Can the Military help you help others?

UNDERSTANDING VIOLENCE AS AN INTERNATIONAL HEALTH ISSUE

Medical Students & the New Bio-Weapons

Book Reviews & abstracts of essential articles

EASING THE GLOBAL BURDEN OF VIOLENCE

VIOLENCE BASED clerkships from Kabul to Joburg

THE MAGAZINE OF THE INTERNATIONAL FEDERATION OF MEDICAL STUDENTS’ ASSOCIATIONS
The mission of IFMSA is to offer future physicians a comprehensive introduction to global health issues. Through our programs and opportunities, we develop culturally sensitive students of medicine, intent on influencing the transnational inequalities that shape the health of our planet.

The goal of the Federation is to serve society and medical students through its member organizations in the following ways:

Empowering medical students in using their knowledge and capacities for the benefit of society.

Providing a forum for medical students throughout the world to discuss topics related to individual and community health, education and sciences and to formulate policies from such discussions.

Promoting and facilitating professional and scientific exchanges as well as projects and extracurricular training for medical students, thereby sensitizing them to other cultures and societies.

Provide a link between different members, medical student associations and international organizations, and encourage their cooperation for the ultimate benefit of society.

IFMSA was founded in May 1951 and is run by medical students, for medical students, on a non-profit basis. IFMSA is officially recognized as a non-governmental Organization within the United Nations' system and has official relations with the World Health Organization. It is the international forum for medical students, and the largest student organization in the world.
This edition of MSI is different than most, in that we focus on the future. Violence has only just become recognized as a public health issue. As the international group for medical students, IFMSA is making a deliberate effort to prepare tomorrow’s physicians for an area of medicine that today’s health care providers know little about.

Just by glancing at the newspaper, it becomes obvious that small arms availability empowers individuals to destabilize society. It is absolutely true that one group’s terrorist is another group’s freedom fighter. However, if as health care students, we remove ourselves from the political debate, and focus on the health care effects of this destabilizing behavior, it becomes obvious that the current levels of interpersonal and collective violence are incompatible with a sustainable society, and strongly influence health care standards.

We have called upon our worldwide members to contribute articles that highlight what students have done to raise awareness about violence, describe how to organize projects, and introduce some of the resources available in the area of violence prevention public health research.

It is our hope that this will serve as a valuable resource to help you begin thinking about violence in a new way. We hope this concept of violence as a public health problem will stay with you for your entire career, regardless of what specialty you go into.

-The MSI Staff

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A Message from the President of IFMSA

For millennia, humans have sought to understand the causes of ill-health. In recent centuries, our understanding of the so-called “basic medical sciences” has accelerated at a dizzying pace. The scientific approach has taken us deep into a microscopic world and beyond, to the point where genes and receptors are part of the everyday language of basic medical training.

But however much we know about the genetic inheritance and microbiopathology of diseases, a look at any TV news can make us feel frustrated and afraid. What use is all this “basic science” when millions are still suffering and dying from preventable diseases, from malnutrition, from violence?

As our concepts of health become more sophisticated, we see how social, political and economic factors determine people’s health as directly as the physical factors that we learn about. Our scientific study of human health must become broader.

This leads us to look in a new way at the ill-health and suffering caused by violence. A surgeon learns how to treat the injuries presented to him every day. But he comes to look beyond the injuries to the cause, seeing violence itself as a disease. A disease that can be studied and better understood. A disease whose effects can be lessened. A disease that we can, with time and commitment, learn to prevent.

The medical students of IFMSA have shown increasing interest in understanding and ‘treating’ violence. A survey with the World Health Organisation looked at how violence and injury prevention is addressed in medical curricula across the world, to identify areas for improvement. Lessening the health impact of conflict is a major focus of our themed committee on Refugees and Peace. Students in many of our 90 member organisations educate themselves about violence and health or take part in community projects with victims of violence.

We believe in a future where doctors play a strong role in helping local, national and international communities to both prevent violence and protect those most vulnerable to it. Through our extracurricular activities, we prepare ourselves for that role.

“Being human is an accomplishment like playing an instrument. It takes practice. The keys must be mastered. The old score must be committed to memory. It is a skill we can forget. A little noise can make us forget the notes. The best of us is historical; the best of us is fragile. Being human is a second nature which history taught us, and which terror and deprivation can batter us into forgetting.”

Michael Ignatieff, The Needs of Strangers 1984

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We were told we were naive and it would never be possible

"Buried or ‘point-detonating’ anti-personnel mines are the only weapons currently in widespread use which cause specific and severe injury resulting in specific and permanent disability. The treatment of the injury requires, on average, twice as many operations and four times as many blood transfusions as an injury from any other weapons. This is a surgeon’s view."

With these lines in mind, it was somehow odd to meet Dr. Robin Coupland, a very polite, middle-aged man of whom I was told was a war surgeon with the International Committee of the Red Cross. Somehow the topic did not correlate with the cultivated and opulent international district of Geneva that we were surrounded by. It became even more odd when I realized we were heading to the legal division.

Medical Student International: Dr. Coupland, what is your current position and how does it relate to violence prevention research?

Dr. Robin Coupland: I am the Adviser on Armed Violence and Effects of Weapons of the Legal Division of the International Committee of the Red Cross (ICRC).

MSI: When did you develop this interest?

Dr. Coupland: The bridge between my former work as a field surgeon to my current occupation is the effect on health of armed violence. There was no particular point at which I became interested in the global problem of armed violence; I was just confronted with anti-personnel mine-injured people. From 1987 to 1991, I worked in hospitals set up by the ICRC on the borders of Afghanistan and Cambodia, two of the most heavily mined countries in the world. During those last years of the Cold War, the full extent of the impact of mines on whole societies was still unknown. New international legislation to ban the devices was not being discussed. This turned into abhorrence for the weapons which caused such injury as a function of their design. In brief, my own reason for finding these weapons abhorrent was the nature of the injury they caused; it was appalling and somehow excessive. I heard of “superfluous injury or unnecessary suffering” — a fundamental concept of international humanitarian law governing weapons. Nobody could tell me what it was, but I was sure I had seen it caused by anti-personnel mines.

MSI: What made you switch to prevention?

Dr. Coupland: The reason why I went from treatment into prevention was the sheer number of anti-personnel mine cases – I simply had cut off too many limbs and felt strongly that something had to be done. At that time, armed violence was not seen as a public health issue. So we decided to launch a campaign. We also looked at other weapons, later on, always in the framework of public health.

MSI: Are there common principles defining which weapons are legitimate and which are not?

Dr. Coupland: Certain types of weapons – chemical and biological weapons, anti-personnel mines, blinding lasers, and expanding bullets – are totally prohibited. General principles put down in international law – the Geneva Convention, the Additional Protocol to that convention, and others – state that injury and/or suffering deriving from the design and usage of the weapon may not be excessive, in comparison with the military objective. Another general principle is that the effect of a weapon should not be indiscriminate, that is, a distinction must always be made between civilians and military targets.

MSI: If you could free the world from three types of weapons – which ones would that be?

Dr. Coupland: I would rather like to name three categories of armed violence that should be subject to the strictest controls: 1. Anything that changes the human body’s chemistry: biological and chemical weapons and other poisoning substances. 2. The use of powerful explosive weapons in large numbers against military targets in populated areas. 3. The use of military assault rifles for wide spread killings, arrests, and displacements.

MSI: Why did you choose these three?

Dr. Coupland: They are all in some way excessive. They are not associated with the military role of defending a country.

MSI: What have been some successes in the past years in terms of reviewing and banning certain weapons?

Dr. Coupland: There were two major events: In 1995, blinding lasers were prohibited. Unfortunately, that was a little later
than the first devices had been produced. In 1997, the total prohibition of anti-personnel mines was agreed on in the so-called Ottawa treaty. It was an important step for many reasons. The Ottawa treaty was the first international law that was driven by the civil society. It also entered into force very quickly. Furthermore, it provides victim assistance for the first time: States are committed to treatment and rehabilitation.

MSI: Now how did that go on?

Dr. Coupland: In 1994 we were told that we were naive and prohibitions of blinding lasers and antipersonnel mines would never be possible. In 1995, the first agreement of the two was made. So we were naive but successful. After 1997, it became more difficult to approach such issues as governments do not like to be pushed like that. They fear public campaigns about weapons.

MSI: Are there certain governments which comply more than others in these matters?

Dr. Coupland: The rules by which the ICRC work do not allow me to comment on the behaviour of individual states. Generally speaking, if it is not possible to change something after a while, public denunciation is one option, but is has been rarely used. Nevertheless, there are a lot of conversations going on confidentially behind closed doors. With respect to weapons, and in particular antipersonnel mines, some major states have not ratified the Ottawa treaty. However, the whole process led to a stigmatization of these weapons. So, as a result, it is far less likely that they will be used in the same numbers as we saw in Afghanistan and Cambodia.

MSI: What are the issues you are working on at the moment?

Dr. Coupland: If we look at any advances in science, ever, whether it be electronics, aviation, nucleonics, electricity, chemistry, at some point these advances have been turned to hostile use against humans. We are concerned that advances in biotechnology could be used in a hostile way and/or by the means of warfare. The deliberate spread of diseases such as typhoid, anthrax, or small pox as well as the alteration of existing disease agents: ethnically or racially specific biological agents might be possible. Biological agents might be used in conjunction with corresponding vaccines for one's troops or population. And the creation of viruses from synthetic materials is around the corner. Or think of ways to alter physiological processes of target populations such as consciousness, behaviour or fertility. Agricultural or industrial infrastructure are other potential targets.

MSI: By which means do you stand up against these horrible threats?

Dr. Coupland: Well, right now, I am being interviewed for MSI. (laughs) Seriously, we are contacting many different stakeholders: scientific societies, industry, universities, defence establishments, and policy makers. We are appealing that there are “certain risks”. Our aim is a “web of prevention” which could lead to a high-level political declaration.

MSI: What are your next steps?

Dr. Coupland: We are working on these issues as well as on the use of chemical incapacitates such as the agent used in the taking of hostages in Moscow. We are voicing our concerns that anaesthetics in vapour form could be used in acts of war in the future.
And there are other non-lethal weapons, explosive remnants of war – the clearance of unexploded munitions, cluster bombs being used in densely populated areas. We are progressively concerned about exploding bullets in anti-personnel sniping. And we are trying to model armed violence relating to the question: Can certain patterns be predicted?

**MSI:** … and avoided?

**Dr. Coupland:** And avoided.

**MSI:** Where do you see the future role of medical students in that context?

**Dr. Coupland:** Well, you will be – if you aren’t already – a part of the medical profession. As such, primarily the recognition of the problems needs to be addressed by you. The message here is: “Armed violence is a severe public health issue.” Another point by preventive measures is the international law: I personally found it a recurrent pattern that medical people do not take much notice of international law. If there is a call to action, I would say: Be a professional in your own field, but be aware of the development of new weapons and do everything possible to ensure that governments take seriously their obligations under international law to control the possible threats that the incredible advances in biotechnology might bring.

**MSI:** Dr. Coupland, thank you very much for the interview.

Recommended Reading:


Collective Violence in the Balkans

The phenomenon of violence in the Balkan Peninsula became a social and political crisis shortly after the fall of the Berlin Wall in 1989. Since the end of the cold war, when the Balkan socialist regimes collapsed like a house of cards, prior phenomena of the past such as nationalism and imperialism, reemerged in Southeastern Europe. This is particularly true in Slovenia, Croatia, Romania, Bosnia and Herzegovina, Serbia and Montenegro, Albania, the former Yugoslav republic of Macedonia (FYROM), Bulgaria, Turkey as well as Greece.

The collapse of the Balkan socialist regimes resulted in the loss of a common point of reference within each Balkan state. The attempts of the new ruling class to advance state reconstruction has faced considerable challenges; namely, finding a new balance between nationalistic values and the need for social cohesion and peace, as well as constituting a path towards joining the European Union (EU). The most influential concept in post-communist state building was the patriarchal nation-state concept. Therefore, the ideology of state and ethnic nationalism based on patriarchal principles inevitably became the most dominant building force (1).

Balkan Minorities in the 90s

In the 90s many Balkan states were threatened by ethnic antagonisms and by their inability to achieve the desired social integration, and failed to accept linguistic, cultural, ethnic and religious diversity. The particularities of minority groups were perceived by the political centers as attacks to the state unity, the very thing perceived as holding the nations together. Diversity became a threatening hotbed of tension. The new political centers, formed after the demise of communism in the Balkans, followed three patterns of action:

Consensus policies have been pursued not only by both Bulgaria and FYROM towards Muslim minorities, but also by Greece towards Muslims in Thrace.

Assimilation policies with more or less violent character have been practiced by Romania regarding the Hungarian minority, by Serbia regarding the Hungarian minority of Vojvodina and by Albania regarding the Greek community of Northern Epirus.

Repression policies were pursued by Serbia in Kosovo and by Croatia regarding the Serbian populations in Kraina.

The results of these 3 approaches had drastic consequences. Repression policies towards minorities paved the way for violent nationalistic conflicts. Assimilation policies resulted in the massacre of thousands of people in Bosnia, Kosovo and Croatia. Violent exchanges between ethnic groups became commonplace. Communities in Kosovo, Bosnia and Kraina became refugees in their own country, which eventually dissolved into new states. The last decade of the 20th century constitutes the barbaric triumph of violence, nationalism and imperialism over the survival of multiethnic and multicultural civic identities in the Balkan region.

Gender Violence

The war in the former Yugoslavia showed that atrocities against women can be a weapon used deliberately during a military campaign. (1) The rape of civilians was used as a form of punishment, revenge and humiliation of the enemy. Aside from rape and physical violence, a large number of Balkan women were the objects of insults and mental violence. They were scourged by physical abuse, homicide, fear, and separation, as well as by the difficulties of adapting to life in refuge, which actually means changes in socioeconomic and familial status. Mothers, sisters and daughters, confident and secure before the war, were often dehumanized and reduced to the status of objects. (2)

The process of transition towards democracy and market economy in
Romania, Bulgaria and Albania, as well as the war in the former Yugoslavia have contributed to acute economic crisis. Such a situation, which has limited women’s other chances, has given way to open sexual abuse of women in sex-trafficking, pornography and beauty contests. (1) Masses of women who flee from poverty of the north of the Balkans seek refuge in Greece or in Western Europe, where they are often treated an indentured servants and sexually abused.

**Easing the Burden of Violence in the Balkans**

Since the end of the 90s peace has been reinforced in the Balkans. As a result Balkan communities, especially those that were drawn into the war, have struggled to reach a new political equilibrium, to safeguard inner freedom and peace. Therefore, an abrupt and fundamental change has taken place. There is a Balkan notion of history as dynamic rather than static, not a dead acceptance of the past but a living rediscovery of the present. This however is a double-edged sword since previously history was used as a useful tool to undermine nationalistic hatred. Today it constitutes the challenge of the Balkan cooperation. The European perspective of the whole Balkan Peninsula emphasizes the necessity of Balkan collaboration in many areas such as science, art, trade, economy, and technology, with the intention of maintaining the social impact of the values of Balkan tradition on the multicultural united Europe of the future.

One the priorities of the Greek presidency 2003 of the EU was the successful enlargement of the EU, since such an enlargement will enhance security and stability across the Balkan Peninsula. (3) Furthermore Greek foreign minister George Papandreou’s first official trip was a three-day tour of the western Balkans. It was intended to send a clear message of encouragement to Greece’s neighbors about their European aspirations. In each capital Mr. Papandreou spoke about making “a success story” out of the western Balkans through the EU’s stabilization and association process. Moreover Slovenia has become an EU member since April 2003. Greece and Slovenia, being the two states of the Balkan Peninsula with full access to the EU, are in the position not only to guarantee the western European perspective of the whole region, but even more to contribute to the social and economic development of Balkan communities. (4)

**Instead of a Conclusion**

The new Balkan generations seem to be committed by their fundamental principles not only to overcome the nationalistic conflicts of the past, but also to safeguard the inner freedom of their communities. They are committed to march towards a united European Balkan future. The hundreds of thousands of young people, who packed the streets of Belgrade in Spring 2003 to pay their respects to the assassinated Serbian prime minister Zoran Djindjic, were not voices crying in the wilderness. Balkan communities have been passing through some difficult times, but there is still vigor and new sense of optimism. Violent conflicts belong to the past. The stability of Europe is not far away…


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Land mines are not designed to kill, rather their purpose is to cause damage to a limb. In the combat setting this diverts manpower to transporting the injured person. In the civilian setting, it causes an enormous loss of manpower, and diversion of resources to rehabilitate the injured person.

Every year, thousands of innocent lives are lost to landmines. There are millions of uncleared landmines that litter the fields and roads of over 80 counties including: Cambodia, Afghanistan, Kosovo, Lebanon and Croatia. These leftovers from previous conflicts continue to silently claim their unsuspecting victims. In an era where weapons of mass destruction have taken on a new meaning and the extermination of these weapons has reached a pinnacle, there has been surprisingly little focus on the silent killers. These have been termed by some as the real weapons of massive destruction, because of their long-term effect on developing societies.

What makes antipersonnel landmines so abhorrent is the fact that landmines do not distinguish between the footfalls of a child versus that of a soldier. Either way, once the landmine is triggered, the detonation causes complete and utter devastation and those who are fortunate enough to survive the initial blast usually require amputations and extensive rehabilitation. In fact, landmines are designed to maim, rather than kill. The effect is a diversion of resources to helping the victim. This indiscriminate method of destruction is shameless and the problem needs to be addressed.

Fortunately, on 1 March 1999, through the work of the International Campaign to Ban Landmines (ICBL), the Mine Ban Treaty became binding international law as the treaty was signed by 137 countries and ratified by 96 of them. The IBCL was first established in 1992 as a joint coordination between fourteen different humanitarian and world health organizations. This committee of organizations brings together over 1300 human rights groups which work over 80 different countries on a local, national, and international level to ban antipersonnel landmines. The initial goal of the campaign was to promote awareness about these weapons of destruction, calling for an international ban on the use, production and stockpiling of landmines, which eventually resulted in the 1999 Mine Ban Treaty. Additional goals of the IBCL include providing increased resources for landmine victim rehabilitation and assistance programs as well as for de-mining programs in the afflicted countries. Even before the monumental Mine Ban Treaty was signed, the humanitarian world has already recognized the efficacy of the IBCL’s campaign. In 1997, the Nobel Peace Prize was awarded to Jody Williams, the coordinator of the ICBL, recognizing that through the IBCL’s campaign, “this work has grown into a convincing example of an effective policy for peace” that could “prove of decisive
importance to the international effort for disarmament.” And even with the signing of the Ban Mine Treaty, there is still work to be done. There are still landmines to clear. There are still victims to help. And there is still awareness to improve.

The International Federation of Medical Students Associations has been affiliated with the ban landmines campaign for quite some time. In the late 1990s, a group of IFMSA students from Lebanon joined forces and created the Lebanese Landmine Project, a student run awareness initiative. The Lebanese Landmine Project was designed using the algorithm provided by the IBCL. Utilizing this algorithm, the medical students were able to access many IBCL resource centers to collect information to promote awareness about landmines as well as increasing knowledge about the inhumane mass destruction that results from these uncleared landmines. In addition, the IBCL provided the resources to help these medical students organize a ban landmine campaign. These public events were created as a forum for lobbying the government to acknowledge the problem with landmines and to start taking proactive steps to ban these merciless weapons.

Overall, the International Ban Landmine Campaign has been a smashing success. With affiliated organizations worldwide all working towards the same final goal of a world free from the havoc of landmines, the success of the IBLC can be measured by its accomplishments as well as its potential. Not only has the IBCL successfully encouraged the passing of the Mine Ban Treaty, but the awareness programs and campaigns provides a wonderful opportunity for people to become involved in a worldwide safety issue by urging governments to ratify the Mine Ban Treaty, educate the public and media, stigmatize the producers, exporters, and udders of landmines, and endorsing the Call for a Ban by signing the People’s Treaty. The ICBL has done wonders in the fight against the atrocity known as landmines. Through continued hard work with medical students and humanitarian organizations alike, there will hopefully, one day, be a landmine-free world.

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Military Intelligence
Reevaluating our ideas about medicine and the military, a story from a Military Combat Surgeon

Being a staunch pacifist, I never even entertained the idea of a career in Military Medicine. However, in Johannesburg I met David Vassallo, a surgeon originally from Malta, currently working with the Royal Army Medical Corps. His story definitely has a perspective that I could not appreciate because of the zeal of my idealism. He sent MSI this story shortly after returning from Basra, in Iraq, where he was recently stationed.

-Alex Guerrero (USA)

Have you ever considered joining the military medical services, or wondered what is so special about such a career that it continues to attract medical students, qualified doctors, nurses and allied medical professionals? I have been asked to present a personal view after a chance meeting with an electrocardiologist, a surgeon originally stationed in Basra, where I was able with a flick of a probe to separate the congenital skin bridges gluing her one-month old baby’s eyelids together.

A team from the Royal Army Medical Corps treating a child injured by a cluster bomb in Kosovo in 1999

I come from Malta, a small island in the central Mediterranean that was heavily besieged by the Axis Powers for two years during the Second World War. Thousands of men and women from the Royal Navy, the Merchant Navy, the Army, the Royal Air Force and the Merchant Navy gave their lives so that Malta could remain free (my parents and family amongst them). Many thousands more, including civilians caught in the bombing, were injured, and cared for in both civilian and military hospitals. One does not buy freedom lightly, nor forget a debt written in blood, nor is freedom bought forever, or maintained without vigilance, as you know only too well.

Having moved to England as a medical student in 1978, I joined the British Defence Medical Services as a trainee surgeon in the late ‘80s to care for the successors of those who gave their lives for others, partially as a way of acknowledging such debt. Yes, there were also excellent training opportunities, the promise of career progression and security, reasonable pay, with the lure of travel and variety in one’s work, but these have not been the main factors.

I found that the servicemen and women I met had the same ethos as their predecessors, and I felt proud to be part of such a tradition. But it is more than that. I have stayed on, because I saw and continue to see in my medical and nursing colleagues the same willingness and commitment as was evident in Malta: to care, in often arduous and dangerous circumstances, for the civilians - men, women and often children, regardless of race or religion - who are caught up in conflict. These are the most powerless, helpless and isolated victims of war, and the ones with whom I personally feel most empathy. The military medical services hold true to the Geneva conventions, and we do not wear the Red Cross armband, or fly its flag lightly.

Admittedly, the military medical services exist primarily to care for the health of the fighting forces. I therefore find myself on deployments most often caring for young servicemen, each one willing to give his life if necessary for his country, as well as honestly trying his best, even if sometimes maligned, to make a little bit of the world a safer place. They rightly deserve the best care possible, and we aim to supply that.

Yet I freely admit that I have obtained most satisfaction, and perhaps achieved more lasting good, when I find myself caring for injured or traumatised civilians, and where necessary co-operating closely with non-governmental organisations on their behalf. I am still in touch with several Kosovar Albanian refugees who had been seriously injured in massacres and sought help at our field hospital in July 1999 – we managed to evacuate them to hospitals in Manchester for further surgery (see references 1-2). Often enough though, there is no NGO, and it has only been through the organised efforts of the military medical services that many such civilians have been helped.

Sometimes the simplest of measures suffices. I shall always remember the look of gratitude on a young Bosnian mother’s face. She had made her way through very dangerous territory to a British field hospital, where I was able with a flick of a probe to separate the congenital skin bridges gluing her one-month old baby’s eyelids together,
and she could look into his eyes for the first time.

One unexpected outcome of looking after patients in isolated circumstances was that in 1997 I developed a personal interest in simple telemedicine (transmitting still digital images and clinical histories by email to relevant specialists back home for second opinions). This has proved so successful in practice that the method was taken up by a civilian charity (the Swinfen Charitable Trust, www.swinfencharitabletrust.com) that has subsequently specialised in setting up similar telemedicine links to isolated hospitals in the poorest countries of the developing world. Specialists from the States, UK and Australia provide email advice on a purely voluntary basis. One such link, still going strong, was established by a final year medical student going on elective to New Georgia (in the Solomon Islands).

My bedrock in all this has been my wife, and I could not have carried on with my career in the military without her support. She has put up time and again with me packing my bags and leaving on yet another foreign adventure, sometimes at short notice. It is also not easy for her when we are re-united, for it takes a while to readjust after the sights one sees. One needs someone like her.

War is evil, its effects are often indiscriminate, and I feel it can rarely be justified. I hate war with a vengeance, having seen how men use bullets, bombs and fire to wreak horrendous damage on others’ flesh and bone. If I cannot prevent war, I feel that, by being physically there as a surgeon and part of a dedicated team, I can directly mitigate some of these horrors, perhaps atoning for the mistakes of others.

As an aside, if one really does not want to join the military, but cares passionately about helping the victims of war, then what about considering a short-term attachment to a hospital of the International Committee of the Red Cross in due course? I would thoroughly recommend this (see reference 3).

Sometimes one is faced by the awful results of modern weaponry. I find this hardest when the child affected is the same age as my own daughter. I would like to end by dedicating this article to the victims of war, especially the children, in particular those who are killed and maimed by landmines and cluster bombs when the fighting has stopped, and to those who care for them.

1. TIME Europe – Cover Story: Cutting Edge Humanity. www.time.com/time/europe/magazine/2000/36/kosovo.html
2. Anne Franks Awards (Bogujevci family) www.annefrank.org.uk for more details

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Medical Students and the Next Generation of Biologic Weapons

The International Committee of the Red Cross is an interesting organization, and always seems to be in the middle of any armed conflict. In terms of classic clinical medicine it is involved through its combat surgery and humanitarian medicine projects. The ICRC is also constantly seeking to prevent the next generation of human catastrophes. It does this mostly in its role as the keeper of the Geneva conventions, but with its strong legal department, it seeks to develop and enforce international conventions, while identifying potential problems before they arise. Its past successes have included the 1925 Geneva Protocol on Biologic Weapons, the 1972 Biologic Weapons Convention, and more recently the moratorium it orchestrated in 1998 on retinal burning lasers, one of the so-called “non-lethal weapons”.

With the advent of genomics, and recent advances in biomedical research comes new concerns about how to protect humans from the potentially deleterious effects of surreptitious use. (1) “If you look at most new technology, it has already been turned against humans in a hostile manner,” explains Robin Coupland, a former combat surgeon turn legal adviser for the ICRC. If you stop and think about it, this holds true. Developments in aeronautics, microbiology and especially computers have all been turned against humans.

Now, if we stop and look at recent advances in medicine, it becomes quickly evident that we are on the brink of a potentially dangerous new era. A quick brainstorm produces many potential problems. Consider what would happen if aerosolized insulin was sprayed in a theater, or worse, if our current mapping of the human genome resulted in a weapon that could affect a particular phenotype, such as skin color. (2) A new type of silent genocide could occur by causing phenotype-specific infertility. An attack might not even be identified for years. It sounds so far fetched until we think about the pace at which molecular biology and biomedical technology is advancing. In a symposium last year the ICRC outlined dangerous new weapons such as the creation of viruses from synthetic material, and the alteration of known disease agents to make them more virulent. (2) The most known example of this was the accidental creation of the “mousepox” virus. (3) This virus was a manipulation of the smallpox virus in a lab in Australia, which lead to the death of mice previously immune to smallpox. The consequences are ghastly, and it does not take a lot of imagination to consider the malicious implementation of extremely positive advances in medicine.

It sounds like a bit of a dilemma, trying to balance the potential harm of new technology. The answer is certainly not to curb development. Rather, the ICRC is trying to introduce the idea of dual-use to health-care and biologic research professionals as well as to medical students. There seem to be 2 levels where we can be involved. There are the big international problems. Several countries still need to become party to the 1925 Geneva Protocol and the 1972 Biologic Weapons Convention. (2) Some countries that have adopted it still do not have stringent national legislation. And with the end of the cold war, it is apparent that countries that did sign on still had programs under the auspices of defense. Quite frankly, the Biologic Weapons convention of 1972 does not seem to be strictly enforced.

The most ambitious and proactive step for medical students to take is to encourage our governments to ratify, without reservation, up-coming treaties, and to of course become party to, if not already, the current conventions. (3) It is a nice idea, but with the limited time we have outside of the hospital, this seems like an impossible feat. What we can do is, at the beginning of our careers, recognize the dual-use potentials of the medicines we use, and the research we participate in, and take whatever practical steps we can to reduce the likelihood of malicious development and use. Specifically, we can scrutinize all research that may have a potential dual-use, and insist on transparent peer review. (4) Additionally recognize that the materials for biologic weapons are not expensive; rather it

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As a third-year medical student, I met Sandra, a three-year-old girl who presented with her parents for a well-child exam to the outpatient pediatrics clinic where I was rotating. Aside from seeming somewhat sullen and withdrawn, the physical examination of this child was somewhat unremarkable - until I noticed what appeared to be a burn mark in the shape of an iron on the child's left thigh. Her seemingly conscientious parents explained away this injury as the unfortunate result of a playful girl who ventured too closely to an ironing board - a plausible enough explanation, to my inexperienced eye. Upon reflection, the unusual distribution and circumstances of the injury strongly suggested child abuse - a point that my attending physician realized immediately. The proper authorities were notified, the child was placed in custody, and I, the third-year medical student was left with an unsettling question: as a practitioner, would I be able to recognize - and prevent - cases of violence and abuse for my patients?

Though mortality due to violence and injuries is concentrated overwhelmingly in the developing world, it is also true that violence and injuries occur in every country, within every culture, and in a variety of forms. Many victims of abuse present physicians with a diagnostic challenge (signs of abuse are often subtle) and an ethical quandary (physicians are often placed in a position of intervening in a patient's personal life.) Often, the physician-patient encounter represents a patient's only opportunity to escape a cycle of violence.

Physicians are uniquely placed to identify and assist those that have been affected by violence and injuries, yet future physicians are often insufficiently prepared to diagnose, treat, and - most importantly - prevent injuries and violence.

That is beginning to change. At the 50th Anniversary IFMSA General Assembly Meeting in August 2001, medical student leaders worldwide recognized that the next generation of physicians must serve as primary agents in the prevention of violence and injuries. Thus were the origins of a partnership between IFMSA and the World Health Organization Department of Injury and Violence Prevention. This ongoing collaboration places changes in the education of future health professionals as an intervention point that will lead to a reduction in the incidence of violence and injuries worldwide. Under the guidance of the WHO, multiple organizations (such as IFMSA) and academic institutions have commenced efforts to develop a "model curriculum" on injury and violence prevention. An initial step has been to identify what medical schools currently teach on this topic.

To do this, IFMSA and the WHO Department of Injury and Violence Prevention surveyed medical schools throughout the world on current pedagogical approaches to injury prevention concepts. IFMSA student members at 88 medical schools in 31 countries completed a survey that asked students to reflect on their medical school experience, and recall what they had been taught in medical school regarding violence and injury prevention. At the time of printing of this Medical Student International report, final compilation and publication of the data from this survey is pending. However, based on a preliminary analysis of the data available, several trends are readily apparent.

First, wide variability exists throughout the world regarding the degree to which medical schools include injury prevention concepts in the medical school curricula. Medical students at each of the four schools in Lebanon report only about two hours of didactic lecture devoted to these issues in the entirety of their medical education. Contrast this to the experience of students at a handful of other schools that report both compulsory modules and elective options within their education on injury prevention topics.

Second, most students perceive their medical education to be limited and inadequate on issues of violence and injury prevention. One student expressed the sentiments of many: "I believe that in my school these aspects are gravely neglected especially with the horrific situation regarding car accidents, domestic, and youth violence. I think there should be much more awareness." Others noted that their schools did include instruction on isolated areas such as child abuse, domestic violence, and elder abuse, but indicated that these topics were comparatively underrepresented within their curriculum.

Continued on page 28
Security Woes Split Afghan Aid Community

The Author is the President of IFMSA-USA, and recently returned from Afghanistan where he worked with various NGOs and documented his experience for both The Crosslines Afghanistan Monitor, and Medical Student International Magazine.

A id agencies in Afghanistan are struggling to build consensus on how to deal with a deteriorating security environment. As some publicly advocate for an increased peacekeeping presence, others argue these calls may do more harm than good.

Over the past three weeks two workers belonging to the Afghan Red Crescent Society and a driver for the American aid agency, Mercy Corps, were killed in Afghanistan’s troubled southern region, forcing the UN to suspend road missions in that area. Violence gruesomely claimed another victim when a girls’ school, funded by the European Union, was attacked in late August.

Growing concerns have turned into calls for action. Well before its August takeover of the International Security Assistance Force (ISAF) in Kabul, NATO was already under high pressure from aid groups. In a statement, “Afghanistan: A Call for Security” (first released on June 17, 2003) over 90 humanitarian, human rights and conflict prevention organizations summon NATO to expand the ISAF mandate to “key locations and major transport routes outside of Kabul.”

“After the war in Iraq, we recognized the need to move forward on an advocacy effort to get Afghanistan back in the ‘hearts and minds’ of the world,” said David Murphy, Country Director of the International Rescue Committee (IRC), which drafted and circulated the statement.

The IRC and other groups campaigning for an ISAF extension argue that Afghanistan is at a critical point in its reconstruction. If unchecked, they fear, the process could collapse rapidly. The Swedish Committee for Afghanistan (SCA) supports this view. Anders Fange of SCA stressed that “there is no other solution.”

**Challenging Neutrality**

Several prominent aid groups operating in Afghanistan, however, think otherwise. They consider such public advocacy efforts a direct request for military involvement and fear this threatens their humanitarian neutrality.

Medecins Sans Frontieres (MSF) is one agency holding this view. The group has refused to sign the statement. In this push for military operation, they feel that complex political factors have not been considered enough. “Making this kind of call does not help because we threaten our ability to collaborate with several political parties when trying to gain access to populations that do not get aid,” said Xavier Crombe, MSF Head of Mission in Kabul. He and his colleagues point out that the outcome of the peace process is uncertain. “If it fails and we would be known to have sided with the government then we will not be able to access populations.”

The International Committee of the Red Cross (ICRC), too, finds it puzzling that aid agencies are openly requesting what they consider to be military action. “I do not understand what the motivation for such calls is,” said the ICRC’s press officer, Simon Chorno. He is even more perplexed to see organizations that do not operate in Afghanistan, like the Ethiopian Aid Council and the Kenyan Refugee Consortium, asking for expansion of peacekeeping forces. “It shows serious worries about security and confusion on what to do about it,” he mentioned.

While acknowledging that the concerns of other organizations, supporters of the ISAF expansion say they are not jeopardizing neutrality. “The whole point is about being neutral but without hiding on human rights and impunity,” according to Mr. Fange.

“I would like to tell other agencies that a coin usually has two sides but here they have five or six, meaning that it’s hard to have a clear cut vision of the security situation.”

“Of course it is a political statement,” admits Mr. Murphy. He emphasizes that it is important to bear in mind that this call for security is not referring to the aid community present in Afghanistan. Instead, “we mean security for Afghans.”

If the focus is on security for Afghans, Afghan aid organizations may be expected to take an active
role in this movement. But most do not feel prepared to do so, just yet. “Advocacy is a new area for Afghan NGOs,” explained Barbara Stapleton, Policy Coordinator for ACBAR, the main coordinating institution for relief agencies in Afghanistan. “Coordinating bodies like ACBAR should be consulted on politically complex and highly sensitive issues such as this one.” Without such consultation, she believes it is questionable, at best, for aid agencies to speak out in such a fragile security situation. “For Afghan NGOs, any call for security expansion must be clearly explained,” Mrs. Stapleton highlighted.

Evolving Humanitarian Policy

The debate among members of the aid community over the “right” approach to poor security in Afghanistan may reflect recent trends in humanitarian policy. Historically, NGOs have been calling for a reduction of military presence. “There has been a lot of open discussion on the lessons learned from East Timor, Bosnia, and Kosovo,” said Mr. Murphy. When pro-ISAF expansion advocacy efforts were launched by the aid community, “even NATO was surprised,” he added.

The changes in humanitarian policy are worrisome, some would say. “People are confused about what the term ‘humanitarian’ actually means,” fears Mr. Chorno. According to him, the call for peacekeeping forces by aid agencies represents a growing tendency among humanitarian groups to directly ask for military intervention. “There needs to be a clear distinction between humanitarian and military groups,” he urged.

Mr. Crombe concurs. He maintains that humanitarian organizations should not be seen as using the military to gain access to populations. “Humanitarian agencies are increasingly perceived as less independent,” he underscored. “The fact that we are being targeted as foreigners is a new concept.”

The apparent loss of neutrality may have several causes, but aid representatives tend to highlight a few. First, recent conflicts have produced highly complicated security environments. “NGOs are being placed, more frequently, in complex situations,” says Sally Austin, Assistant Country Coordinator for CARE in Afghanistan. Saturated with a mix of private armies, coalition forces, provincial reconstruction teams and international peacekeepers, the security terrain in Afghanistan is certainly dynamic. “Operating in a rapidly changing arena, many are finding it difficult to adapt,” explains Mrs. Stapleton.

Others add that a considerable increase in the number of humanitarian actors has made it difficult to coordinate effective responses. “Public advocacy on security issues seems to be poorly utilized because so many actors are new,” said Mr. Chorno. “The actions of inexperienced agencies have increasingly blurred the line between humanitarian, peacekeeping and military operations.”

Next Steps

Even if the debate is not resolved and consensus among the aid community is not reached, agencies at the forefront of working for an ISAF expansion intend to continue pushing.

“We have already met with NATO several times,” stated Mr. Murphy. He hopes to see change when NATO conducts a six month review of its mandate on February 12th. “We are looking up to this date to lobby NATO and its members.”

The alliance of agencies says the ISAF expansion could take several forms. Options include road patrols on major highways, permanent presence in major cities, or even a “roving battalion” that could intervene quickly where needed.

Continued on page 28
A Scientific Approach to Violence and Injury

Injury is a public health problem, and with a little background any medical student can put together a research project.

What is an Injury?
It depends on who you ask. According to the WHO it is the “physical damage that results when the human body is subjected to an intolerable amount of energy, or deprived of a vital element, such as warmth, oxygen or in some cases water.” For practical purposes it can be the disruptions in normal anatomic relationships that come into the emergency ward following an acute episode.

What causes Injuries?
Anything could cause an injury. It ranges from motor vehicle accidents to execution style genocide. But, when we construct a project it is best to start to divide types of injuries based either on the mechanism of injury, the effect on the human body, or the severity.

How we broadly divide injury types?
Intentional versus unintentional is a convenient way to think about injuries in a public health model for preventative measures, though clinically the division is blunt and penetrating.

How aspects of the Injury can we do a project about?
In the 1970s the first public health model for injury research was produced by William Haddon. I find it very useful. (see chart)

As a medical student you can pick almost any one of these boxes and do a study about it.

How can I even figure out if there is a project I can do?
If your medical school has a trauma programme, then they probably have a database that looks at the third line in the matrix. It probably looks at severity as measured by the Injury Severity Score, and the Glasgow Coma Score (see the end of this article). Transport times, interventions, radiography and the patient’s final outcome are often included in the database. This database is called a trauma registry. It is useful for studies that help guide clinical decision making, such as what type of radiology is helpful for an injury type, or for quality assurance questions such as are patients going to the operating room quickly enough. It also helps to compare different hospitals.

If your medical school has a trauma registry, then you might be able to use it do a small project. This will be easy because you should not have to collect your own data. This is called secondary data analysis. If you decide to use secondary data, be warned, you will probably have to get the data from some office, and then input it into your own computer. More likely, the trauma registry may help you decide on a project that will involve primary data collection, where you collect your own data. The trauma registry should be able to tell you how many of a particular type of injury arrive at your hospital during a given time period.

Let us take the whip beatings as an example. If your trauma registry data says that there are 200 whip injuries then you can either make a clinical research project out of the registry’s secondary data, and describe how the patients did, and try to figure out if anything predicted how well they did. The predicting part is called inferential statistics, and I will describe that later.

You could also decide that you want to answer some of the more social aspects of whip beatings. Since what you want to know does not involve a clinical question, it will probably not be in the trauma registry. This is where the future of public health research is, and where a motivated medical student can make a big difference. For exam-
Do I need to use a computer database?

Basically, yes, you do. There are 2 computer programmes you can use. Excel, which is probably already on your computer, or the Statistics Program of the Social Sciences (SPSS), which isn’t. I always use SPSS because once you know how to use it you can save a lot of time and do complicated statistics yourself. With the help of the SPSS Survival Manual (see book review in this magazine), you should be able to construct a database that can provide descriptive statistics, that is to say how many of each variable you are looking at, and perform univariate inferential analysis.

Inferential statistics are important, and for our purposes, not very complicated. A few definitions you should know first. Continuous variable are data that occurs along a spectrum, for example blood pressure. Binary data is yes or no, such as dead, or alive. Whenever possible try and frame your questions as binary questions. It will make your analysis simpler. A dependant variable is typically the outcome. In our whipping example, the dependant variable could be survival. This is a question. Did the patient survive to be discharged from the hospital? Yes or no? Okay, that is the dependant variable. Try and make sure that your dependant variable is binary. Otherwise the statistics become far more complicated than this introduction. Now we are going to see if any of the variables in our database predicted death. I think that whip injuries that also had another type of trauma such as a stab wound has a predisposition to not survive. The independent variable is concomitant injury. If the independent variable is binary, such as in this example, we perform a test called chi2. This is easily done with SPSS.

If the independent variable is continuous, then we do an independent T-test. Back to our example, perhaps the lower the blood pressure on arrival, the lower the chance of survival. Either way, these tests only work if the dependant variable is binary. When you perform this statistical maneuver, you will get a p-value. The p-value basically says what percentage chance exists that the relationship, that is to say that the independent variable, predicts the dependant variable, is due to pure chance. So a p-value of 0.05 means that there is a 5% chance that the observed relationship is due to chance. P-values <0.05 are typically considered significant.

To summarize; if I speculated that concomitant injury predicts death before discharge, I would perform a chi2 analysis. If the output is p=0.05 then I can say with 95% confidence that my statement is true.

Important definitions in violence research:

Multivariate analysis: Too complicated to explain how to do it and interpret it, but know that it is essentially a statistical model that looks at how "significant" independent variables interact with each other to influence the dependant variable.

Injury Severity Scoring: It is a number between 0 and 75. Using a code book, a number between 0-6 is assigned to each organ system. A 6 is defined as an unsurvivable injury. The scores from each organ system are squared and the 3 "worst" organ systems are added together. So a "3" head injury, with a "4" abdominal injury and "2" neck injury=ISS of 3^2+4^2+2^2=29

Glasgow Coma Score: Using 3 categories assesses the neurologic status of patient. Range is 3-15, where 15 is a normal person, and 3 is total coma.

Trauma Revised Score: Takes the Glasgow Coma Score and adds initial blood pressure, respiratory rate and age. This describes the degree of physiologic derangement, where the lower the score, the lower your chance of survival.

For more information, please see the reviewed texts elsewhere in this magazine.

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Training in Violence Prevention
A Report from the First Panamanian Medical Students’ Violence Prevention Workshop

As the mortality rates due to violence continue to expand worldwide, there has been an increasing international awareness over the past decades on the subject of violence and its repercussions in modern societies. The effort for reducing the incidence of intentional injury has drifted away from strengthening systems for dealing with the medical consequences of violence, towards primary prevention of intentional injury. However, there are certain difficulties implied in primary prevention of a phenomenon that is as complex and diverse as society itself. First of all, it involves analyzing every form of violence, a most difficult task to undertake due to the wide variety of situations that can be defined as types of violence. This in itself has dissected what should, ideally speaking, be a joint effort, into disciplines of individualized struggle that, although effective in their own range or scope, fail to ease the economic and moral burden of violence upon society. Secondly, the erroneous concept of violence as an exclusively social problem has partially caused national public health authorities in many countries to refrain from taking an active part in funding and promoting violence prevention initiatives.

The First World Report on Violence and Health states that violence “is preventable [and] not an intractable social problem or an inevitable part of the human condition.” Furthermore, “creating safe and healthy communities around the globe requires commitment on the part of multiple sectors at the international, national, and community levels to document the problem, build the knowledge base, promote the design and testing of prevention programs, and promote the dissemination of lessons learned.” This is the main reason why the Panamanian Federation of Medical Student Societies (PFMSS), an IFMSA national member organization since 2000, recently launched the first phase of a student-coordinated violence prevention project, titled “Integrated Action Proposal for Violence Prevention: A Challenge for Generations”.

The structural basis of the project is science-based research focused on the identification of risk factors associated with violent behavior. This, in a sense, is an effort to prove that the responsibility of our societies’ raw aggressiveness and violence lies mostly upon itself. The purpose of doing this is primarily to create an alternative for integrated action at three different levels, in the shape of program proposals for violence prevention in our country. Also, we hope the project can be promptly implemented in other countries by medical student organizations around the world.

Although in theory this may sound like an impossible task, it has already started to take shape. The first phase of the project, which consists of training and workshop activities, was held on April 26 thru May 17, 2003, and lasted a total of 20 hours. It included sessions on topics such as domestic violence, child abuse, genre-related violence, violence in adolescent youth, the teenage gang phenomenon, and others. Within the discussions, there was an increasing awareness of the fact that, no matter how you focus on violence itself, nothing will change if there is not a sincere effort to change at a personal level. When you become a victim of violence, you are faced with two alternatives: you can fight back with direct or indirect violence, or you can seek help and take the decision to break the cycle of violence. It was also stressed that, in order to decrease violence levels in a society, certain issues, such as poverty, racial and social discrimination, genre-based inequity and health disorders must be addressed first.

In general, the problem of violence is a great one. We feel its weight and appreciate its enormity when we attempt to outline all the various forms of intentional injury. Nevertheless, we feel it is our duty as future health professionals to ask ourselves how much is really being done to prevent violence in our homes, our schools, and our communities... to take a stand and strive to change our own paradigms in order to create an impact on society that will last. What this will require of each individual is, in the end, proportioned to the level of compromise with this effort. It is only a matter of time...

Guillermo Zurita Lemm
Universidad Nacional de Panama (Panama)
email: violenceprevention@hotmail.com
I am 26 year old final year medical student from Munich, Germany. Together with a friend of mine, I did a four month elective in General Surgery and Trauma at the Chris Hani Baragwanath hospital in Soweto, a township suburb outside of Johannesburg in South Africa. Looking back on my time there, it was an experience I am extremely glad I had.

Studying trauma surgery in South Africa is wonderful for two reasons. On the one hand, you get medical experience like nowhere else, and there are unbelievable opportunities to spend your spare time. In the hospital, there are circumstances you get in few places, or perhaps no where else in the world. The Surgical Pit, as the trauma area is commonly referred to, is responsible for anything that takes place in Soweto, which has somewhere between 1 and 5 million habitants. This is a primarily low socio-economic area, with an extremely high crime rate. Every fifth day we were on intake for 24 hours. There was not much time to sleep. Next to the usual surgical diseases such as appendicitis there were a lot of gunshot wounds, stab wounds and car accidents. Believe me, after one month none of us were afraid of a severe abdominal gunshot wound, and we all felt comfortable dealing with anything that came into our resuscitation room. Completely different from Germany, most of the registrars and consultants have a good relationship with the students, and under their supervision, we were able to learn a lot of procedures such as intercostal drain placement, subclavian line access and excision of small tumors. An embarassing thing is the fact that the hygienic conditions are extremely poor and most of the wards and operating theatres are running short of material because of a lack of resources. Additionally, the support staff left a lot to be desired. We quickly learned that if we wanted anything

Elective Report: Chris Hani Baragwanath Hospital, Soweto, South Africa

**Institution:** University of Witswatersrand  
**Country:** Republic of South Africa  
**Unit:** General Surgery  
**Description:** 3,500 bed hospital, the largest in the world. Largest number of penetrating injuries in a non-combat hospital. An overwhelming number of advanced pathology general surgery cases as well.  
**Learning opportunities:** Entirely practical, and dependant on self-motivation. No lectures, or formal teaching.  
**Number of students accepted:** 8-10  
**Duration of elective:** 1-4 months  
**Accommodation:** Some dormitory housing available in Parktown, 20 minutes by car from Soweto. No public transportation available.  
**Fees payable:** US$200 per month, US$50 application fee, US$125 work visa, US$50 registration fee with the Health Profession Council of South Africa.  
**Applicant requirements:** Must be in final year of medical studies and must obtain a South African work permit, which is time consuming.  
**Contact information:**  
Mrs. A Mclean  
Faculty of Health Sciences  
University of Witswaterand  
7 York Road, Parktown  
Phone: +27 11 647 2045  
Fax: +27 11 647 4318  
Email: elective@chiron.wits.ac.za  
Web address: http://www.chrishanibaragwanathhospital.co.za
done at all, we had to do it ourselves. Another wonderful opportunity was getting to know other students from around the world that were also working at the hospital.

In conclusion the time at the Chris Hani Baragwanath Hospital was a wonderful experience. Naturally, we took a one month holiday and traveled around the country. Together with my girlfriend and my friend’s parents, we went down the garden route by a hired car (not very expensive) and up to Capetown. The whole journey took us 10 days. On the way we visited the Addo elephant park with elephants closer than 5 meters from our car. We crawled through the cango caves, we took sun baths on the beaches of the sun coast, rode ostriches and had a wonderful time. But there were also a lot of nice quiet moments such as evenings in authentic lodges, that my friend’s parents liked very much. South Africa also offers a lot of sporting activities. At that time, the Cricket World Cup was taking place in Johannesburg, and we were invited to one match. The South Africans are big Cricket fans, so it was a lot of fun being in the stadium. Personally, I like golf a bit more than cricket. I started playing there on one of the very inexpensive golf courses with no license requirement and now I am an avid golfer. I found that golfing there was very affordable.

As far as accommodations are concerned, the university provides a list of contacts of private people offering affordable accommodations. The main negative aspect of Johannesburg is the danger and violence. This should not be neglected or underestimated. We had no problems in the whole four months, but we were very careful. It is not advisable to visit, mainly at night, places that are not monitored by security.

If you can handle the security situation, a medical elective in South Africa is a wonderful thing, that I would do again without hesitation. Without a doubt, one of my next holidays will be right back in South Africa.

Harald Langer  
Technische Universitat Munich (Germany)  
email: harricane@gmx.de
Elective Report: Johannesburg General Hospital

Institution: University of Witswatersrand
Country: Republic of South Africa
Unit: Johannesburg Trauma Unit, (also known as “Unit 163”)
Description: 2,000 bed hospital academic hospital, with 38 Operating Theatres. The only trauma unit in Africa designed around the American College of Surgeons’ Advanced Trauma Life Support Protocol.

Learning opportunities: Formal rounds in the Intensive Care Unit, a weekly Morbidity and Mortality conference, and a great deal of hands on experience in penetrating injuries.

Number of students accepted: 4

duration of elective: 1-4 months

Accommodation: Some dormitory housing available in Parktown, across the street from the hospital.


Applicant requirements: Must be in final year of medical studies and must obtain a South African work permit, which is time consuming.

Contact information:
Mrs. A Mclean
Faculty of Health Sciences
University of Witswaterand
7 York Road, Parktown
Phone: +27 11 647 2045
Fax: +27 11 647 4318
Email: elective@chiron.wits.ac.za

Web address: http://www.wits.ac.za/trauma/

I have met around 8 students that have done electives at the Johannesburg Trauma Unit, and it is their unanimous opinion that working there is the rush of a lifetime. Trauma there is a weekend sport. When the sun sets friday night, the gunshot wounds start coming in. They often arrive by taxi, in the trunks of car (so as not to soil the back seat), by foot, and even by bus. Most often the resuscitations begin by taking a stretcher out to the entrance of the receiving area, and pulling the person out of the car. Basically, you are the first person to evaluate the patient. No paramedics to give a story, no IV in place, no cervical collar on. It all starts when you first see the patient.

Then the organized Advanced Trauma Life Support training kicks in. In a rigid and organized fashion 2 doctors wearing color coded lead aprons begin the systematic examination of the patient, while preparing them for immediate surgery, or jumping in right away if the patient requires it.

As an elective student you will suture more in one weekend, then most people do in all of medical school. In my first month, I placed more chest tubes, than a surgery resident does in 2-3 years in the Institution: University of Witswatersrand
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As an elective student you will suture more in one weekend, then most people do in all of medical school. In my first month, I placed more chest tubes, than a surgery resident does in 2-3 years in the Sjambok whippings often lead to rhabdomyolysis and renal failure
United States.

So what’s the catch? The place is dangerous. I was assaulted my second day in town. You will see the worst of humanity. It is not uncommon to see gang rapes of young girls, that also involve mutilation, people tied up and whipped nearly to death, people tied up and burned slowly, not to mention all types of stabbings and gunshot wounds.

Also, 59% of the patients are HIV+. You will be working with needles and scalpels, and many students get at least one needlestick injury. This can be particularly frightening, especially when you are far from friends and family. The medications for post-exposure prophylaxis, AZT and 3-TC, make you feel sick for one month, which can ruin your time there. You will also question your morals. Each month, a mortuary session is organized, where the house officers and students practice emergency surgical procedures. More than one student has refused to participate in this, since it seems to cross the fine line between helping the needy, and exploiting them for our education. Not to say that is the case, but it regarded as such by some individuals.

If you want to see the most extreme trauma possible, in an environment that is well organized with regards to education, and where you will get as much hands-on training as you can handle, then you might be ready for an elective at the Johannesburg Trauma Unit.

This is an excellent elective for beginning to think of Violence as a public health problem. In fact, in November, it was announced that all elective surgery at the hospital will be cancelled for 6 months, because the trauma unit is using up all the resources of the hospital. What better example for highlighting the diversion of limited resources away from people with medical issues to deal with the effects of violence. There are research opportunities available as well, though any retrospective project would probably be clinical.

Some tips on setting up the elective: A work permit for South Africa is required and can take up to 6 months to arrive. Be sure to take some medicine from your home country to treat yourself should you have an HIV+ exposure. Consider renting a car, as it is inexpensive and public transportation is not well developed, and quite frankly, a bit dangerous.

Alex Guerrero
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Elective Report: Burn Surgery in the US

**Institution:** University of Washington/ Harborview Medical Center  
**Country:** United States of America  
**Unit:** University of Washington Burn Unit at Harborview  
**Description:** 350 bed hospital dedicated almost exclusively to trauma. It is the only burn center for ¼ of the land area of the United States, so patients come from as far as Alaska.  
**Learning opportunities:** Very practical. The consultants get the students very involved in the operations.  
**Number of students accepted:** 1-2  
**Duration of elective:** 1-2 months  
**Accommodation:** List of rooms to rent near the hospital is available. The dormitories offered by the University are far from the hospital.  
**Fees payable:** US$50 application fee  
**Applicant requirements:** Must be in final year of medical studies  
**Contact information:**  
Visiting Student Office, U of Washington  
Box 356340  
Seattle, WA 98195-6340  
Phone: +1 206 543-5560  
Email: visitstu@u.washington.edu  
Web address: http://www.washington.edu

Burns are an overlooked area of trauma that often requires more than surgery. Poor initial management of burns leads to dramatically lost productivity, and diversion of resources from other areas.

The University of Washington Burn Center at Harborview is an excellent place to study burn surgery. They have an entire intensive care unit dedicated to burns. Often the patients are entirely healthy, and just require some fluid and ventilator support for 24-48 hours. When people have burns to the face, you intubate them because of upper airway swelling. Therefore, you practice weaning people from ventilators, and titrating urine output. Nutrition is a big issue in burns. This is a wonderful rotation to begin learning about surgical nutrition. There are many interesting cases that come in. The surgeries are not particularly complicated, and the students are involved from the first day of the rotation. The cases tend to involve excision of burned skin with a straight razor, and replacement with either split thickness skin grafts, or an artificial dermal matrix that allows new skin to grow. At night the team also covers plastic surgery, so you might be called to the emergency room to do some suturing. They give the students a lot of responsibility, which is somewhat rare for the US.

One of the most interesting aspects of working on this burn unit is the weekly meeting where we talk in a small group about some of the public health aspects of burns. Such simple things like doors opening outward in public buildings, and the fabric of children’s pajamas are all because of advocacy by burn surgeons.

You would enjoy a rotation here if you want a solid introduction into ICU management of patients, and interested in some of the social advocacy that surrounds and important, but highly specialized area of trauma. The lessons I learned at the Harborview Burn Unit will stay with me for my entire life.

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Violence Reading List: Research, Public Health and Clinical

The prevention and management of violence is a very new area that encompasses many disciplines. There is no textbook that addresses this area, so you have to consult a variety of smaller texts. The following is a list of books that have been noted to be helpful and relevant.

Research

Injury Control
Authors: Rivara, Cummings, Koepsell, Grossman and Maier
Pages: 314
Publisher: Cambridge University Press, 2000
Cost and availability: US$100.00, widely available
ISBN: 0521661528

Aside from Robbin’s Pathology, this is the only expensive book I bought in Medical School. This is the research textbook for injury prevention, outcomes and program evaluations. If you are going to do a project you should take a look at this book. It takes you through the history of this research area, and explains in detail the different definitions that are specific to injury research, while providing a conceptual framework for its practical advice.

Small Arms Survey 2002
Authors: Graduate Institute of International Studies in Geneva
Pages: 320
Publisher: Oxford University Press, 2002
Cost and availability: US$25.00, widely available
ISBN: 0195108140

A group of researchers in Geneva has decided that there should be an impartial source of information regarding the small arms trade. This book is excellent and the academic rigor is at a level that other research in this area should strive for. They take a serious quantitative look at what is known about legal arms production throughout the world and describe it. Where information is not known, they clearly state so, and may speculate, but never assert. They debunk a lot of the lore about armed conflict and fall back on the proper studies that have been done.

Anyone doing research in this area deserves to read this book. Additionally, before anyone talks about war and public health, they should consult this book because it adds credibility to an area that has often made a lot of statements based on bad science.

Lange’s Medical Epidemiology, 2nd ed.
Authors: Greenburg and Daniels
Pages: 185
Publisher: Appleton & Lange
Cost and availability: US$25.00

If you can only have one public health textbook to carry with you on a trip, this is the one. Small, light, and paperback, with just the right amount of details, this is a classic introduction to the basics of critical reading of papers and constructing your own project.

The SPSS Survival Manual
Author: Pallant
Pages: 304
Publisher: Open University Press
Cost and availability: US$25.00
ISBN: 0335208908

There was a time when I would walk around campus in a daze, running into walls because I was so entranced with own thoughts. Anyone that tried to talk to me would receive the desperate plea “do you know how to set up an SPSS database and run multivariate models?” SPSS is brilliant, but, much like the “reverse polish entry” calculators made by Texas Instruments in the 1980s, you need to know how to use it, and you probably won’t figure it out on your own.

Always assume that someone has already been where you are now, and if there is a way to make money off your desperation, then there is a book. Having tried a lot of computer statistics books, I can safely state that this is the book to consult for SPSS projects. With quotes like “this is where you click to do this” and a wire binding that allows the book to stay open while you pull your hair out with both hands, this is the best book by far for using, in my opinion, the best statistics program around. If you have no clue how to do research related to databases, or inferential statistics, this is the book to own. If you already know how to do the basics, you need this book as a reference.

Public Health

War and Public Health
Authors: Sidel and Levy
Pages: 412
Publisher: Oxford University Press, 2000 (paperback edition)
Cost and availability: US$65.00
ISBN: 0195108140

This is a classic text that first
helped to identify some of the links between armed conflicts and health. Its strength is definitely the comprehensive perspective that it takes. In other words, it addresses an extremely wide area of problems surrounding combat. Everyone knows people are going to get shot. But it goes a step further and looks at the prevalence of sexually transmitted diseases around military bases, and the environmental consequences of stockpiling weapons.

While this is an important text in making the public aware of health consequences, it lacks the rigor that should be demanded of current researchers. Notably, this is in no way a poor reflection of the editors, who are some of the founding fathers of social medicine. Rather it is a reflection of the progressive nature of the book. It was written before solid data was available about combat injuries, and relied heavily on NGO data collection.

The book is worth reading for sure, and practically a mandatory read for anyone doing violence related social advocacy. However, I would shy away from citing it too strongly as a definitive text.

Terrorism and Public Health
Authors: Sidel and Levy
Pages: 377
Publisher: Oxford University Press, 2002
Cost and availability: US$50.00
ISBN: 0195158342

This book is organized differently than any book I’ve ever read. The authors take the endpoint of terrorism and work backward to describe all the ways that terrorism could affect health. And they go several degrees past the direct effects. For example, the chapters range from; the environmental impact of the World Trade Center attack on lower Manhattan, to the small arms trade in Pakistan, to the rate of tuberculosis and measles inoculations in Afghanistan. I found this book to be interesting in that it expanded my thinking about terrorism, but it was too much of an introduction to several fields to be useful. It is neither complete enough about how to strengthen health care systems against terrorist attacks, or practical enough on how to prevent them. I see the role for this book as one of hypothesis generation, or simply collecting some facts to discuss the issue casually. A good book if really interested in the issue of terrorism as a public health problem, but not a good one for any specific research referencing.

Light Weapons and Civil Conflict
Authors: Boutwell and Klare
Pages: 256
Publisher: Rowman & Littlefield, 1999
Cost and availability: US$25.00
ISBN: 0847694852

This book has a number of strong points that make it a good introduction to the issue of small arms availability. It begins by outlining the conceptual problems that small arms pose to economic and public health development, why the issue has been so challenging to control and what steps have been taken to control the illicit small arms trade. Then it goes through specific regional examples of how small arms have impacted public health, how the weapons were delivered, some of the local economics of the trade, and what has been done on the local level to help stop this trade. It also highlights specifically what the United Nations is doing on the issue. While the book is a bit outdated, having been published in 1999, the examples are the best way to understand the nebulous and complex issue of small arms availability.

World Report on Violence and Health
Authors: World Health Organization
Pages: 340
Publisher: World Health Organization, 2002
Cost and availability: Free from website, or US$27.00 commercially
ISBN: 9241545615

Commissioned in 1997 by the World Health Assembly, this report summarizes what is known about violence worldwide. It has three excellent benefits that make this report mandatory for anyone doing research or even talking about this area. Firstly, it provides actual fig-
ures about violent death and disability. This will serve as a baseline for a long time as newer studies compare how violence changes with time. Secondly, it describes a structural manner to divide types of violence. There are so many disciplines involved in this area that dividing up the causes and the types of violence really needed to be done. Lastly it provides nine recommendations to ease the global burden of violence. While some may be as large as promoting social equality, some are as practical as collecting more data on violent injuries. This is a sentinel work that deserves to be looked at, and respected as the baseline by which all other global assessments will be measured.

Clinical Management of Violence and Surgery in the Developing Worlds

Primary Surgery Vol. II
Author: King
Pages: 398
Publisher: Oxford University Press, 1994

Cost and availability: Low cost edition US$30.00, can be purchased from www.vsonline.co.za
ISBN: 0192615998

This is like one of those “worst case scenario” books you see at novelty shops. You are stranded in a small village with no operating theatre, you have not passed your medical licensing exam, and you have to treat 50 patients that have been in a massive riot. The patients have such diverse injuries as broken bones, lacerated tendons, intracranial haematomas and intraperitoneal bleeding. Your first step should be to open this book.

Volume II deals exclusively with trauma. However, coupled with volume I, you could easily make suture from fishing line, repair an autoclave, and do a bowel anastomosis. If you’ve never put on a cast, you might want to consult this book. It goes step-by-step through any surgery you are likely to encounter in the developing world. In other words, it teaches you how to do everything as if you were an untrained medical student, which…..you are. I’ve found it an excellent companion to standard texts when doing a surgery rotation in the United States because it skips the theory, of which you get enough of in books such as Sabiston, and just says, “put the clamp here.” Sometimes it is nice to be told what to do, without all the rhetoric.

Surgical Care at the District Hospital
Authors: Dobson and Fisher
Pages: 450
Publisher: World Health Organization

Cost and availability: US$22.50
ISBN: 924154575 5

This book was recently released by the WHO, and it is essentially several previous books complied into one very practical and current guide to common surgical problems in remote hospitals. This book combines anesthetic essentials, and the entire Primary Trauma Care Manual, which has been the practical guide for trauma management in limited resource areas. It also includes the basics on Orthopedics and Obstetrics, which general surgeons from developed countries have very little experience in, but which make up a large part of general surgery in the developing world.

Overall this is the best clinical book, perhaps because Primary Surgery is in 2 volumes and last updated in 1986. Surgical Care at the District Hospital assumes however, a higher level of knowledge than Primary Surgery, and also assumes that after stabilizing the patient, transfer to a tertiary referral center is available. This book is definitely worth purchasing.

Staying Alive: safety and security guidelines for humanitarian workers in conflict area
Authors: Roberts
Pages:125
Publisher: ICRC Press, 1999
ICRC ref: 0717

In medical school you probably
didn’t learn how to make a sandbag bunker, use a shortwave radio, get through a hostile checkpoint, avoid getting shot, identify a mine or bulletproof the windows in your bedroom. Well, now that you are interested in studying violence you might want to learn how to do these things. This book is full of cartoon illustrations that prime you on the basics of surviving work in a hostile environment. Basically, if you have no military background, and are going into a combat area, or maybe doing an elective in trauma surgery in the developing world, this is a good book to have. Even if you are not going into a dangerous place, everyone should know how to make a sandbag bunker, because when you need to know how to make a bunker, you probably really need to make a bunker.

Hospitals for War Wounded
Authors: International Committee of the Red Cross
Pages: 158
Publisher: ICRC press, 1998
Cost and availability: CHF5, or free from www.icrc.org, available in French or English from www.icrc.org
ICRC ref: 0714

It is unlikely that in the next few years you will need to set up a hospital from scratch in a combat zone, with no security assurances, no power supply, limited water, and with a kitchen staff infected with helminthes. People that do this for a living are the target audience for this book. However, this book is also an excellent primer on understanding how Non Governmental Organizations go about setting up health care service in dangerous and inhospitable areas. It definitely makes you stop and think of all the different aspects that go into an NGO hospital. Who would have thought that de-worming the kitchen staff is the first step to providing nutrition to post-operative patients. This book is excellent reading for anyone planning a trip to a small rural hospital run by expatriate administration, but local staff. One of the issues that it focuses on is the interaction of foreign and local staff. This is one of the largest problems with doing field work outside your home country. This book does a nice job of highlighting an important issue that is often overlooked.

War Wounds: Basic Surgical Management
Authors: Robin Coupland
Pages: 44
Publisher: ICRC Press, 1994
Cost and availability: CHF5, or free from www.icrc.org, available in English, French, Spanish, Arabic and Russian
ICRC ref: 0570

This book is a classic because it is available for free in 5 languages from www.icrc.org, and the main points provide a conceptual and practical introduction to the management of big dirty wounds made by high velocity weapons and anti-personnel mines. The lessons here are definitely applicable at the medical student level if working in an emergency ward with a lot of gunshot wounds. Examples of the main points are “do not think war surgery is easy” and “the best antibiotic is a through wound excision.”

Gunshot Wounds: practical aspects of firearms, ballistics, and forensic techniques
Authors: Di Maio
Pages: 424
Publisher: CRC press, 198
Cost and availability: US$80.00
ISBN: 0849381630

The author of this book is a Pathologist and a total gun fanatic. This is the book for understanding how firearms operate, and more importantly the specific effects they have on the body. It may seem that this book does not fit with the scope of the other books on this list. However, it is essential to note, that by understanding the injury patterns of different weapons, you can conduct research and estimate if the injuries are from high velocity weapons (military vs. civilian weapons) and at what distance the patient was shot (execution vs. collateral damage). This is an essential book for classifying injuries. While in the developed world you may not be the first person seeing a patient with a gunshot wound, in other parts of the world you just might. Identifying injury types is a tremendous advantage both in research and in clinical decision-making.

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is the experience in the laboratories and the exposure to advanced techniques that are priceless. (5) With that in mind we must realize that as the health care professionals of tomorrow we are important play a large role in the big picture of biologic weapons development.

The ICRC has done a lot to protect humanity for over 100 years. They will continue in this mission with their forward thinking programs. However, as future physicians we are in a unique position to help make the world a bit safer by simply thinking ahead.

This joint WHO-IFMSA survey is one of several examples of medical student activism on violence prevention in the past three years. This edition of Medical Student International describes medical student-driven efforts at violence prevention throughout the world. Student-led conferences have been conducted in Denmark, Estonia, and Serbia-Montenegro on issues related to violence prevention. At the 2002 World Health Assembly, IFMSA issued a statement in support of the many initiatives of the WHO Department of Injury and Violence Prevention. At the 2002 World Health Assembly, IFMSA issued a statement in support of the many initiatives of the WHO Department of Injury and Violence Prevention. And locally, many medical students throughout the world have begun to ask their professors to address the deficiency of these topics within medical school curricula.

We would all do well to encourage our medical schools to do the same. Each of us may well encounter a patient like Sandra in our medical practice, and we must know how to advocate adequately for her wellbeing - and when possible, we must how know to intervene in a way that might prevent her injury from occurring.


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The long term effects of war on children should make us stop and consider how we can avoid these atrocities

Joel Kammeyer (USA) Former IFMSA President (2001-2002) email: joel@ifmsa-usa.org

In the meanwhile, those that have not signed on to the campaign may continue to feel uneasiness. But there is hope that channels for dialogue could open. “I do not think that all NGOs are comfortable calling for security expansion, but ACBAR hopes to establish guidelines and recommendations for such actions,” explains Mrs. Stapleton.

Even if they differ on strategy, all agencies agree that enhanced stability, reconstruction and security are desperately needed.

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What every medical student should know about the WHO First World Report on Violence and Injury

About the Report:

- It was commissioned in 1997 by the World Health Assembly.
- It was released in October 2002 at a ceremony in Brussels, where IFMSA was represented.
- It seeks to summarize what is known about Violence Worldwide.
- In the report, violence is looked at in 4 levels; individual, relationship, community, societal. These classifications tend to represent the different levels where interventions can take place.

Important statistics in the Report:

- 1.6 million people lost their lives to violence in 2000, half were suicides, one-third were homicides and one-fifth were the result of armed conflict.
- In 2000, the rate of violence-related death in low- to middle-income countries as a whole was more than twice than that in high-income countries, though rates varied between countries.
- The majority of violence is not fatal, and results in injuries that are often permanent. For every person killed, and estimated 20-40 require hospital treatment.
- Violence exacts a social and economic cost which, though difficult to quantify, are substantial.

Recommendations from the Report:

1. Create, implement and monitor a national action plan for violence prevention
2. Enhance capacity for collecting data on violence
3. Define priorities for, and support research on, the cause, consequences, costs and prevention of violence.
5. Strengthen responses for victims of violence.
6. Integrate violence prevention into social and educational policies, and thereby promote gender and social equality.
7. Increase collaboration and exchange of information on violence prevention.
8. Promote and monitor adherence to international treaties, laws and other mechanisms to protect human rights.
9. Seek practical, internationally agreed responses to the global drug and arms trade.

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Mike Magee, MD

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