

INJURY AND SAFETY MONITOR

E D I T O R I A L

Injuries arising from intentional incidents (e.g. violence, crime, suicide) and unintentional incidents (e.g. traffic-related, falls, fires, poisonings) contribute significantly to our national burden of disease. Yet our social and academic responses to their prevention and containment remain problematic. The lack of quality local injury data, the inordinate focus on criminal justice measures, and the underdevelopment of the field in South Africa are among the many factors that limit our attempts to encourage a public health multi-disciplinary orientation to injury prevention.

The emerging injury prevention movement in South Africa must therefore prioritise the production of quality and accurate injury data depicting the 'who, what, when and how' of injuries, and the study of local good practices for prevention. In addition, significant resources ought to be invested towards the professionalisation of the field: rapid and sustained skills development initiatives, authorship development projects, facilitation of professional associations and effective information dissemination strategies can all serve to strengthen the injury prevention field in South Africa. All of these activities can be somewhat daunting for our fledgling injury prevention movement, still characterised by lack of co-ordination in its research efforts, professional jealousies and competition for limited resources.

Noting the many challenges and opportunities, we launch our *Injury and Safety Monitor* in the spirit of encouraging dialogue and information dissemination in the injury prevention sector. Through the *Injury and Safety Monitor*, which incorporates the Medical Research Council's *Trauma Review* and the Unisa Centre for Peace Action's *Community Safety News*, we shall endeavour to disseminate injury epidemiology and best practices information. Intended as a quick yet informative quarterly newsletter, the *Injury and Safety Monitor* will highlight emerging injury priorities and associated implications for prevention policy and practice. We will focus particular attention on lessons for **What Works** for injury epidemiology and surveillance, and prevention practice and policy.

ISSN 10121-6251
VOL. 1 NO. 1 JUNE 2002

IN THIS ISSUE.....

- EDITORIAL *Page 1*
- THE NIMSS: A PROFILE OF FATAL INJURIES IN SA, 2000 *Page 3*
- THE UTILITY OF INJURY SURVEILLANCE AND EPIDEMIOLOGY DATA *Page 4*
- LEARNER INCIDENT AND INJURY SURVEILLANCE *Page 5*
- CRIME AND VIOLENCE IN THE WORKPLACE - EFFECTS ON HEALTH WORKERS PART II *Page 8*

CO-ORDINATING EDITORS

SANDRA MARAIS (sandra.marais@mrc.ac.za)
(CVIP),MRC
GARTH STEVENS (steveg@unisa.ac.za)
(CVIP),MRC UNISA - ISHS, JOHANNESBURG

EDITORIAL SUPPORT

MOHAMMED SEEDAT
ASHLEY VAN NIEKERK
CVIP,MRC
LEVERNE GETHING, IZELLE THEUNISSEN
NEWS, PUBLICATIONS AND MEDIA RELATIONS, MRC

PRODUCED BY

NEWS, PUBLICATIONS AND MEDIA RELATIONS, MRC
P O BOX 19070, TYGERBERG 7505

DESIGN AND LAYOUT

PATRICIA CAREY
MEDICAL RESEARCH COUNCIL STUDIO

AN MRC PUBLICATION



We encourage readers, including organisations, wishing to submit contributions, to contact the Co-ordinating Editors:

Sandra Marais: MRC, Cape Town, Tel.: (021) 938-0216, e-mail, sandra.marais@mrc.ac.za

Garth Stevens: UNISA-ISHS, Johannesburg, Tel.: (011) 857-1142, e-mail, steveg@unisa.ac.za

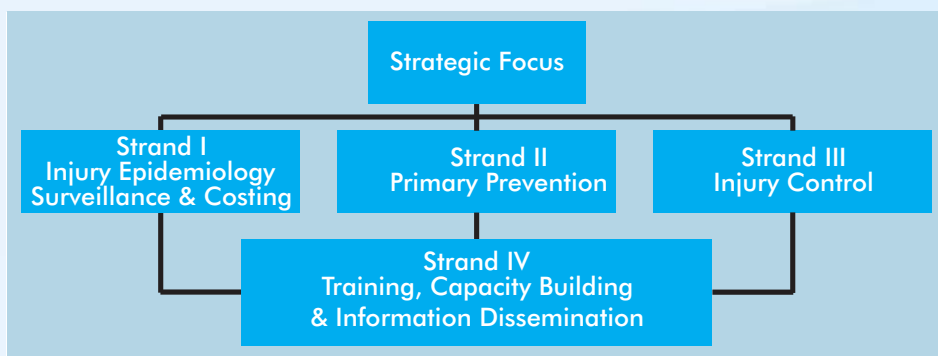
For more information on the Crime, Violence and Injury Lead Programme (CVIP) you may go to the following webpages: www.unisa.ac.za/dept/ishs and www.mrc.ac.za/crime/crime. We have also designed and posted a Request for Information Form onto our webpages for those agencies and individuals wishing to source information from the CVIP.

AIMS, SCOPE AND PURPOSE OF THE CVIP

The Crime, Violence and Injury Lead Programme is co-directed by the Medical Research Council and the Unisa Institute for Social and Health Sciences.

In seeking to address the need for information on the patterns, risks and determinants of injury and how to prevent it, the public health logic, assumed by the Lead Programme and other successful prevention work, upholds the idea that safety promotion is contingent on problem definition, risk factor identification, development and testing of pilot initiatives, and widespread implementation and ongoing measurement of effectiveness. While physical injuries are the primary target for investigation, the Lead Programme will also give due regard to psychosocial features of trauma arising from injury at the levels of secondary and tertiary prevention.

Within the field of crime, violence and injury prevention, the Lead Programme's overall strategic orientation and goal is to produce research on the extent, causes, consequences and costs of injuries and on best practices for primary prevention and injury control. The emergent body of knowledge is to be used strategically to develop the initiative into a Programme of Excellence that serves as a resource for research groups, service agencies and policy-makers working in the field of crime, violence and injury prevention. The Lead Programme also aims to build capacity among South African researchers, including historically marginalised groups.



Building on the initial surveillance data and drawing on local, national and international experience, the Lead Programme's best practices research will study the effectiveness and impact of individual, family, school, community and societal level approaches to crime, violence and injury prevention. The Programme is focused on researching macro- and micro-level prevention and injury control measures.

Following the Institute's orientation towards a mix of basic, strategic and applied cum action research, for the next 5 years the Lead Programme will have four broad focus strands, depicted in the diagram.

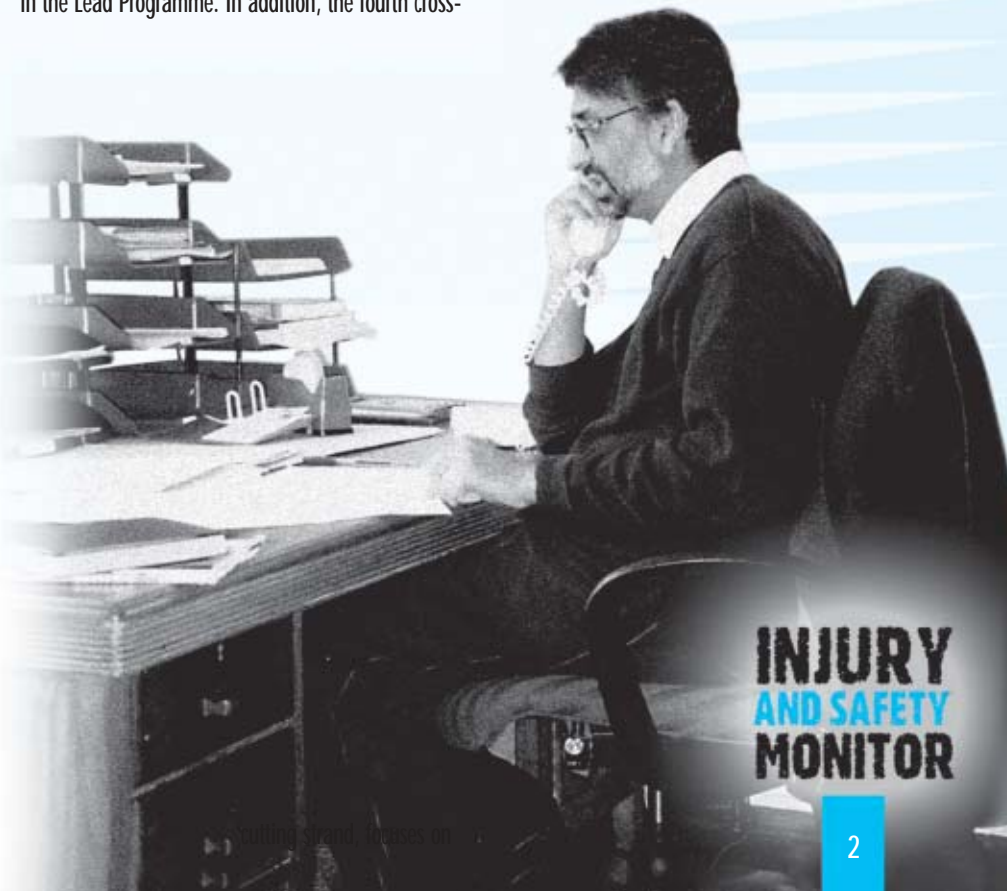
Whereas the epidemiology and surveillance strand converges around the first two phases of the public health approach, the best practices strand converges around the third and fourth phases, thereby promoting synergistic exchanges between the various research strands and the two primary research groups working in the Lead Programme. In addition, the fourth cross-

information dissemination, conceptual development and capacity building. This strand ensures information linkages between the Lead Programme and various collaborators and potential end-users of Lead Programme products.

Mohamed Seedat
Director: CVIP

Sandra Marais
Senior Specialist Scientist, MRC

Mohamed Seedat, Director of the Crime, Violence and Injury Lead Programme



THE NATIONAL INJURY MORTALITY SURVEILLANCE SYSTEM A PROFILE OF FATAL INJURIES IN SOUTH AFRICA, 2000

Richard Matzopoulos

Epidemiologist: Crime, Violence and Injury Lead Programme

National vital statistics last reported an analysis of non-natural deaths by manner of death and external cause in 1991, and there are no indications that such reporting will be reinstated in the near future. In 2000, the National Injury Mortality Surveillance System (NIMSS) Annual Report for 1999 was released, which provided the first semi-national profile describing the epidemiology of non-natural deaths since 1991. The NIMSS database provides information about the external causes of fatal injuries (e.g. gunshots, sharp instruments, pedestrian motor vehicle accidents) by victim age, sex, population group, spatial and temporal characteristics of the events, and alcohol involvement. The information is critical for monitoring demographic, seasonal and socio-economically related trends in such major causes of death as homicide, motor vehicle accidents, burns, falls and drowning.

The NIMSS Annual Report for 2000 describes non-natural deaths recorded from fifteen mainly urban mortuaries in five provinces (see Table 1). The NIMSS recorded a total of 18 876 fatal injuries for the period 1 January to 31 December 2001. In the absence of accurate and reliable routinely collected data, current estimates for the national number of deaths that occur due to non-natural causes range from 65 000 to 80 000 per annum. This accounts for between 12% and 15% of the more than half a million deaths that occur annually from all causes of death. Therefore, the data collected by NIMSS in 2000 accounted for between 24% and 29% of all non-natural mortality. NIMSS aims to expand its case coverage until all injury deaths are included in what is intended to be an ongoing system for the epidemiological surveillance of fatal injuries. It is estimated that case coverage will be up to 33% for the year 2001, and will reach 40% by the end of 2002.

In South Africa, injuries due to homicides, traffic collisions and other incidents, such as burns, falls, and drowning, are among the leading causes of death. Despite the magnitude of the problem and constant media coverage, the situation has not improved. One of the reasons is that prevention agencies do not have access to information about the demographic, seasonal and socio-economic causes of injury, disability, psychosocial trauma and death.

The NIMSS produces and disseminates descriptive epidemiological information for deaths due to non-natural causes that, in terms of existing legislation, are subject to medico-legal investigation. The ultimate goal is to establish a permanent system that will record all such deaths that occur annually in South Africa. The NIMSS, will at a local, regional and national level, provide information to:

- describe the incidence, causes and consequences of non-natural deaths;
- prioritise injury and violence prevention action directed at high-risk groups and socio-environmental risk factors;
- identify new injury trends and emerging problem areas;
- monitor seasonal and longitudinal changes in the non-natural fatality profile; and
- evaluate direct and indirect violence and injury prevention and control measures.

The information is collated from existing investigative procedures at mortuaries, state forensic chemistry laboratories and the courts. All deaths due to external causes are included, generat-

Table 1. List of mortuaries included in the NIMSS 2000 Annual Report

Province	City	Mortuary	TOTAL
Eastern Cape			
	East London	Woodbrook	784
	Port Elizabeth	Mount Road	383
	Port Elizabeth	New Brighton	662
	Port Elizabeth	Gelvandale	724
Northern Cape			
	Kimberley	Kimberley	349
KwaZulu-Natal			
	Durban	Gale Street	2365
Gauteng			
	Pretoria	Pretoria	1737
	Pretoria	Bronkhorstspuit	185
	Pretoria	MEDUNSA	483
	Johannesburg	Germiston	2616
	Johannesburg	Johannesburg*	1101
	Johannesburg	Diepkloof	1693
	Johannesburg	Roodepoort	1145
Western Cape			
	Cape Town	Salt River	2498
	Cape Town	Tygerberg	2151
TOTAL			18 876

*Only six months data from Johannesburg mortuary

ing an overview of the manner in which the different categories of external cause contribute to the deaths of men, women and children. The box overleaf presents an overview of the 2000 findings, extracted from the Executive Summary of the full report.

The utility of NIMSS lies in the pointers it provides for improving the prevention and control of injuries in South Africa, and in evaluating the impact of direct (e.g. gun law enforcement) and indirect (e.g. socio-economic development) interventions that are expected to reduce some of the major external causes of fatal injury. Whereas the 1999 report provided a baseline profile for future monitoring, the 2000 report shows that homicide continues to be the main cause of non-natural death, and that among homicides, the proportion of deaths due to firearms continues to increase.

Requests for the report, and for customised analyses of the data are welcomed. To track the user profile and improve the targeting of future reports, these requests should be in writing and include a brief motivation indicating how the information will be used.

Please address all requests to the Crime, Violence and Injury Lead Programme Secretary, Ms Lyndsey Loure at telephone (011) 857 1142 or e-mail lourilc@unisa.ac.za

OVERVIEW OF NIMSS 2000 FINDINGS

Sex, age and race. Of the 18 876 non-natural deaths, 80% were among males and 20% among females. Blacks constituted 70% of all cases, Coloureds 16%, Whites 12%, and Asians 2%. The majority of victims were young adults, with 37% of all cases aged 15 to 29, and 36% aged 30-44. Four per cent of the victims were younger than 5 years, another 4% were aged 5 to 14 years, 14% were aged 45 to 59 years, and 6% were 60 years and older.

Manner of death. Homicide was the most common manner of non-natural death, accounting for 45% ($N = 8395$) of all cases. Accidents accounted for 35% ($N = 6503$), followed by suicide (9% or 1782 cases). For 12% ($N = 2196$) manner of death was undetermined. Males constituted 80% of all injury deaths, and there were 4.1 male deaths for every female death. The leading manner of death for males was homicide (49%) and for females, unintentional incidents (44%).

External causes of death. Firearms overshadowed all other external causes, and accounted for 28% of all cases. The total of 5201 firearm deaths was greater than the 4315 deaths due to all motor vehicle collision (MVC) categories combined. In infants and children younger than 5 years, burns were the main cause of death. From 5 to 14 years pedestrian injuries ranked first. For all other age groups older than 14 years, firearms ranked first, with sharp object deaths second for 15 to 44 year olds, and MVC pedestrian deaths second for those aged 45 and older.

Homicide. Over half of the 8395 homicides were inflicted by firearms, and almost a third by sharp instruments. The number of homicide victims rose abruptly in the 15 to 19 year age group, peaked in

the 25 to 29 age group, and remained high until 44 years. There were 6.8 males per female homicide victim. Of the males, 54% were killed using firearms, while firearms accounted for 43% of female homicides. Strangulation homicides were 13 times more frequent in females than in males. Firearm homicides dominated for all age groups. Sharp instruments were the second leading cause for those aged 10 to 49 years, blunt objects for those aged 50 years and older, burn deaths for 5 to 9 year olds, and other causes for those younger than 5 years. Most homicides occurred in private homes, and nearly 80% of sharp instrument victims had positive blood alcohol concentrations (BACs) in contrast to the 43% of firearm victims with positive BACs.

Fatal accidents. Accident deaths due to transport, burns, falls and drowning, and other external causes accounted for 6503 or 35% of all fatal injuries. Of these, 72% were transport-related, 12% were due to burns, 7% due to other external causes, 4% due to drowning and 4% due to falls.

Transport-related deaths. Of the 4660 transport-related deaths, 90% were the result of MVCs, 7% were railway-related and 3% involved cyclists. Pedestrians accounted for 40% of the MVCs, followed by 25% where the user category was unknown. There were 3.2 males per female transport-related death. Pedestrian deaths ranked as the top external cause of death from age 5 to 14 years, among the top three for all other age groups, except those under 1 year, where MVC passenger injuries ranked as the leading external cause of death. Most MVC-related deaths occurred from 18:00 to 22:00 on the weekends. BAC was positive for 63% of pedestrians and 54% of drivers.

Burns, falls, drowning and other accidental deaths. Of the 1840 deaths due to these causes, 44% were due to burns, 26% due to a cluster of 'other' accidents, 16% drowning, and 14% falls. Burns were the leading external cause of death under 4 years of age, and the second leading cause for those aged 5 to 9 years. There were 3.7, 3.1 and 1.8 males per female victim of drowning, falls and burns, respectively. Most burn and fall deaths occurred in private homes, and drowning deaths in the sea, lakes and rivers, although a substantial percentage of drownings also happened at private homes (e.g. in swimming pools). BACs were positive in 64% of the burn fatalities, 52% of the drowning deaths and 30% of the falls. There were 476 fatal accidents due to 'other' causes. Contact with blunt objects, poisoning and crushing (mostly in mine accidents) were among the leading causes.

Suicide. Firearms and hanging each accounted for one third of the 1782 suicides. Most suicide victims were between 25 and 39 years of age. There were 4.5 males for every female suicide. The leading external causes of suicide in males were hanging (42%) and firearms (37%), and in females poisoning (32%) and firearms (25.0%). Most suicides occurred in private homes. Under half of all suicide victims had elevated BACs.

Manner of death undetermined. For 2163 cases the manner of death was undetermined. While it is essential to examine these cases in greater detail, further analysis is not undertaken in this report. A future in depth study will determine the profile and patterning of these cases.

THE UTILITY OF INJURY SURVEILLANCE AND EPIDEMIOLOGY DATA BRIEF FINDINGS FROM A RECENT STUDY

Injury preventionists produce surveillance and epidemiological data for the purposes of producing information on priority injury patterns, vital for informing the formulation of appropriate policy and practice responses. Despite such good intentions there is a paucity of studies tracing how, when and why injury data are utilised.

Following the uptake of data produced in the emerging mortality surveillance initiative and a community-based safety promotion project, useful insights are provided for those wishing to influence policy and practice. The analysis reveals that mortality surveillance data are used for multiple purposes: informing prevention programmes, justifying budgets, management, teaching, academic presentations, and advocacy.

The use of the injury data is influenced by a range of factors: context, content, process and social actors. The reputation of the agency generating the data and the quality and accessibility of the associated reports are both significant. In addition, the timing of data releases, academic background of end-users, political and organisational climate, and degree of responsiveness to the public health approach are all among the many factors influencing uptake and utility of injury data. A responsive political culture that appreciates the value of science is critical for meaningful data uptake.

This limited study points to the need for further investigation into the research-policy-practice nexus. It is sug-

gested that in order to maximise success, policy advocates and lobbyists become sensitive to the many opportunities and challenges presented by the encroaching influences of globalisation on policy reform. A full copy of the study report is obtainable through Ms Lyndsey Lourie at lourilc@unisa.ac.za

**INJURY
AND SAFETY
MONITOR**

PRELIMINARY RESULTS AND PREVENTION IMPLICATIONS OF THE LEARNER INCIDENT AND INJURY SURVEILLANCE SYSTEM

Tanya Swart and Garth Stevens

UNISA Institute for
Social and Health Sciences and MRC-UNISA
Crime, Violence and Injury Lead Programme

INTRODUCTION

The Learner Incident and Injury Surveillance System (LINCIS) was initiated in mid-2000 as part of the UNISA Institute for Social and Health Sciences' Safe Schools Project, which is currently being implemented in Eldorado Park secondary schools. The Learner Incident and Injury Surveillance System utilises the Learner Incident and Injury Report to record and monitor all incidents and/or injuries through the completion of the surveillance registry each time such an incident and/or injury occurs within the school premises (Stevens, 2000; Stevens, van Niekerk & Wyngaard, 2001).

The Learner Incident and Injury Report focuses on the specificity of incidents of violence and injury occurring in the school environment. In addition, it focuses on behavioural repertoires that compromise prosocial activities at schools and that may be directly or indirectly associated with crime, violence and injury among school-going youth. It includes items directed at obtaining information regarding the demographics of learners involved in incidents and/or injuries (e.g. age, grade, sex); the details of the person recording the incident (e.g. teacher, principal, secretary); the nature of the incident (e.g. physical assault, sport-related, sexual harassment); the location of the incident (e.g. classroom, playground, toilets); and the time of the incident (e.g. class time, lunch break, before school).

With reference to incidents in which physical injuries were sustained, the Learner Incident and Injury Report contains items regarding the type of injury sustained (e.g. cut, penetrating wound, bruise); the body part(s) injured (e.g. head, shoulder, foot); and the care provided to the injured person (e.g. first aid, doctor, paramedics). For injuries resulting from intentional acts, details about

the number of people involved (e.g. one, two, more than two) and the offender relationship (e.g. school friend, teacher, unknown person) are elicited. For incidents arising from unintentional acts, details about the surface type (e.g. concrete, grass, tiles) and condition (dry, muddy, jagged) are requested.

Overall, the instrument aims to tap the WHO, WHAT, WHERE, WHEN, HOW and WHY of incidents and injuries occurring at school (Swart, 2001a, 2001b, 2001c). The questions contained in the injury and incident report incorporate this kind of detail in order to be able to make concrete and specific recommendations for safety initiatives once the information has been analysed.

THE LONG-TERM AIMS OF LINCIS ARE:

- To provide ongoing and systematic information about the incidence, causes and consequences of violence and injury within schools at local, regional and national levels.
- To allow for the early identification of new violence and injury trends and emerging problem areas within schools, so that adequate interventions may be timely established.
- To determine priorities for violence prevention action, both for high-risk groups and for social and environmental risk factors.
- To evaluate direct and indirect violence and injury prevention initiatives.
- To monitor longitudinal changes in the violence and injury profile.
- To inform resource allocation and policy formulation in the youth sector.

METHOD

LINCIS was implemented following needs analyses conducted in Eldorado Park secondary schools that indicated the necessity of having interventions that prevent crime, violence and injury within this context. The surveillance registry was developed through examining existing schools-based surveillance systems and making appropriate modifications for the Eldorado Park context. Schools were approached about the possibility of implementing LINCIS as part of the broader Safe Schools initiative. The implementation process was negotiated with relevant stakeholders, so that agreement could be reached about the responsibilities each party would assume. Staff members with access to information about incidents and injuries at their respective schools were identified and trained in the recording of incidents and/or injuries. All staff members were trained in the purpose and utility of surveillance methods, and brought on board to support the recording process. Surveillance data is collected from participating schools on a weekly basis, analysed, and documented in the form of popular and technical reports in order to disseminate information regarding violence and injury trends.

PROVISIONAL FINDINGS

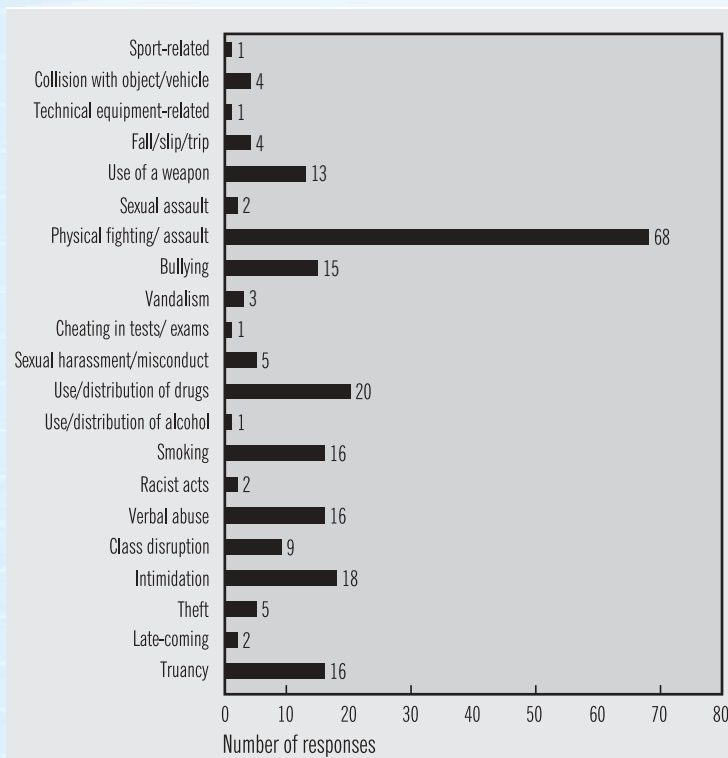
144 cases of incidents and/or injuries were recorded from July 2000 to November 2001. The results reported below pertain to these cases.

Continued on page 6

NATURE OF RECORDED INCIDENTS

Results regarding the nature of recorded incidents and/or injuries are presented in the chart below. It should be noted that more than one category could be selected to describe a particular incident and/or injury. As a result, 240 responses were given to describe the 144 cases. The findings indicate that most incidents were associated with *physical fighting or assault* (47% of cases). Of these incidents, 19% involved the use of *an instrument or weapon*. Combining the figures for incidents associated with the *use or distribution of drugs, use or distribution of alcohol and smoking, substance use and distribution* also presented as a major concern, representing 26% of cases for all reported incidents. Given the salience of violence and substance-related concerns, these cases were further examined in order to identify associated risk factors.

Figure 1: Nature of recorded incidents.
(*N* responses = 240) (*N* cases = 144)



SUBSTANCE USE/DISTRIBUTION

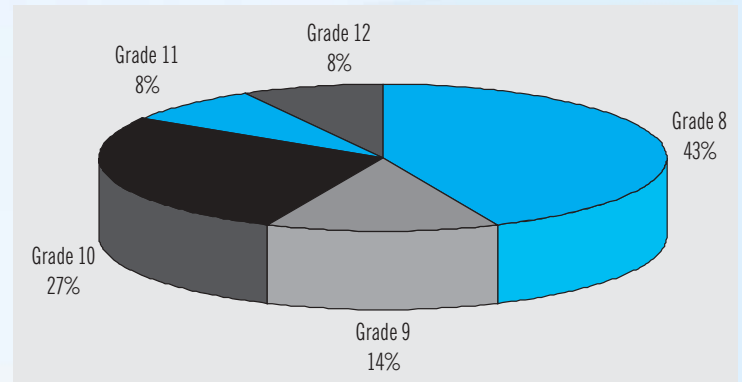
- Sex

Of the 37 cases associated with substance use and distribution, 62% (*N* = 23) involved male learners, whilst 38% (*N* = 14) involved their female counterparts.

- Grade

Results pertaining to the grade of learners involved in cases of substance use or distribution are represented in the chart below. These findings indicate that most learners were in Grade 8 (43%). Of the remaining cases, 14% involved Grade 9 learners; 27.0% of learners were in Grade 10; and 8.1% were in Grades 11 and 12, respectively.

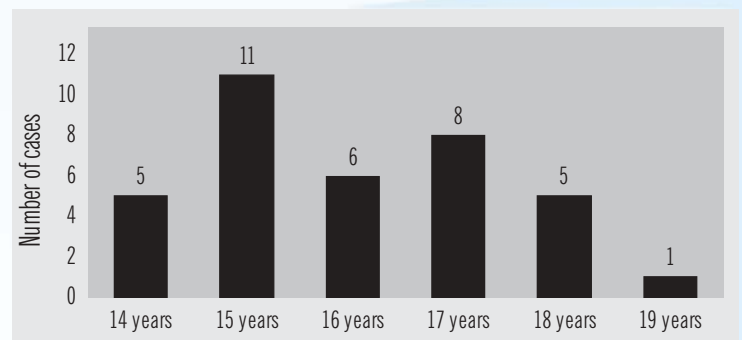
Figure 2: Case of Substance Use/Distribution by Grade of Learner
(*N* = 37)



AGE

The ages of learners involved in cases associated with substance use/distribution are represented in the chart below. These findings show that 13.9% of learners were aged 14; 30.6% were aged 15; 16.7% were aged 16; 22.2% were aged 17; 13.9% were aged 18; and 2.8% were 19 years.

Figure 3: Cases of Substance Use/Distribution by Age of Learner
(*N* = 36)



PHYSICAL FIGHTING/ASSAULT

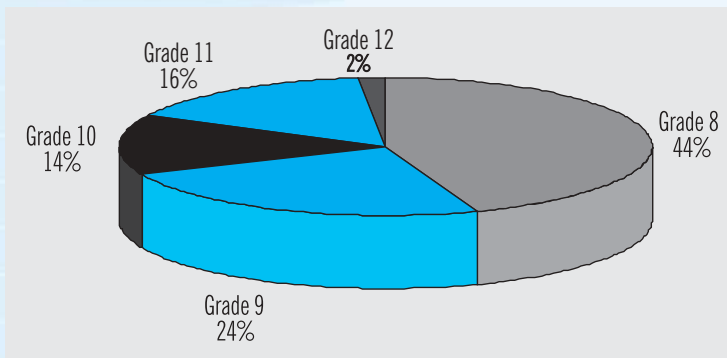
- Sex

Of the 68 reported cases of physical fighting or assault, 68% ($N = 46$) involved male learners, whilst 32% ($N = 22$) involved female learners.

- Grade

Results for cases of physical fighting or assault by grade of learner are represented in the chart below. These findings indicate that 44% of learners were in Grade 8 ($N = 28$); 24% were in Grade 9 ($N = 15$); 14% were in Grade 10 ($N = 9$); 16% were in Grade 11 ($N = 10$); and 2% were in Grade 12 ($N = 1$).

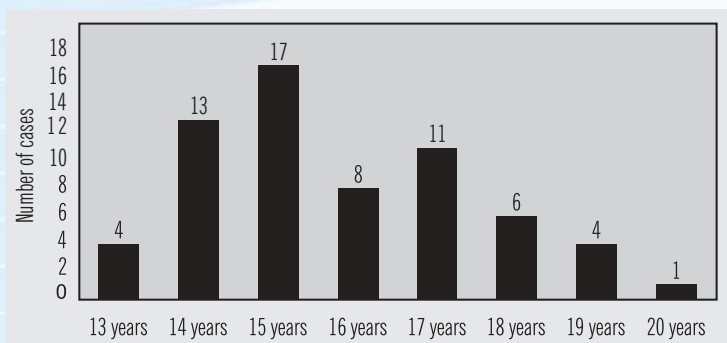
Figure 4: Cases of Physical Fighting/Assault by Grade of Learner ($N = 63$)



- Age

The ages of learners involved in cases associated with physical fighting or assault are represented in the chart below. These findings show that 46.9% of learners were aged 14 or 15 years.

Figure 5: Cases of Physical Fighting/Assault by Grade of Learner ($N = 64$)



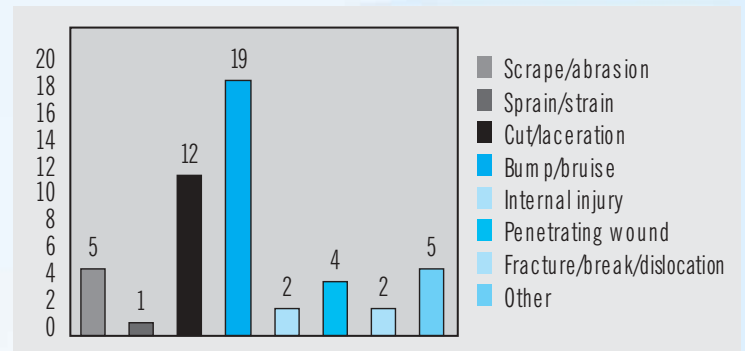
- Injuries resulting from physical fighting/assault

Of the 68 cases that involved physical fighting/assault, 52 reported physical injuries being sustained. For these cases, the person recording an incident was required to specify the type of injury incurred and the body part injured.

TYPE OF INJURY INCURRED

The types of physical injuries that were reported are detailed in the chart below. It should be noted that more than one category could be selected for a particular incident. For some cases, the type of injury incurred was not specified.

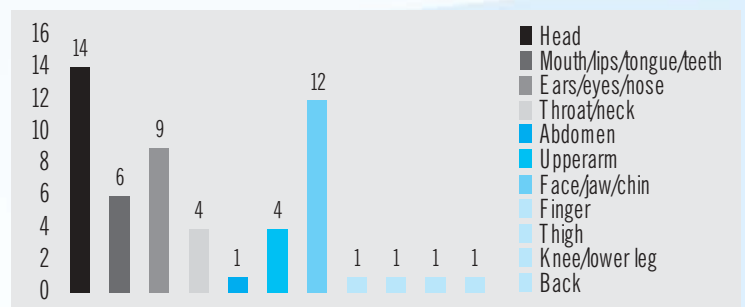
Figure 6: Types of Injuries sustained from Physical Fighting/ Assault (N responses = 50)



BODY PART INJURED

Of the 52 cases in which physical injuries were sustained from incidents associated with physical fighting or assault, the following results pertaining to the body part injured were obtained. Here again it should be noted that more than one category could be selected to describe a particular incident.

Figure 7: Body parts injured from acts of Physical Fighting/Assault (N responses = 54)



Continued on page 8

DISCUSSION

The preliminary results cited above highlight a number of potential issues to consider for further research, but also point to several possible considerations in the development of intervention strategies directed at school-going youth.

With regard to the latter, younger learners appear to be more represented in these findings. Whilst many schools-based interventions are often directed at older learners in senior secondary schooling for a variety of reasons (e.g. they are often focused upon when using the replicator model of intervention), interventions may need to be augmented to accommodate for the specific needs of younger learners as well (even before they reach senior secondary levels of education). In addition, learners who were often involved in incidents and injuries were more often than not located in the lower grades of senior secondary schooling and in line with primary prevention approaches, these learners should probably be targeted sooner rather than later.

Even though there is a sizeable body of research indicating that young women are at-risk for violence and injuries, these results are consistent with other South African findings that indicate the need to consider interventions aimed at reducing risk behaviours among young men as well (Butchart, 2000; Burrows, Bowman, Matzopoulos & van Niekerk, 2001).

Interpersonal violence and substance use and/or distribution emerged as the primary types of behaviours associated with violence, injury and antisocial acts. Both the South African and international literature suggests that interpersonal violence and substance use are often associated, and in the context of HIV/AIDS, interpersonal vio-

lence may increase the likelihood of sexual coercion, unsafe sexual practices and the contraction of HIV/AIDS and other STIs (Swart, Seedat, Stevens & Ricardo, in press). Educative, environmental and enforcement strategies aimed at the prevention, reduction and control of interpersonal violence and substance use should be considered as critical components of interventions, especially given that these trends tend to be maintained among adults as well (Butchart, 2000; Burrows, Bowman, Matzopoulos & van Niekerk, 2001).

With regard to secondary prevention initiatives, learners and educators involved in health and safety at these senior secondary schools may require specific training in the containment of injuries sustained through interpersonal violence (i.e. lacerations and bruises to the head, face and upper extremities), as well as the sequelae of substance use.

In conclusion, the preliminary findings cited above highlight the value in conducting ongoing surveillance at schools, especially with regard to their application to informing prevention initiatives. However, the consequences, sustainability and possible integration of such a system needs to be further evaluated within the context of the education sector in South Africa, and compared to other forms of data collection (e.g. surveys).

Additional considerations for further research include understanding why younger rather than older learners tend to be more reflected in these surveillance findings, what the victim-perpetrator relationships are in cases of interpersonal violence, and how the substance abuse-interpersonal violence nexus articulates itself among school-going youth in South Africa.

REFERENCES

- Burrows, S., Bowman, B., Matzopoulos, R., van Niekerk, A. (Eds)(2001). *A profile of fatal injuries in South Africa 2000*. Tygerberg: MRC-UNISA Crime, Violence and Injury Lead Programme.
- Butchart, A. (Ed)(2000). *A profile of fatal injuries in South Africa 1999*. Johannesburg: UNISA/MRC/CSIR.
- Stevens, G. (2000). *Youth safety and health promotion programme (2000-2004). Draft Programme Documents, February 2000*. Johannesburg: UNISA Institute for Social and Health Sciences / Centre for Peace Action.
- Stevens, G., van Niekerk, A. & Wyngaard, G.C. (2001). The safe schools model: An antidote to school violence? *Perspectives in Education*, 19(2), 145-157.
- Swart, T. (2001a). *The safe schools incident and injury surveillance system: Preliminary results (July-November 2000)*. Johannesburg: UNISA Institute for Social and Health Sciences.
- Swart, T. (2001b). *The safe schools incident and injury surveillance system: Preliminary results (January-June 2001)*. Johannesburg: UNISA Institute for Social and Health Sciences.
- Swart, T. (2001c). *The safe schools incident and injury surveillance system: Preliminary results (July-November 2001)*. Johannesburg: UNISA Institute for Social and Health Sciences.
- Swart, L., Seedat, M., Stevens, G. & Ricardo, I. (in press). Violence in adolescents' romantic relationships: Findings from a survey amongst school-going youth in a South African community. *Journal of Adolescence*.

CRIME AND VIOLENCE IN THE WORKPLACE – EFFECTS ON HEALTH WORKERS, PART II

Sandra Marais

Crime, Violence and Injury Lead Programme, MRC

Elrena Van Der Spuy & Ricky Röntsch,

Institute of Criminology, University of Cape Town

Violence in the workplace has become an issue of international concern. Workplace violence can be defined as destructive behaviour towards another person or object and finds expression in, for instance, physical assault, homicide, verbal abuse, bullying, sexual harassment and acts leading to mental stress (Hoel *et al.*, 1999).

Violence at work is often considered to be a reflection of a more general and pervasive pattern of violence in the

society at large. The impact of violence at work, an environment which traditionally has been viewed as violence free, has become a matter of particular concern for the health services sector. Existing research suggests that compared to many other professions, health care workers are disproportionately at risk of workplace violence, whatever its form. A safe working place is an occupational right of any worker, but there is also concern about the consequences of violence in the workplace on

the efficiency and effectiveness of the day-to-day rendering of a service. Since the majority of the workforce in the health sector is female, the gender dimension to the problem can also readily be recognised.

This second part of an article on workplace violence reports on the research findings of the quantitative section of a broader project on the influence of crime and violence on the delivery of health services in the Western Cape. (The first part of the article was published in the previous *Trauma Review*, vol. 8, 2, December 2000). A structured questionnaire was administered to a sample of health workers at different levels of state health services, i.e. primary, secondary and tertiary care levels. The survey was conducted at the following research sites:

GF Jooste Hospital, Manenberg, Cape Town
Mitchells Plain Day Hospital, Cape Town
Gugulethu Day hospital, Cape Town
The Trauma & Emergency Unit at Groote Schuur Hospital, Cape Town.

The survey at the hospitals formed part of a project design that also included qualitative methods such as field observations, in-depth interviews with senior health officials at provincial and local level, and a focus group discussion with staff members at a primary health care clinic.

THE RESEARCH OBJECTIVES

- To develop a comprehensive profile of the safety concerns of health care workers in our research region.
- To map actual incidents of violence and crime as they affect a sample of health workers in the workplace in the Western Cape.
- To establish the risk profiles of particular categories of health workers with the view to determining those who are most vulnerable.
- To determine the effects of both the fear of crime and of the actual experiences of crime and violence on the delivery of health services.
- To examine preventative strategies that have been deployed to bolster workplace safety.
- To formulate recommendations aimed at improving the safety and security of health care workers.

SAMPLE DESIGN

In the case of each health site, the duty roster - consisting of the lists of staff deployed for the particular week

during which the survey was to be conducted - constituted the broad sampling frame. The sample was drawn on proportional grounds for each of the professional categories of health workers. Although the sample in the event was not randomised, it constituted a reasonable approximation to such a sample under the constraints of accessing health care staff deployed on both day and night duty and the tight budgetary limits. A loading factor was included to increase the number of doctors at each of the sites which otherwise would have been too small for analysis. In addition, the sample at Groote Schuur was only drawn from the emergency and trauma units. While this is also a limitation of the study we considered it a reasonable compromise as staff attached to such units are more likely to encounter incidents of violence.

DEMOGRAPHIC PROFILE OF THE SAMPLE

A total of 176 questionnaires were completed. Most of the interviewees were women (75%). Nearly two thirds (62.5%) of the sample were nursing staff of which a large majority were female (Chief Professional Nurses made up 14.2% of the sample, Senior Professional and Professional Nurses 16.5%, and non-professional nurses 31.8%). Doctors constituted close to a third of the sample (29%) and 65% of this group were males. The rest of the sample (8.5%) consisted of paramedics and administrative staff.

Half of the sample (50.6%) was between the ages of 26 and 35 with a further 28% between the ages of 36 and 45. Only a small percentage of the respondents were under 26 years old. On average nurses tend to have worked for longer periods in the health field in general as well as at the specific health facility where they were interviewed (14 and 6 yrs for nurses compared to 5 and 2 yrs for doctors, i.e. three times as long).

According to home language, interviewees were evenly distributed across the three official languages of the province, Xhosa, Afrikaans and English.

GENERAL WORKPLACE CONCERNS

When asked to rate their overall satisfaction with their jobs, 60% of the sample indicated that they were 'reasonably satisfied'. Nurses were more positive about the

job than doctors, with 23% of the nurses indicating that they had a 'great' job. More than half (54,9%) of doctors said they were 'reasonably satisfied' with a further 25,5% seeing their job as 'just a job'.

Almost two thirds of the sample (62.9%) indicated that working conditions have deteriorated in the past few years. More nurses than doctors agreed with this observation (65.1% as opposed to 58.8%). The large majority of the interviewees (80%) agreed that the main reason for this deterioration was an insufficient health budget.

MOST IMPORTANT ISSUES IN THE WORKPLACE

Respondents were asked to rank their workplace concerns in order of importance. Staff shortages and salaries seemed to be the most important issues in the workplace (33,9% and 20,1% responses respectively). In contrast to nurses, doctors seemed more concerned with actual working conditions, for instance staff shortages, long working hours and patient load rather than with salary issues. These same issues remain a priority as a second or third choice in a list of possible concerns. Judging by the responses solicited to this broad question, crime and violence did not feature prominently as an issue in the workplace at all.

IMPORTANCE OF CRIME AND VIOLENCE AS A WORKPLACE CONCERN

In a follow-up question respondents' views around workplace crime and violence were probed more directly. The responses indicate that doctors and nurses think differently about crime/violence as a major concern in the workplace. Although 69% of nurses thought that this was a major concern for staff, only 30% of the doctors agreed, while a further 26% of the doctors indicated that they simply did not know.

61.1% of the sample indicated that they have to contend with violence/crime in the workplace frequently and yet 58.1% did not regard violence as 'part of the job'.

Continued on page 10

Doctors, in contrast, tended to normalise violent and criminal incidents in the workplace to a larger extent - 46.9% of doctors regarded crime/violence as 'part of the job'.

A little more than half of the sample (53.4%) thought that management was responsive to the safety concerns of staff - nurses much more so than doctors (63,6% as opposed to 35,3%) but more than a third of the doctors (37,3%) did not know.

Respondents were however less convinced and unsure about the commitment of the Provincial Department of Health/City Council to safe working environments. The larger percentage of respondents were of the opinion that workplace safety is not a top concern (42%) or did not know (27.8%) whether this was a top concern at this level of governance.

Respondents were not sure whether counselling was available to staff members should they be exposed to workplace violence with 63.2% of respondents saying no or they did not know. It was however clear that staff members are not trained to handle threatening and aggressive behaviour in the workplace (this was indicated by 76,1% of the respondents).

ISSUES OF SAFETY IN THE WORKPLACE

A series of questions were put to respondents to gauge on what occasions and in which areas in and around the hospital they felt safe or unsafe. The role of the fear of crime/violence in shaping people's general feelings of safety in different situations and how they react to crime/ violence in general is well known. This profile of the respondents' perceptions of crime becomes particularly meaningful when compared to the profile of the actual experiences of crime/violence, discussed later in the article.

More than 40% of the sample indicated that they felt 'reasonably safe' in the neighbourhood where they live, when they travel to work and at work. At work the largest proportion on the respondents felt most unsafe outside the trauma unit (49,7%) and the vicinity of the visitor's entrance (41,7%). There are however marked differences between the responses of the nursing staff and the doctors. Nursing staff tend to feel much more unsafe to very unsafe where they live, when they travel to work and even at work (see Table 1). Nurses seem to be much more vulnerable in their work situations than doctors. Many nurses live in the communities where they work, which is in many cases not so safe. Nurses also make use of public transport much more often than doctors do (only 37,6% of the nurses travel by car as opposed to 94,1% of doctors). They

indicated in 44,5% of the cases that they felt unsafe to very unsafe travelling, and in some cases walking to work. Both doctors and nurses felt unsafe outside the trauma unit. More nurses than doctors felt unsafe inside the trauma unit, probably because they are the ones to confront patients first and are therefore more open to abuse.

Table 1: Perceptions of safety in different contexts

	Moderately safe (%)			Unsafe/Very unsafe (%)		
	Nurses (N=110)	Drs (N=51)	All (N=176)	Nurses (N=110)	Drs (N=51)	All (N=176)
Where you live	44.5	41.2	42.0	19.1	13.7	18.1
Travel to work	40.0	56.9	45.5	44.5	27.5	39.2
At work	49.1	64.7	52.8	28.2	7.9	22.1
Outside trauma	30.0	36.0	30.9	48.0	50.0	49.7
Inside trauma	34.9	62.7	40.9	38.5	15.9	33.0
Visitor's entrance	35.8	38.0	34.9	39.5	36.0	41.7

Both nurses and doctors indicated that they felt more unsafe at night (38.5%) and over weekends (40.2%). Reasons for feeling unsafe were a combination between internal threatening behaviour (in 21.3% of the cases) and an externally threatening environment (15%) coupled with an inadequate hospital security system that is unable to allay these fears. Staff seemed to have a generalised feeling of being victimised. Gangs (51.2%) escorts (27.3%) and to a much lesser degree, patients, were seen to be most likely to threaten their safety and all staff agreed on this. Gangs were considered the biggest threat at GF Jooste Hospital, Mitchells Plain and Groote Schuur Hospitals. Escorts were identified as the ones most likely to threaten staff at Mitchells Plain and Gugulethu Hospitals.

ACTUAL INCIDENCE OF VIOLENCE

Respondents were asked to indicate how often in the past 2 years they have experienced different forms of aggressive behaviour in the workplace, ranging from verbal abuse to assaults.

Verbal abuse and threats of assaults were experienced most often in the workplace. A small percentage (6.9%) of interviewees had, on a few occasions, been assaulted with resultant minor injuries, and a further 4.6% of respondents had experienced an assault with noteworthy physical injury. Fig. 1 indicates the number of victims of various forms of violence and Fig. 2 indicates the number of respondents who had witnessed various forms of violence at work.

Figure 1: How often have you been a victim of the various forms of assault?

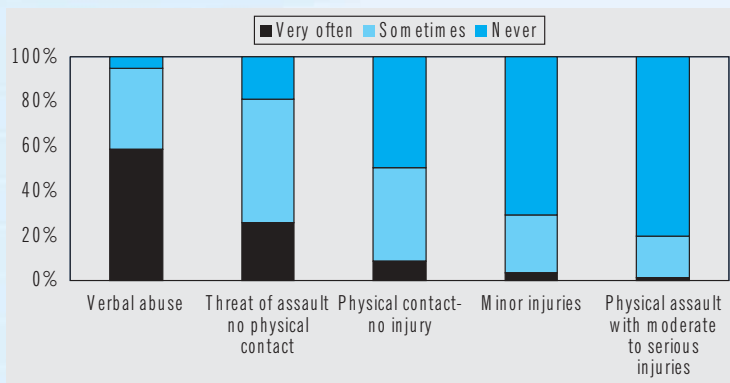
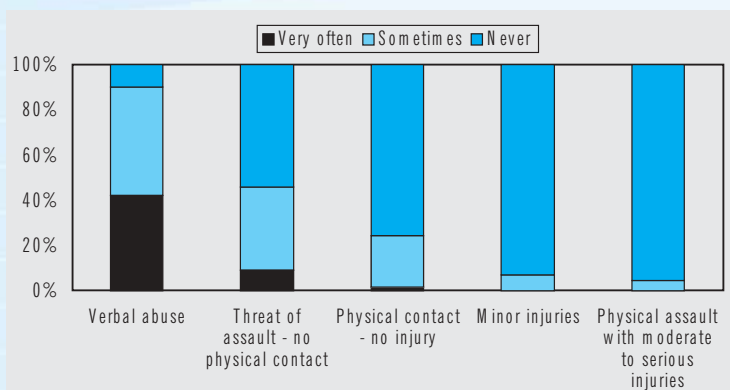


Figure 2: How often have you witnessed the various forms of assault?



The incidence for the different forms of violence drops markedly with seriousness of the assault. Almost all forms of violence were experienced more often by the nursing staff than by the doctors (see Figs 3 and 4).

Figure 3: Experiencing violence as a victim - nurses.

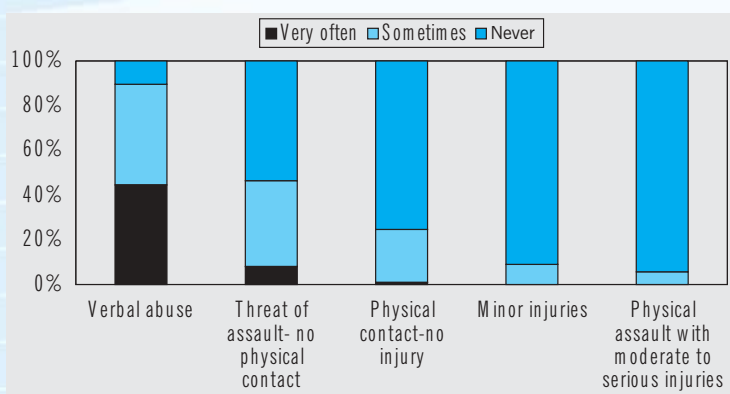
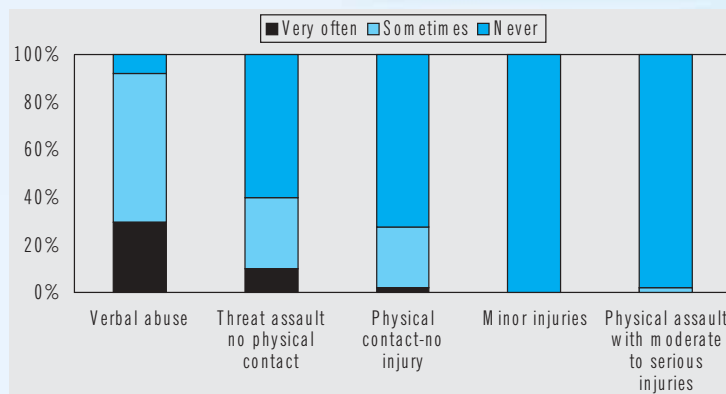


Figure 4: Experiencing violence as a victim - doctors



Fifty per cent of the respondents indicated that they did not report verbal abuse incidents to any relevant authorities. Reasons that were given included: it is such a common experience, and that they are of the opinion that nothing will and/or can be done about it. Almost as many respondents did not report threats of assaults because they see these as empty threats and that nothing will be done about them. The respondents who did report incidences of verbal abuse and threats of assault, mostly reported such incidents to their direct line manager and sometimes also "informed" the security guards, especially if they required the latter to deal with the abusive perpetrator.

The few assaults that involved physical contact were mostly ascribed to psychotic behaviour of the patient or to behaviour that stemmed from the patient's substance abuse (mostly alcohol intoxication). Only one case of sexual assault was reported among the respondents in the past 2 years. Where no injury resulted, such incidents were often not reported. Most of the assaults that resulted in physical injury were reported to the hospital management. It was however indicated that the reporting system in hospitals is inadequate.

A number of respondents (26.6%) experienced petty theft in the hospital. There were thirteen instances of theft out of a vehicle reported. The reporting of these incidences was seen as futile in the majority of cases.

As indicated earlier, most of the incidents of aggression have been predominantly perpetrated by visitors and escorts of patients, although patients are also perpetrators of violent acts.

FACTORS THAT CONTRIBUTE MOST TO THREATENING BEHAVIOUR

Mitchells Plain Day Hospital respondents were of the view that the main contributing causes to aggressive or threatening behaviour are frustration due to lengthy waiting periods and substance abuse (mostly alcohol), and to a lesser extent gang disputes. The trend is the same at Gugulethu Day Hospital, except the carrying of weapons is a

Continued on page 12

concern here, not gang disputes. At GF Jooste and Grootte Schuur Hospitals the main problems were substance abuse, gangs and guns. Frustration due to long waiting periods was of a lesser concern here. On the whole doctors' and nurses' opinions were similar on these issues.

INFLUENCE OF VIOLENCE/CRIME ON THE DELIVERY OF SERVICES

In an open question, respondents were asked how feelings of unsafety at work influenced the performance of their tasks. Less than half of the respondents (40.9%) reacted to this question.

The majority of the respondents (37.5%) gave a response which was a blend of three reactions:

*Internalised responses

*Creative adaptation, avoidance strategies and coping mechanisms

*Negative service delivery

The response of 27.8% of the respondents indicated that they had learned to cope, could pacify potentially threatening patients, and thus avoid an open confrontation or that they simply avoided trouble spots in the hospital (nurses more so than doctors). A further 23.6% of respondents stated that they sometimes suffer from depression and internalised reactions due to the fact that they felt unsafe at work (doctors more so than nurses). A small percentage (11.1%) admitted outright that they delivered less than a quality service and that their absenteeism could frequently be ascribed to the fact that they were demoralised by their unsafe working environment.

SECURITY MEASURES AT HOSPITALS

Respondents were asked to rank various security measures at their hospital in terms of effectiveness. The overwhelming majority (66.7%) of interviewees considered security guards to be the most effective security mechanism. As the second most effective measure, 26% of the respondents chose the perimeter fence and a further 24% percent chose the security gates. A breakdown of these responses into the four different sites, presents a more differentiated picture.

At Mitchells Plain Day Hospital half (52%) said that the security staff were the most effective. A further third of the respondents considered the Neighbourhood Watches to be the most effective barrier against crime and violence.

At Gugulethu Day Hospital there is no security system other than the perimeter fence, the security gate and the security guards.

At GF Jooste Hospital 70% of the respondents had confidence in the security staff. The perimeter fence was the second most effective security measure.

Only at Grootte Schuur Trauma and Emergency unit were the high-tech, costly security mechanisms, such as the metal detectors and CCTV, rated together with the security guards with any confidence by respondents here.

COMMUNITY INVOLVEMENT IN MAKING HEALTH FACILITIES SAFE ENVIRONMENTS

Poor socio-economic conditions (58.5%), substance abuse (22.8%) and gangsterism (11.1%) were cited as the most important causes of crime and violence in the Western Cape at present. Interviewees suggested that socio-economic improvements and better policing encompassed community involvement are required to reduce crime and violence in these communities. Strong emphasis was placed on the active role that communities can play in workplace safety at health facilities.

Interviewees stated that there was a need for mass education in the community which would inform the users of health care facilities how the facility functions and what its constraints were. Furthermore, communities should actively participate in crime prevention strategies and assist in the provision of crime control. In the majority of cases, though (71.4%), respondents indicated that there were no structures or forums in their communities that facilitated safety at hospitals or clinics. At GF Jooste Hospital, a small percentage of respondents (17.5%) were aware of a Community Youth Education Programme initiated by the hospital, and at Mitchells Plain Hospital 41.9% of the respondents indicated that there was such a structure, namely the Mitchells Plain Neighbourhood Watch.

In summary then, community structures that facilitate safety at hospitals were expressed as desirable, but such partnerships were in the main non-existent.

Health workers also saw themselves as having a definite role to play in reducing crime and violence in the community. Nearly two thirds of the respondents (61.8%) said yes to such a question. Both doctors and nurses agreed on this. Their contribution was seen as an advocacy role by the health worker in the community as well as education to the individual patient whilst being treated in the hospital.

HEALTH WORKERS AS PERPETRATORS OF VIOLENCE

A question was asked whether health workers themselves were perpetrators of aggressive responses towards patients. In 59% of the cases the answer was yes. There was no difference in the responses between nurses and doctors. Aggressive responses towards patients is mostly a reaction to provocation by the client base, but in some cases it is either a deliberate strategy to control or punish service users or simply the rude and unprofessional behaviour of some health care workers.

SUMMARY

- The majority of staff at health care facilities are women.
- Nurses are at a greater risk of aggressive and violent behaviour than doctors in the workplace.
- Nurses suffer to a larger extent from a fear of violence and crime than do doctors in their work situation.
- Feelings of insecurity amongst health care workers are greatest outside the trauma unit and in car parks of health facilities.
- Verbal abuse and threats of assault are the types of violent acts most commonly experienced in the workplace.
- These acts of aggressive behaviour are mostly not reported; indications are that reporting systems in health care facilities are considered inadequate.
- Preventive strategies included: fortification of health facilities and privatisation of security services by health authorities. On an individual level: developing of coping mechanisms by staff members to deal with aggressive behaviour. Staff also reported that their colleagues sometimes resort to aggressive behaviour themselves.
- Gangs and escorts are seen to be perpetrators of violence more often than the patients.
- Long waiting times and substance abuse are seen to be the most important reasons for aggressive behaviour amongst users of health services.

REFERENCE

Hoel H, Rayner C, & Cooper C L. (1999) Workplace bullying. In Cooper C L & Robertson I R (Eds) *International Review of Industrial and Organizational Psychology*. New York & Chichester: John Wiley & Sons, 195-230.