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Medics against Violence – The Development of a New Violence Prevention Intervention for Schools

Abstract: This article outlines the rationale, evidence base and development of a new anti-violence intervention for schools delivered in the school setting by healthcare professionals. It is an example of multi-professional and mutli-disciplinary working and demonstrates how all healthcare professionals can be involved in wider healthcare issues.

Clinical Relevance: The majority of victims of violence are young men. Most incidents of interpersonal violence involve injury to the head and neck area, including the dentition. The Medics against Violence Schools Project is very relevant to Oral and Maxillofacial Surgeons, Oral Surgeons and General Dental Practitioners all of whom may have to deal with the sequelae of such injuries.

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Medics against Violence (MAV) (Figure 1) is a Scottish charity founded in 2008 by the authors. MAV is a multi-professional, multidisciplinary organization and works in partnership with the Violence Reduction Unit, a subdivision of the Scottish Police Force. It is a member of the World Health Organization's (WHO) Violence Prevention Alliance. MAV is currently rolling out the Schools Project in Scotland; its primary aims are to change attitudes to violence and reduce the level of injury resulting from violence among young people, using a new intervention developed for use in the secondary school setting. Although developed by oral and oral and maxillofacial surgeons, MAV's Schools Project is an example of how teams of health professionals from very different backgrounds can work together to improve the health of young people. The rationale for MAV's Schools Project, the evidence base behind it and the development of the schools intervention are described in detail.

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The rationale for Medics against Violence

Violence is recognized by the WHO as a major public health problem. A total of 1.6 million people die each year worldwide as a result of violence, the majority of these individuals being young (15–40) and 35% dying as a result of interpersonal violence.[1] This number, however, only represents the tip of the iceberg; for each death, 20–40 individuals require medical intervention, resulting in a significant burden on health and other services.[1] Interpersonal violence is the tenth leading cause of death and the tenth ranked cause of burden of disease in young people.[2] It is estimated that the USA spends 3.3% of its gross domestic product dealing with violence and, in England and Wales, the annual cost is several billion pounds.[3,4] Scotland has a long association with violence and has a knife-related murder rate 3.5 times that of England and Wales. The treatment of injuries related to violence in Scotland consumes 3–6% of the total NHS budget.[5] A recent report estimated that a deprived urban male could suffer as

Figure 1. MAV Logo.

much as 60 years of incapacity following a violent injury and the resulting long-term draw on health and other services by these individuals may, to a certain extent, prevent health services from tackling other health problems.[6]

Facial and dental trauma

It is well known that the face and neck are the most frequently targeted areas in incidents of interpersonal violence, which makes the MAV programme very relevant to dentists.[7] Oral and oral and maxillofacial surgeons see and treat the majority of victims of violence with survivable injuries, and dentists, both in primary and secondary care, deal with traumatic dental injuries and their sequelae.

In Scotland, the overall incidence of facial trauma necessitating inpatient admission between 2001 and 2006 was 3.27 per 1000 head of population, but this peaks at the extremes of age; further work in this area has shown that, overall, the 15–19 year age group had an incidence of 5.53 per 1000 head of population[8] (Figure 2). Alcohol-related facial trauma in Scotland also disproportionately affects the young, males and those who live in areas of relative social deprivation. In Glasgow, over 1000 facial trauma patients are treated annually, the majority of these are young males and over 70% are victims of alleged assault.[9]

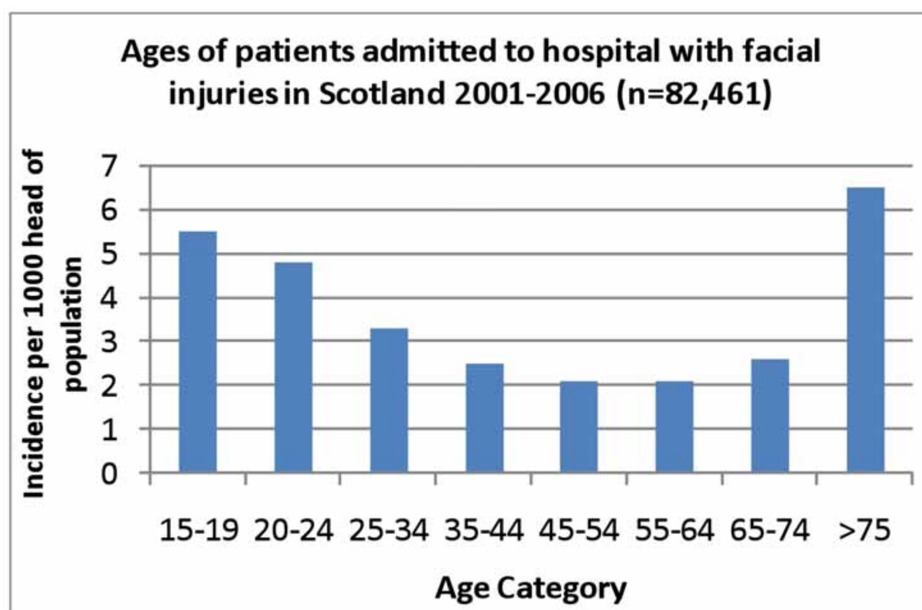

Figure 2. Incidence of facial injuries in Scotland 2001–2006 according to age.

Other injuries

Other health professionals deal with more serious and life threatening injuries due to violence. In Scotland, 1333 individuals were admitted to hospital and 46 died as a result of an assault with a sharp object in 2008. These assaults accounted for 57% of the deaths due to assault in Scotland in that year. Again, young men were the most frequently affected group, accounting for 71% of the total admissions. Glasgow and Ayrshire and Arran Health Board areas had significantly higher levels of these types of injury than other areas of Scotland.[10] Maxwell *et al*[11] reported that admissions following assault with a sharp object in England and Wales increased by 30% between 1995 and 2007; 70 of the admissions in 2004/5 were children under 15 years of age. Forty-nine percent of the male admissions and 61% of the deaths had injuries to the head, neck or thorax. We believe that many of these injuries are preventable.

Knife carrying among young people

There is a considerable wealth of information on young people and knife carrying, partly because of the current political and social interest in this topic. Reported rates of knife carrying among young people (11–25 years) in England vary between 3–17%.[12] In Scottish schools, 34% of males and 8.6% of females had carried a weapon to school and overall 12% had carried a knife.[13] In a UK survey, 30% of young people claimed to carry a knife 'for protection' and 11% in case they 'got in to a fight'. Thirty-six percent of 11–16 year-olds worried about being physically assaulted and, in 2008, 18% had been physically attacked in the preceding 12 months.[12]

Social deprivation

Social deprivation is an important underlying factor for many adverse health outcomes; injury is just one. There is a well documented association between social deprivation and stress and, in turn, between chronic biological stress and heart disease, high blood pressure, diabetes and stroke.[14] In the UK, 28% of 10–15 year-olds express concern about going out after dark and rate their safety as poor or very poor.[15] Individuals living in areas of social deprivation in Scotland show the highest level of concern about being assaulted and about being out after dark.[16] In the East End of Glasgow, which includes some of the most deprived areas in the UK,[17] there are 55 established street gangs involving an estimated 600–700 young people aged 13–20 in recreational violence. Twenty percent of young people in Glasgow worry about gangs and violence.[18] Fear of being assaulted or attacked contributes to the stress experienced by young people in deprived areas and, in turn, may contribute to poorer long term health outcomes. Additionally, Bellis *et al*[19] point out that the high levels of violence in some deprived communities in the UK may limit the participation of individuals in other interventions to improve health, thereby compounding the problem.

Involving health professionals

Taking all of these facts, plus our own personal experiences of the effect that violent injury can have on young people, into account, we felt that it was time that health professionals in Scotland became more involved in primary violence prevention. To date, in Oral and Maxillofacial Surgery, our efforts have been focused on secondary prevention and have included

successful trials of alcohol interventions with facial trauma victims.[9] Our views on the involvement of health professionals in violence prevention reflect some of those in the literature. In recent years, there has been a call for paediatricians to become more involved in violence prevention,[20] and training programmes on violence for medical staff have been reported. However, these primarily relate to violence prevention in the hospital setting. The WHO's public health approach to violence suggests that primary prevention should expose a large number of people to preventive measures in order to prevent violence and this is what the MAV Schools Project sets out to do.

The evidence base for school-based interventions

Attempting to tackle violence prevention in the school setting is not a new concept, however, using medical staff to do it is. Other medically led violence interventions targeted at young people have been carried out in hospitals[21,22] and have resulted in an increase in awareness and change in attitudes towards violence. The MAV schools intervention takes volunteer health professionals out of the hospital and into the classroom; something we consider to be a unique aspect and one which allows us to expose young people to medical staff without the added stress of illness, injury or the hospital environment.

Many groups primarily based in the United States of America have already addressed school-based violence prevention with some success. A recent Cochrane review[23] assessed studies of school-based violence prevention programmes targeted at children who were either aggressive or at risk of being aggressive and found a significant improvement in behaviour patterns related to violence. Similar evidence exists for the effectiveness of programmes delivered to the general school population.[24] Existing school-based interventions for violence vary in content and may include:

- Anger management;
- Relationship and social skills;
- Listening skills.

These range from one lesson programmes to those lasting many weeks. They are often presented by teachers, social workers or police officers. There is very little evidence for interventions delivered by medical staff in schools primarily because such programmes are rare. However, young people are willing to listen to advice from medical staff if they limit themselves to their area of knowledge, link violence to its effect on health and avoid jargon.[25]

Figure 3. MAV school recruitment poster.

Some basic facts about Medics against Violence

- MAV is now a charity but received start-up funding from the Scottish Government; £155K in funding has been awarded since 2008.
- MAV has over 120 members, the majority of whom are hospital consultants or Specialty Trainees; all are volunteers.

It's not a good idea to carry or use a knife
It's not a good idea to hang about with gangs involved in violence
Walking away from trouble is always the best course of action

Figure 4. MAV School Project Key Messages.

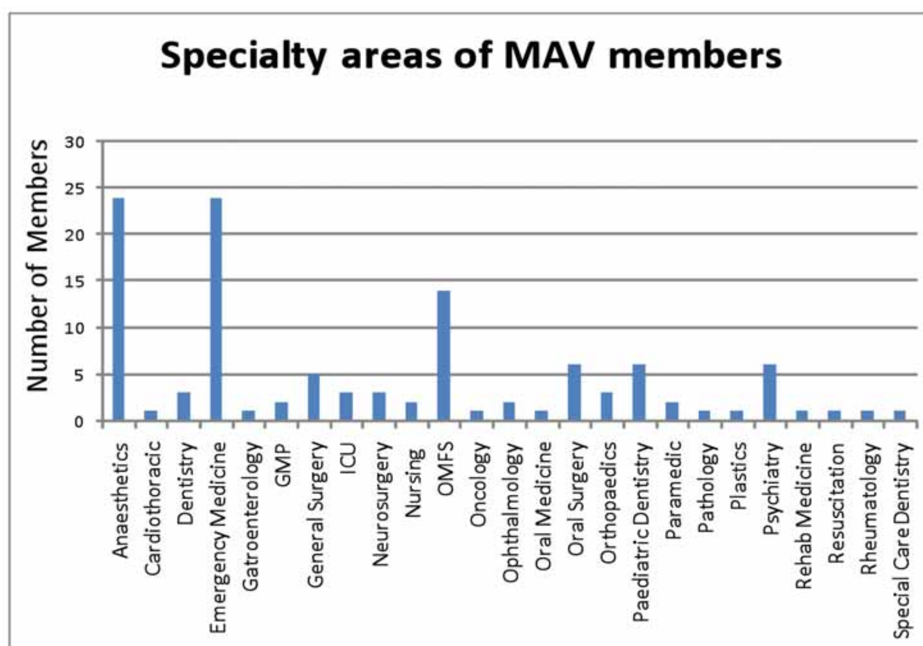

Figure 5. Medical, dental and nursing specialties represented in MAV.

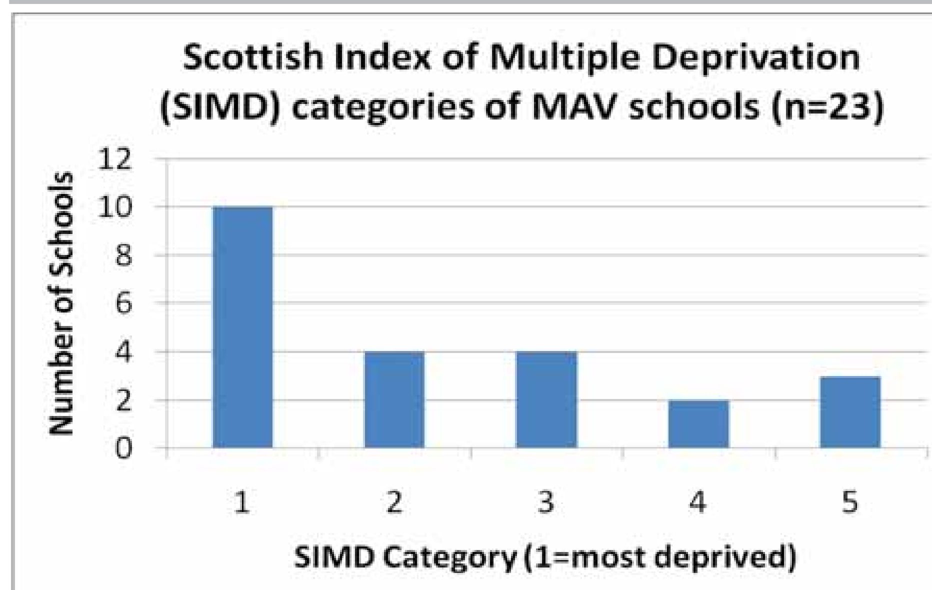

Figure 6. Deprivation categories of MAV schools visited in 2009–10.

- MAV has support from the Scottish Police and works with the Campus Cops, the Community Police and with teachers of Personal and Social Education (PSE). Recruitment of schools into the programme was via the campus cops and teachers (Figure 3).

The development of the Medics against Violence school intervention

When developing the school-based intervention or lesson for delivery by medics we were very conscious of a few basic facts, not least of which was the limited free time health professionals have to devote to this sort of activity.

- Timing: The 'lesson' had to fit within one school period which, in Scottish schools, is between 50 and 55 minutes.
- Content: The content had, largely, to be limited to topics about which medical staff had knowledge and experience.
- Messages: The key messages of the lesson had to be simple, easily understood and well illustrated (Figure 4).
- Target group: The target groups for this intervention are 2nd year school pupils (13–14 years-old).

Input into the development of the programme from both the police and education has undoubtedly made a valuable contribution to the finished intervention.

Training for members

The healthcare staff delivering the MAV programme are trained, partly so that they feel comfortable presenting the lesson, but also to ensure some degree of consistency for evaluation purposes. One-session training courses are held regularly in the Royal College of Physicians and Surgeons, Glasgow.

The format of the intervention

The MAV schools intervention currently consists of a one-visit lesson presented by two MAV members, ideally from different medical, dental or nursing backgrounds, to give some breadth of perspective to the lesson. The lesson follows a structured plan which is introduced to the medics in the training course. After a short introduction, the pupils are shown a short film commissioned by MAV called *Your Choice*. The film forms the basis for a group discussion around three set topics chosen from the lesson plan and its use in every lesson ensures an element of consistency in all lessons.

Your Choice film

In its recent policy statement on media violence, the American Academy of Paediatrics stated that exposure to media violence desensitizes children to violence and can lead to more aggressive behaviour.[26] In developing the film we

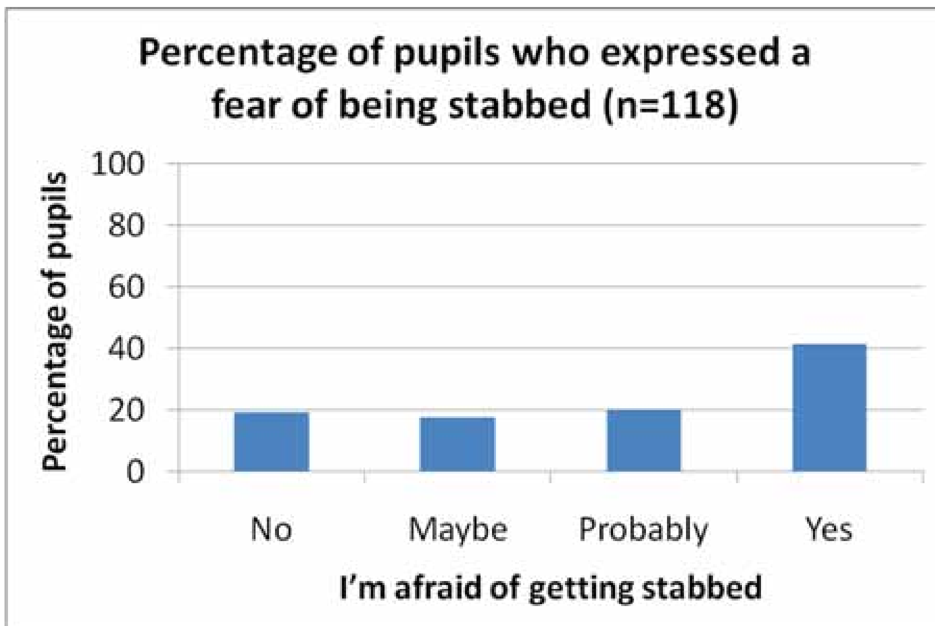

Figure 7. Percentages of 2nd year pupils at school in Glasgow's East End who feared being stabbed.

made a conscious decision not to focus on images of injuries but rather to focus on the consequences of violence and injury, and the film features five individuals whose lives have been affected by violence telling their stories. It is well known that young people, particularly teenagers, will get involved in risky activities with no thought of the consequences,[27] and we thought it was important to show them the effect that violence can have on people's lives from a medical perspective.

Progress

MAV started recruiting members in 2008 and visiting schools in May 2009. We currently have over 120 members from a wide variety of medical, dental and nursing specialties (Figure 5). In 2009 and 2010, MAV members visited 23 schools in the Glasgow area and spoke to around 3000 young people, the schools visited included a special school and one with a secure unit. For 2010 and 2011, a further 18 schools have requested visits. The majority of schools visited were in areas of social deprivation (Figure 6).

Evaluation

Evaluation of the programme is currently in the early stages and will involve both quantitative and qualitative methodologies. One of our aims is to change attitudes to violence and *The Attitudes Toward Violence* questionnaire (Child Version)[28] is currently used to collect both baseline and follow-up data. This includes 16 questions on violence and responses are given on a 4-point tick-box scale. We also intend to determine whether there has been a real reduction in violence and injury post intervention, using school, police and health service figures.

We used *The Attitudes Toward Violence* questionnaire to collect baseline data in one school in the East End of Glasgow and the results of this were interesting. In terms of knife-related variables, while most of the pupils realized that it was not a good idea to carry a knife (84.3%), over 40% of the pupils were afraid of being stabbed (Figure 7), and 6% would feel safer with a knife. With regard to more low level violence, such as fighting, 64% believed that if someone hit you, you should hit them back, and only 21% would run away from a fight; 19.5% believed that people who used violence were respected.

Feedback from pupils and teachers.

Feedback from both the pupils and teachers at the schools visited about the programme has been very positive (Figure 8). The teachers mentioned relevance of the programme, the impact which the film made on the pupils, and the benefit of having medics in the classroom. The pupils seemed to appreciate that we tried to show them the consequences for the victims of violence. In discussions with pupils it is clear that they hold various misconceptions about the damage caused

Feedback from a PSE teacher, Braidhurst High, Motherwell

'I just wanted to let your team know that the talks they gave in our school were greatly appreciated. The teachers thought they were 'brilliant' and totally relevant to the pupils. They all said the DVD was very good and they would have the team back 'in a minute.''

Feedback from 2nd year pupils at St Stephen's High School, Port Glasgow

'I thought the violence was hard to look at but made you really think of the consequences of carrying a knife'
'Shows you what happens when people get involved with violence'
'Normally when people talk about violence it's about the offender. This time it was different because the DVD showed us how the victims felt'
'I learned it's my choice, nobody else's'
'It changed what you think about having a knife'

Figure 8. Feedback on the MAV programme from teachers and pupils.

by violence and the consequences of injury, and it is in this area that healthcare professionals can use their knowledge and expertise to best effect.

The way forward

Over the next year the school programme will expand into Ayrshire and into Dundee. Recruitment of members and interested schools in these areas is ongoing.

If you would like more information about the MAV programme, or if you would like to join us, please visit our website **www.medicsagainstviolence.co.uk** for details of our Schools Project and other health-led programmes to tackle violence. The programme is appropriate to all parts of the UK.

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