending rates and readmission rates in patients who remain engaged with St Giles trust are extremely low.