Injury prevention should or should not be the role of the trauma service

Colin A Graham
Professor, Emergency Medicine
Chinese University of Hong Kong

August 2010
Scotland
100 blade victims a month

By ANDREW NICOLL
Scottish Political Reporter

Published: 27 May 2009

THE growing menace of Scotland's knife culture is claiming more than 100 victims every month.

The shock new figures released yesterday show 1,278 people were taken to hospital after being attacked with a blade last year.

The worst health board area was Glasgow with a toll of 779 victims -- that's two EVERY DAY.

Last night Tory justice spokesman Bill Aitken called for courts to take a harder line and cage all yobs caught even carrying a knife for two years.

He said: "These figures are a shocking tip of the iceberg. These are only the victims that were
Who’s next?

Deadly ... the knife used in the classroom attack

By BRIAN HORNE
Published: 15 May 2009

A LAUGHING schoolboy plunged a knife into a classmate's back then asked: ‘Who wants it next??’

Horrified pupils fled to the other end of the classroom in terror after the attack by the 14-year-old blade fiend.

And a bloodbath was only avoided when two brave teachers rushed in and disarmed the teenage thug.
A study of stab wounds

I. J. SWANN,* R. MACMILLAN,† AND A. A. WATSON‡
*Accident and Emergency Department, Royal Infirmary, Glasgow, †Health Services Operational Research Unit, Strathclyde University, Glasgow, and ‡Department of Forensic Medicine, Glasgow University, Glasgow, Scotland

SUMMARY

A study was made of patients with stab wounds who attended the Accident and Emergency Department of Glasgow Royal Infirmary during 1978 and 1983. There were 318 patients. The majority, 304 (96%), were males. A total of 87 (27%) were teenagers. The most common sites of the wounds were the chest (143 patients) and the abdomen (113 patients). The features of the patients and their wounds are compared with those of a previous study carried out at the same hospital in the early 1960s (Batey & MacBain, 1967). The post-mortem reports of 25 fatal stab injury cases occurring in Glasgow between 1971 and 1978 are also reviewed. Some aspects of diagnosis, management and prevention of stab wounds are discussed.

INTRODUCTION

The incidence of stabbing in the east end of Glasgow was previously studied in the early 1960s by Batey & MacBain (1967). They showed that the incidence of patients admitted to Glasgow Royal Infirmary with stab wounds had increased between 1962 and 1965 and that 40% of victims were teenagers. In February 1981 the Criminal Justice (Scotland) Act 1980 was introduced. This extended the powers of the Scottish Police to search for offensive weapons. In spite of this, the use of knives in serious crimes of violence in the east end of Glasgow increased from 16% in 1978 to 23% in 1983. Although the gangs of the 1960s to whom much of the stabbing had been attributed no longer gained so much publicity in the 1970s, our impression was that patients with stab wounds still came to the Accident and Emergency Department of the Glasgow Royal Infirmary in sufficient numbers to warrant further study.
Hong Kong
Hong Kong
Hong Kong Island
Typical Hong Kong trauma
Objectives

- What is trauma prevention?
- Why is it important?
- Why should the trauma service do it?
- Why should the trauma service not do it?
- What should we do then?
What is trauma prevention?

• “efforts to forestall or prevent events that might result in injuries”
  – National Highway Traffic Safety Administration

• “the interventions that eliminate or reduce the likelihood of injury”
  – Monterey County Health Department
Different types of prevention

- Primary prevention - prevention of a disease before it occurs
- Secondary prevention - prevention of recurrences or exacerbations of a disease that already has been diagnosed
- Tertiary prevention - reduction in the amount of disability caused by a disease to achieve the highest level of function
Why is trauma prevention important?

Prevention saves lives
Why should the trauma service do trauma prevention?

- We are able to speak about trauma with authority as we deal with its consequences.

- We know the catastrophic effects of trauma on patients, their families and their world.

- We have a captive audience in the ED, ICU and trauma wards in hospital.
Example: talking to parents

- Usually appreciated after childhood injury
- Often a ‘teachable moment’
- Sometimes negative responses due to guilt
- Be careful not to blame
Why should the trauma service do trauma prevention?

- We see patients with risky conditions before significant trauma occurs
  - Excessive alcohol intake
  - Illicit drug users
  - Minor injuries from dangerous mechanisms
  - We know the epidemiology of trauma

- We are required to do it for trauma centre accreditation (United States)
Why should the trauma service not do trauma prevention?

• We don’t have the time
  – In US level 1 trauma centres, 14% of the time of the trauma coordinator is spent on prevention

• We don’t have expertise with the media

• We are not good at targeting the right people in our communities
Why should the trauma service not do trauma prevention?

- Patients and their families don’t listen to us
  - Not true: good evidence supporting brief alcohol interventions in the ED and admission wards

- Trauma centre prevention is not cost effective
  - Very little evidence ‘for’ or ‘against’

- Trauma centres in the US have no financial incentive to reduce the trauma burden
  - Trauma centres are partially paid for by trauma patients
What is the answer?

• Trauma prevention needs dedicated staff
  – Doesn’t matter whether they are from ED, ICU, wards, or trauma coordinator
  – They need ‘ring fenced’ time and support

• Trauma prevention needs an integrated and truly multidisciplinary approach
  – Police, rescue, fire, ambulance, hospital, families
What is the answer?

• Trauma prevention methods need to be rigorously researched
  – Not just effectiveness, but cost-effectiveness
  – May be easier to do in the developing world

• Trauma prevention strategies need to be compared for effectiveness and costs
  – Hospital based v public health based
  – General prevention v targeted approaches
Violence Reduction Unit

Aim: to reduce violent crime and behaviour by working with partner agencies to achieve long-term societal and attitudinal change, and, by focusing on enforcement, to contain and manage individuals who carry weapons or who are involved in violent behaviour.
Summary

• Prevention is important

• Prevention is best done by people who
  – Understand the problem
  – Have the skills to intervene at the source
  – Have the time and expertise to do it properly

• Multidisciplinary approaches are the key