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Peace through health?

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Introduction: war, violence and health

War and violence are known to have a devastating effect on human health and well-being. Project Ploughshares (1996) estimates at least 110 million deaths from war in the last century (Elliot 1972). Each year over 1.6 million people worldwide lose their lives to direct violence, which is among the leading causes of death for people aged 15–44 years worldwide, accounting for 14 per cent of deaths among males and 7 per cent of deaths among females (Krug et al. 2002). Garfield and Neugut (1997) suggest that the percentage of civilians killed due to war has increased from 14 per cent during the First World War to 75 per cent during the 1980s and to even 90 per cent in some conflicts taking place during the 1990s. By 2020, the World Health Organization and the World Bank predict that war will be the eighth leading cause of disability and death (Murray and Lopez 1996). For every person who dies as a result of such violence, many more are injured and suffer from a range of physical and mental health problems.

Malnutrition and under-nutrition occur with increased frequency during and after wars. Disruption of infrastructure allows waterborne cholera, dysentery and typhus. HIV/AIDS may be spread as soldiers engage in unsafe sexual practices with multiple partners. New diseases such as Ebola 'emerge' with greater frequency and diseases such as measles, malaria and tuberculosis are difficult to reduce as a direct result of war (Connolly and Heymann 2002; Diamond 1997; Holdstock 2002). Epidemics often spread; the extent of the Spanish flu epidemic of 1918, for instance, is thought to be related to the concentration of otherwise healthy young men in the trenches in close proximity to very sick ones (Orent 2005). A major barrier to the campaign to eliminate polio has been the pockets of wild polio virus remaining in areas of active armed conflict such as Sierra Leone, the Democratic Republic of Congo and Angola (Guha-Sapir and van Panhuis 2002; WHO 2001). The continuation of an African belt of meningococcal meningitis Type A (CDC website) may likewise be related to conflict in the zone.

War impacts on the basic rights of all (UN 1948). Children may be forced into slavery, early employment or combat, violating their right to being '*protected against all forms of neglect, cruelty and exploitation*' (UN 1959; UNICEF 2005). Women may suffer from sexual and physical abuse, and be at increased risk of sexually transmitted diseases including HIV/AIDS, increased

reproductive complications and death and mental health issues (Shanks and Schull 2000). Refugees and internally displaced persons (IDPs) suffer from increased mortality, disability and psychological distress (Santa Barbara 1997). Damage to the physical environment may have consequences for many generations (Ashford and Gottstein 2000; Leaning 2000).

Violence costs countries billions of US dollars each year in healthcare, law enforcement and lost productivity. The Inter-American Development Bank in Latin America has estimated the direct and indirect cost of (direct) violence for Latin America at US$140–170 billion per year, up to 15 per cent of GDP (GIIS 2001); in Colombia, some claim figures up to 25 per cent of GDP (Vieira 1998).

Countries at war tend to be lower socio-economically (UNDP 2005); those with increased military expenditure often have decreased spending on education and healthcare (Levy and Sidel 1997; Sivard 1996). Zwi and Ugalde (1989) found a strong correlation between infant mortality rates and the proportion of GNP devoted to military expenditure. The cost of the arms trade to many Third World countries which can ill afford such expenditure, may reduce security (Sidel 1995).

Interestingly, a nation's ill health may also be a risk factor for war. As a nation's childhood mortality exceeds 100 per 1000, the probability of it becoming engaged in an armed conflict increases substantially (Hotez 2001). Such a relationship also exists between the incidence of other infections such as tuberculosis and conflict. Speculation as to the mechanisms of such links include reduced gross national product, increased population pressures forcing migration and urbanization, increased competition for resources, loss of confidence in government leadership to manage epidemic situations, depletion of skilled administrators as a consequence of disease and flight of capital (Moodie and Taylor 2000).

Defining health

Yet as ill health and disease are linked to war and violence, so too is health linked to peace. Peace and health have many parallels in definition, both negative and positive, as human rights at least for children in terms of their determinants and ways of promotion (Arya 2004a). The Constitution of the World Health Organization (WHO) defines health as 'not merely the absence of disease or infirmity', but more holistically as a 'state of complete physical, mental and social well-being' (WHO 1946). Governments reaffirmed this in 1978 at the Alma Ata Conference (WHO 1978), promising 'Health for all in the Year 2000'. In 1986, public health specialists and health promoters determined that the fundamental conditions and resources for health were (in this order): peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice and equity, in what became known as the Ottawa Charter (WHO 1986). Not only is 'peace' the first prerequisite cited to provide a 'secure foundation' for health, but war affects each of the other conditions. Subsequent efforts in public health and health promotion (e.g. People's Health Charter 2000) and United Nations Millennium Development Goals (MDG 2000) place some emphasis on reducing structural violence and eco-system damage and improving social cohesion and human rights to promote health.

The message is clear: To truly improve the health of our patients, it is our professional responsibility to reduce both direct and structural violence.

How poorly done health work in war zones exacerbates conflict[1]

Those on the ground working in war zones often are too busy dealing with acute illness to think about abstract concepts such as peace. But such concepts have a very practical impact on decision-making. These health and aid workers face difficult choices.

Will they try to be neutral or impartial? Will they cooperate with governments? Will they work in solidarity with populations? How will they secure their aid so it can be delivered? 'Positive' developmental or health outcomes might produce 'negative' peace-building consequences, which may in turn impact their health work (Anderson 1999; Anderson and Olson 2003).

By working through existing power structures in order to gain access to people in need, international assistance agencies can prolong oppression by authoritarian regimes. By adopting policies of solidarity with groups fighting for their legitimate rights, international donors can contribute to the will of the people to engage in violent conflict over prolonged periods of time. When agencies hire armed guards to protect their delivery of goods to needy recipients, they 'buy into' the terms of existing conflicts.

The health sector often receives significantly greater resources than other peace-building efforts. Aid is not always good for peace. It can lead to centralization of power and authority and reinforce structural or overt violence, thereby disempowering local people. Introducing external resources into a conflict-prone, resource-scarce environment may distort local economic activities, changing income and employment opportunities differentially, increasing competition and suspicion, thereby worsening divisions among warring parties. Further, these additional resources might free up internal ones to be used in pursuit of war. When more than one agency works in an area, they may even become participants in competition and the furthering of inter-group suspicions.

After the genocide in Rwanda, NGOs were puzzled to find food failing to reach the most needy, in refugee camps in Goma, Zaire. After several months, MSF stopped working in Goma when they found militias had taken over aid distribution and the same people who had organized the genocide now were being strengthened by NGOs (Rachel Monroe-Blanchette, cited in Peters 1996).

The health sector, which is relied on for information, may find this being manipulated or selectively communicated. Humanitarian agencies circulating pictures or stories of war-based atrocities as a means of enlisting support for their work may fuel the cycle of accusation and counter-accusation perpetuating conflicts among groups.

Health work for peace?

But can we in healthcare professions actually act to mitigate the effects of violence and help create conditions for peace? The Nobel Peace Prize Committee in Oslo certainly seems to think so. In 1901, it awarded its first Prize to Henri Dunant, founder of the Swiss Red Cross. Dunant, a Swiss businessman, won not only for founding the medical relief organization, but for developing the first of the Geneva Conventions, regulating the rules of war and the care of combatants. Since then, the International Committee of the Red Cross (ICRC) has won the Nobel in 1917, 1944 and 1963. So have individuals such as Albert Schweitzer (1952), who won for his work at the Lambaréné Hospital in Gabon, and organizations such as International Physicians for the Prevention of Nuclear War (1985) and Médecins sans Frontières (1999). The International Campaign to Ban Landmines (1997) won with a medical message – to stigmatize

a weapons system because of its disproportionate effect on civilian non-combatants. But the power of the health sector in peacemaking and peace-building has failed to reach much of the peace studies community. In their model of multi-track diplomacy, Joseph Montville and Louise Diamond do not even mention health as a sector to create help peaceful environments (Montville 1990). Let us examine some of the efforts in the health sector to contribute to peace.

Nuclear war

International Physicians for the Prevention of Nuclear War (IPPNW) proved very effective in changing public discourse around nuclear weapons, going from its formation in 1980 to the Nobel Peace Prize in 1985. In *Perestroika*, Mikhail Gorbachev credited the organization with changing his thinking with regard to the utility of nuclear weapons. As such, Gorbachev was able to make agreements that his generals thought compromised security:

> The International Physicians for the Prevention of Nuclear War has come to exercise a tremendous influence on world opinion in quite a short period of time. . . . For what they say and what they do is prompted by accurate knowledge and a passionate desire to warn humanity about the danger looming over it.
>
> In the light of their arguments and the strictly scientific data which they possess no serious politician has the right to disregard their conclusions.
>
> (Gorbachev 1987)

What were these conclusions? In short, in the event of a nuclear attack, don't bother to call your doctor! The 98 per cent of medical personel who live and work in the centre of cities would be dead. Bernard Lown, the renowned inventor of the implantable defibrillator, was also an author of a 1962 study (PSR 1962) showing that an attack on Boston would lead to unimaginable horror, with bones shattered and internal organs ruptured by gale force winds. There would not be enough burn beds in all of the US to deal with the victims from just this city and radiation would continue to cause cancers years after an attack (Sidel et al. 1962). Using epidemiological knowledge to show the destruction of the medical and civilian infrastructure, they gave lie to the claim that there could be a meaningful medical response to such an attack. Lown's friend and fellow expert on Sudden Cardiac Death, Evgeni Chazov, was the cardiologist for much of the aging Soviet leadership. United in friendship and concerned about the hearts of the world, the pair asked how they could be working together to save lives while their two nations be planning to blow up tens of millions of their families, friends and compatriots? Nuclear war was 'unwinnable' by any side, should never be fought, nor contemplated nor prepared for, but only prevented by abolition. Nuclear war moved from the realm of the military and political to a public health problem. Psychiatrist Robert J. Lifton, who had studied both victims in Hiroshima and Nazi mass murderers, showed how 'psychic numbing' might be responsible for people prepared to commit the genocide that pushing the nuclear button entailed (Lifton and Markusen 1990) and paediatrician Helen Caldicott, immortalized in Academy Award winning film 'If You Love this Planet', became perhaps the most effective spokesperson for the movement. IPPNW asked why the superpowers would need to develop tens of thousands of bombs and spend trillions of dollars to develop these arms, when they only led to more insecurity? IPPNW continues research, education and advocacy for nuclear abolition in the post-Cold War era where the dangers of accidents (Forrow et al. 1998) and of terrorism remain (Helfand, et al. 2002).

Landmines

In 1992, Handicap International, Human Rights Watch, medico international, Mines Advisory Group, Physicians for Human Rights, and Vietnam Veterans of America Foundation united to form the International Campaign to Ban Landmines (ICBL). Using pictures of injured children and postcards describing how every 22 minutes someone was killed or maimed corresponding to a human death toll of 10,000 deaths per year (Stover et al. 1997), it showed that any military utility was far exceeded by disproportionate and indiscriminate damage to civilian non-combatants. Basing its argument on this medical burden of suffering and illness – physical, psychological and rehabilitative – and the depletion of resources (they were designed to maim resources devoted to treatment), often lasting years after a war, it galvanized a civil society effort to ban these weapons.

Medical groups continue to be involved in treatment and in social projects providing employment opportunities and rehabilitation. Landmines explode into tiny particles, inevitably contaminating wounds and leading to major blood loss and amputations. IPPNW (a member of the ICBL) has chosen to highlight the damage of landmines by producing both documents on the geopolitical damage and burden of illness as well as a treatment primer. An estimated nine million landmines are scattered throughout Cambodia, where they cost less than $10 to plant and $300 to clear (Cahill 1995; Human Rights Watch 1991; Stover et al. 1994).

The ICBL is now a network of more than 1,400 organizations in over 90 countries. Though cluster bombs continue to be used in Afghanistan and Iraq, and though many major producers refuse to sign on, even non-signatories have been shamed by the norms established by the Ottawa Convention (officially 'The 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction') into modifying their behaviours.

Using lessons from the landmines campaign, other organizations have tried to use international humanitarian law to restrict weapons that cause damage disproportionate to war aims. The International Committee of the Red Cross was less successful in attempting to replicate the success of the ICBL in launching the SirUS project to ban all weapons deemed to cause 'superfluous injury and unnecessary suffering' and tried to define these medically (ICRC 1999). A lesson learned is that in addition to good epidemiological data, it is essential to have bold images to sway partners, policy-makers and the general public.

Small arms

The public health damage related to small arms and light weapons (SaLWs) is far greater than that of landmines because of their physical, psychological, social and economic costs. One estimate has them killing about 500,000 annually – 300,000 in armed conflict situations and 200,000 in peace (Cukier 1998). This would rank on the scale of that of the major public health issues of HIV/AIDS (2.9 million), tuberculosis (1.6 million) and malaria (1.1 million) (WHO 2001). Public health models are being used to address gaps in our knowledge, to standardize databases and collection methods, to propose areas for research, to ponder educational and advocacy strategies and to evaluate the effectiveness of preventive approaches (Arya 2001, 2002a; Arya and Cukier 2005).

IPPNW has used 'One Bullet Stories' to personalize the damage of war with stories of each victim (IPPNW student). IPPNW is part of the International Action Network on Small Arms (IANSA), a coalition of victims' groups, medical and humanitarian organizations, researchers and policy-makers united to reduce the damage. In El Salvador, the IPPNW affiliate,

MESARES, examined the damage of small arms along with medical students through hospital, police and coroners' data. Engaging in advocacy, they received much press coverage, enabling a meeting with political leadership helping convince them to tighten up legislation on small arms (IANSA 2004). They are extending this work in partnership with the UNDP, PAHO and WHO.

Epidemiologists have compared rates between the geographically close and demographically similar Canadian and US cities of Vancouver and Seattle (Sloan et al. 1988), examined the lethality of handguns compared to knives and ropes (Chapdelaine et al. 1991) and compared households with and without small arms in terms of homicides, suicides and accidents (Kellerman et al. 1992, 1993). In Afghanistan, Meddings showed that, despite the end of hot war, when social conditions remained unchanged and weapons weren't removed, morbidity and mortality due to small arms could remain high (Meddings 1997).

Medical reasons for opposing war and sanctions

The two major wars of this millennium led by the US have each been opposed by many medical organizations in the Western world. The first, on Afghanistan in the immediate aftermath of 11 September, was considered by many activists as arguably 'just' or legal, but certainly unwise and not a last resort (Arya 2002b). Delegates to the first Peace through Health Conference called for an end to military activity in the immediate aftermath of the US invasion (Sibbald 2002). The American Public Health Association led by Public Health officials in New York, also opposed a military response to the World Trade Center attacks (APHA 2002). These cautions seem well advised four years later as the war continues: Afghan President Karzai is unable to travel outside of Kabul without US military escort, in the rest of the country fundamentalists and warlords are often in charge, in practice women have few more rights than under the Taliban, the opium trade has resumed and cluster bomblets continue to maim children.

Health professionals were critical in highlighting the damage of the wars and sanctions in Iraq. The cost of the first (1990–91) Gulf War turned out to be far greater to the Iraqi people than was obvious from the nightly 'videogame' shows by the US military during the war, including a precipitous fall in GDP at a cost of $170 billion. This included the deliberate targeting of infrastructure, including water supply (MacQueen et al. 2004). But more damaging than the war, in terms of direct and indirect health consequences, was a decade of sanctions targeting civilians. Chlorine, for instance, was considered 'dual use' – of potential military utility it was prohibited for years and then severely restricted, and households were left without any work income, restricting access to food, many basic medicines and immunizations. This caused an increase in deaths due to malnutrition and a resurgence of infectious disease such as cholera, typhoid, hepatitis and malaria. In the end sanctions were responsible for the deaths of at least one and a half million, including over a half a million children under age five (Arya and Zurbrigg 2003). US Secretary of State Madeleine Albright said the price was worth it, ironically and tragically in the end, to fight weapons that had been destroyed or never existed.

While UNICEF and the ICRC highlighted the humanitarian tragedy during the decade (ICRC 1999; UNICEF 1999), it was remarkable that the damage had been forecast by an international study led by the Harvard School of Public Health immediately after the first Gulf War and published in the *New England Journal of Medicine* (Ascherio et al. 1992). Throughout the 1990s, physicians from various organizations, including IPPNW, went on humanitarian missions to Iraq (Gottstein 1999). They took supplies and came back reporting on 98 per cent of childhood leukemics dying because of lack of chemotherapeutic agents, that had cured

90 per cent before the war, of diabetics not receiving insulin and of the malnourished and under-nourished, personifying the otherwise invisible Iraqi plight (Johnson 1999; PGS 2001).

With the second (2003) Gulf War, even before the war began physicians were prepared to oppose its effects with evidence. Using a medical approach, in an article entitled, 'Ask the Right Questions', I asked: 'How imminent and credible is the threat? What would the war do for the Iraqi people? What would it do for countries and peoples of the region? Would it enhance our own security? What would it do to international institutions and international law?' and 'Might there be more cost-effective ways to make us more secure?' (Arya 2003a). A prediction of a $200 billion price tag of the war, considered by the US Administration at the time to be a wild overestimate (National Priorities Project website), now turns out to be an underestimate. Including indirect costs, Nobel Prize winning economist, Joseph Stiglitz calculates the figure 'conservatively' as being over $1 trillion (Bilmes and Stiglitz 2006).

Four months before the outbreak of the second Gulf War, Medact, the British affiliate of IPPNW, released a report, predicting between 48,000 and 250,000 deaths (Salvage 2002), though was unable to predict the conduct of the war. Another International Study Team and the WHO published similar figures (Hoskins et al. 2003). Such data was used throughout the world by medical journals, organizations and even students to oppose the war on medical grounds (Clark 2002; CMAJ 2003; Lee 2002; Ottawa Citizen 2002).

Eminent epidemiologists and public health officials in Coalition countries have called for an accounting of the dead so that we can evaluate the success of this venture. Donald Rumsfeld claimed that the US military did not 'do Body Counts' and US forces, in fact, tried to put a halt to an Iraqi Health Ministry survey of civilian casualties and prevented release of any data collected (*Toronto Star* 2003). Academics, led by British psychologist John Sloboda, sprang up to fill this apparent void using documentary evidence from credible media to establish direct deaths due to the conflict, which now are greater than 30,000 (Iraq Body Count website). US President George Bush now appears to acknowledge these figures (Baker 2005). The Iraqi Ministry of Health, in spite of US opposition, privately continued to keep figures, which showed that 60 per cent of both conflict-related civilian deaths and injuries in Iraq in the last half of 2004 were caused by the US-led coalition and Iraqi security forces (*Toronto Star* 2005).

Immediately prior to the 2004 US election, at a time when Iraq Body Count reported 10,000 direct deaths (Iraq Body Count 2004), a retrospective study by Johns Hopkins University showed 100,000 excess deaths, with general mortality being 2.5 times greater than pre-war and violent death 58 times greater (Roberts et al. 2004). Medact continues to issue follow-up reports using secondary sources to highlight the public health consequences of war. And the media and general public continue to turn to physicians for an opinion on the merits of the war (Arya 2003e).

Humanitarian ceasefires[2]

In the early 1980s, Central America was plagued with civil war and children were dying in great numbers, not because of direct violence, but in fact because of a lack of sanitation and low rate of immunization. From 1981–85, El Salvador, Guatemala, Honduras and Nicaragua, suffering from the effects of war, had infant mortality levels about 80 per 1,000 while their neighbours at peace, Panama, Costa Rica and Belize, had levels just below 25 per 1,000 live births (Rodriguez-Garcia 2001). UNICEF, under Executive Director James Grant, the Pan American Health Organization (PAHO), and the Roman Catholic Church together brought these facts to the attention of the Duarte government and the FMLN rebels in El Salvador and brokered a series of ceasefires beginning at Christmas 1985 allowing children throughout the country to

be immunized. Soon numerous other national and international organizations including Rotary International and the International Committee of the Red Cross joined in the planning and the implementation of the ceasefires and the 'days of tranquility' were expanded to three times a year. Almost 300,000 children were immunized annually at several thousand sites until peace accords were signed in 1992 and the incidence of measles and tetanus dropped dramatically, while polio was eradicated. While a major success as a health venture, this effort is thought to have facilitated an atmosphere of trust and allowed the identification of common goals, setting the stage for the peace accords.

With the help of intermediaries such as the ICRC and WHO, similar efforts were replicated in Lebanon in 1987, the Philippines from 1988–1993, Afghanistan from 1994–97 and again in 2000–01, the Democratic Republic of the Congo in 1999 and 2000 and Iraq/Kurdistan from 1996 onward.

In Sudan in 1989, UNICEF's James Grant again achieved an agreement with the Sudanese government and the SPLA to allow 'corridors of peace' to deliver relief supplies to the desperate people of southern Sudan in what became known as Operation Lifeline Sudan. This has been credited with increased commercial activities in these regions, resulting in a more stable environment and a zone of 'almost peace' without a real ceasefire occurring.

Though temporary pauses in fighting have been arranged in at least 19 countries since 1985, and while humanitarian ceasefires, days of tranquility and corridors of peace meet significant health needs, how can they be part of larger peace-building processes? They represent a space of tranquility, reminding people of what peace is really like and can inspire them with hope and strengthen their commitment to work for peace. They may be seen to empower people to overcome the sense of isolation that war brings. Negotiations for ceasefires and corridors also help to make communities aware of their basic human rights to receive food and medical care. They can draw a wide range of parties at the local, national and international level into dialogue, and help to shed light both nationally and internationally on the effects of the war on all people, especially children. They might develop new channels of communication and foster the creation of an environment of confidence in negotiations to end the armed conflict.

In the case of Sudan, the picture is not so rosy as ceasefires also allowed rearming, repositioning of forces and smuggling in of weapons. NGOs delivering aid were forced to sign agreements with the government or rebels, which severely limited their independence, so much so that the ICRC refused to participate (Hendrickson 1998; Macrae 1998). What makes the difference between efforts paving the way to lasting peace and those which merely provide a temporary lull in fighting? Mary Anne Peters (1996) attempted to find part of the answer.

Firstly, the ability to strike *common ground* between warring factions. Intervenors have to help parties identify a concern or goal of value to all sides. The well-being of children is an ideal super-ordinate goal transcending all issues of the conflict. Another might be dignity and respect for human life. The benefits of the humanitarian operation must be delivered *impartially and transparently*, with assistance focused on the civilian population. There must be *agreement on standards and monitoring*: time limits have to be defined; the parties must establish a minimum code of conduct; and there must be an ability to apply pressure to adhere to these rules. For example, a clear identification of vehicles used and an assurance that no arms will be transported or military information passed may be helpful.

The choice of intermediaries is important. *International governments can apply pressure and international non-governmental organizations*, with their capacity for neutrality and their ability to act without the constraints of governments and official agencies, are often helpful. Ultimately in internal wars, it is local groups or civil society that can maintain such a peace. Community participation is important, with the *voices of women and children* being strongly represented. If

possible, *local NGOs* of the country or the region, with an understanding and respect for indigenous cultures and political realities, are the best vehicles for providing aid.

The *military and militias* must be made part of the solution and an attempt to address political and strategic questions must recognize that they and their families are often the victims of war. *Local human rights and legal organizations* can make clear reference to international agreements and laws to safeguard the peace. *Education* and communication are important and the *media* can play a vital role in peace education. Distance education through radio teaching or correspondence courses can complement standard education. Training of *community healthcare workers* can strengthen the outcomes of these initiatives but health workers must make use of the peace-building potential through building partnerships with many outside of the health sector.

The World Health Organization and Health as a Bridge to Peace [3]

PAHO initiated the concept of Health as a Bridge for Peace (HBP) in the 1980s, based on the principle that '*shared health concerns can transcend political, economic, social and ethnic divisions among people and between nations*'. Later this developed into a multi-country, multi-agency process, with cross-border surveillance of populations, joint procurement and the exchange of medicines and vaccines among Central American countries. The leadership role of PAHO was essential in bringing health to the forefront of the peace-building agenda, while the actions of UNICEF, the ICRC and NGOs were important in coordinating efforts at the field level. The involvement of the international community (OAS, Spain, US, other European countries, UN agencies) was also integral to the conceptualization and implementation of HBP efforts and invested between $50–100 million in this project in the late 1980s.

The WHO has embraced the concept of Health as a Bridge to Peace (WHO HAC website) and even facilitated training workshops on HBP in the Caucasus/Russia in 1998, in Sri Lanka (1999–2000) and Indonesia in 2001; but HBP remains minimally operationalized and funded within the WHO. Let us look at some of the WHO-supported activity in the field in the name of HBP.

In 1996–97 in Eastern Slavonia, the largely ethnic Serbian part of Croatia, the WHO led an effort to reintegrate health services according to principles of the Dayton, Paris and Erdut agreements. Chairing the Joint Implementation Committee (JIC), it involved governments, civil society leaderships and health NGOs to bring together Croat and Serb health workers in confidence-building activities. These included joint health situation analysis, planning and implementation. In the public health domain, ethnic Croatians and Serbs worked together on the organization of a sub-national immunization day against polio and provision of essential drugs, along with epidemiology and other health research. The administrative reintegration of the health sector included physical rehabilitation, mental health and health information systems. By providing a safe space for dialogue on technical issues, the WHO hoped to create a basis for mutual understanding and cooperation within the health sector. This included emphasizing the respect for both sides' roles as health professionals, and their traditional neutrality and impartiality in situations of conflict. While it seemed to increase the number of Serb and Croat health employees working together and to provide for more equal opportunities for local Serb health workers, few Serbs were employed by the Croatian administration, none were selected for key positions in the health system, and only half of the Serb population were covered by the Croatian National Insurance System.

During the 1992–95 war in Bosnia-Herzegovina, government buildings, civilian homes, hospitals and other public institutions on all sides were targeted and destroyed; a severe refugee crisis ensued, with hundreds of thousands fleeing to Croatia and the rest of Europe and many

others being internally displaced. As the war ended, the health sector remained divided and the WHO again worked to unify staffing, service provision, training and healthcare delivery. With European partners, it facilitated 'decentralized cooperation' (DC), a community empowerment bottom-up initiative to link local communities (institutions, health and social services, professionals and lay people) in Europe, primarily in Italy, with 22 diverse towns in Bosnia-Herzegovina (particularly Croat and Muslim) to create and/or consolidate long-term cultural, technical and economic partnerships. The WHO assisted in the coordination of preliminary meetings, needs assessments, planning exercises and training sessions, and provided technical assistance meant to strengthen the trend towards reconciliation. The importance of the WHO and health sector and ultimate success of this venture is still not clear.

When a military junta overthrew the democratically-elected Haitian government of Jean-Bertrand Aristide and ruled from 1991 till 1994, the WHO and international NGOs were torn as to whether or not they should cooperate with it in order to deliver needed aid. Some in the international community (supported by many in Haitian civil society) felt that the best response was strict non-cooperation, enforcement of sanctions and evacuation of foreign personnel. In the end a decentralized strictly apolitical Health/Humanitarian Assistance Programme (HAP), involving Haitian professionals of different backgrounds, and targeted to most vulnerable segments of the population, contributed to the development and stabilization of the health sector. Opponents of such an approach would argue that maintaining relations with the de facto government may have legitimated it and weakened civil society (Böck-Buhmann 2005).

The WHO also tried to help integrate health systems in Mozambique and Angola. From 1992–6, cooperation of the government and RENAMO in Mozambique led to a comprehensive effort to re-train RENAMO health workers to re-integrate them within the National Health System and to increase the accessibility to basic healthcare for demobilized soldiers and their families in order to defuse political tensions. After the signing of the Lusaka protocol, UNITA and the Angolan government worked with UNICEF and the WHO to disarm and demobilize soldiers from armies on both sides of the conflict. The latter brokered arrangements for the development and implementation of a health programme. This included joint data collection activities, designing common protocols between groups, the adoption of national guidelines on priority health issues (sleeping sickness, malaria, TB) and a common simplified health information system (early warning system). Integrated activities, meant to promote dialogue, trust and common goals, included in-service training, working with communities to develop public health programmes and setting up a joint medical team to assess and classify disabilities supporting a legal basis for institutionalizing benefits to disabled war victims and demobilized soldiers. When fighting broke out again in 1998, Days of Tranquility once again allowed for immunization.

The WHO has identified the following characteristics as important for success: working with health authorities and professionals on all sides openly and transparently according to geographical boundaries (not political) to create a safe space for health (neutral environments), addressing human rights and ethics through health, fostering and empowering responsibility for health and environment with action based on best available information and flexibility to correct when necessary. However it has not been able to properly evaluate the success of the above measures nor really developed a framework for assessment. Is such an effort worthwhile or indeed possible? This will be examined later in this chapter.

Peace through health at McMaster

McMaster academics articulated an engaged theory of health initiatives promoting peace processes and developed study tools to systematize such knowledge (Peters 1996; MacQueen and Santa Barbara 2000; MacQueen et al. 1997, 2001; Santa Barbara 2004; Yusuf 1998). In addition, McMaster projects included field studies and interventions in former Yugoslavia, Sri Lanka and Afghanistan. These projects demonstrated the desirability of the health sector to cooperate with other sectors of society, including teachers and artists.

Designed 'to promote trauma healing, non-violent conflict resolution, peaceful living, human rights, and reduction of ethnic bias in Croatian children affected by war' (Woodside et al. 1999), a school-based project trained fourth- and fifth-grade teachers in modules discussing emotional reactions, flashbacks, 'bias and prejudice' conflict skills, nonviolence and communication skills.

Afghan Canadian physician, Seddiq Weera, led a series of workshops in partnership with Afghan University in February 2001 in Peshawar, Pakistan, where much of the Afghan refugee community took shelter. Intellectuals, opinion leaders, political leaders, journalists, writers, educators and NGOs (across the political spectrum, with a special effort to promote the participation of women) all participated. After the Taliban fell, given Weera's access to the new Afghan leadership, Western governments and international agencies, a psychosocial model of conflict transformation and a peace education curriculum were developed for Afghan school children ages 10–15. Major transferable outputs included a training manual and a storybook demonstrating peaceful principles; the latter has been adapted for a puppet show (Centre for Peace Studies, CPS website).

In the Tamil-speaking ethnically mixed eastern Batticaloa district of Sri Lanka (two-thirds ethnic Tamil and one-third Muslim), there had been massacres, kidnappings and displacements. There the study showed that of 170 children, 41 per cent had experienced personal exposure to war-related direct violence (home attacked shelled, being shot at, beaten or arrested); 53 per cent had a direct family member suffering a violent death; 95 per cent reported events placing them at risk for PTSD; and 20 per cent showed severe levels of post traumatic psychological distress (Chase et al 1999).

In searching for a 'health initiative' to respond to the needs of children identified in the survey project, medicalized models of trauma (PTSD) and treatment with drugs or counselling were found to be stigmatizing and not accessible locally. The focus on children living amidst conflict shifted explorations towards models of resiliency, the capacity to positively cope with adversity and traumatic stressors. Rob Chase, lead physician in this Health Reach study, helped facilitate an exploratory visit to Sri Lanka by artist Paul Hogan. Together with Jesuit father, Paul Satkunanayagam, a qualified counsellor and educator, and a multi-ethnic committee of local representatives, in partnership with schools, religious and tribal leaders, they opened the Butterfly Peace Garden (the Butterfly Peace Garden Media Unit website). The Garden itself would provide sanctuary, a space to honour children. The animators possessing a 'contemplative, respectful spirit' were meant to accompany children and through personal engagement and using imaginative play involving earthwork, artwork and heartwork ultimately help heal the trauma of war and promote resilience. They planted herbs, cared for abandoned animals on site, designed costumes, developed stories, played music, worked with clay and paint.

The teachers initially sent the most troubled children aged 9 to 14 from surrounding villages half Hindu, half Muslim and half male, half female. Soon the programme developed to 150 students a year. The Butterfly Garden assisted in meeting each of the child's basic

needs – physiological, safety belonging and love needs and esteem needs as defined by Maslow. The peace-building components of the Garden project include repair and transformation of damaged relationships, reconciliation, trust-building and maximization of mutual understanding (Wetmore 2005).

Peace through health as an academic discipline

As an academic discipline Peace through Health is relatively new, yet Peace through Health education efforts have already taken place in many countries (see the section References to this chapter). The WHO Report on Violence includes direct macro-level violence along with suicides and domestic violence. Peace through Health practitioners have generally chosen to concentrate interventions on direct violence at a macro-level, though they recognize the relationship between community violence, family violence and violence to the self with macro structural, cultural and ecological violence. Academics in Norway, Canada, Holland and Britain, however, include in their analyses the ability of health sector action to promote human security and to mitigate structural (including poverty, malnutrition and illiteracy) and ecological violence (Arya 2004b).

As opposed to disciplines of eco-system health, health and human rights, social determinants of health, medical ethics and global health, Peace through Health is more designed at interventions and while projects are often at a micro-level (individual or interpersonal), the objective is macro-levels of violence.

A new paradigm: development of a model of peace through health activities

MacQueen et al. (1997) made the first significant attempt to classify PtH work. Medical professionals participating in organizations such as the ICRC and MSF dare to tread where few outsiders might venture. They assist with *Communication of Knowledge*.

By their very presence, as one institution persisting throughout a conflict, they contribute to *Strengthening of Communities* and can develop, foster or sustain a structure for post-conflict rebuilding. They might help with *Healing of the Individual and Society* (physical, psychological and at times even spiritual). They *Extend Solidarity* merely by their presence; that is, by risking their own lives to treat people in war zones. Such gestures can give hope to the relatively powerless side of a conflict, strengthening their struggle for fundamental human rights. They *Broaden the Concept of Altruism*, treating victims impartially, when military and other civilian personnel are propagandized into believing that people on the opposite side of a conflict have and deserve fewer rights as they are different. While opposing war leaders who seek to diminish, depersonalize and dehumanize the 'enemy', they seek to *Personify the Enemy*. For example, IPPNW used common professional contacts and friendships during the Cold War to show that the consequences of war for 'real people' on the other side would be as real and catastrophic as they were for 'us' in the 'free world'. *Construction of Super-ordinate Goals* such as the well-being of their children allowed the warring factions to find a common goal in El Salvador. The refusal of medical personnel to participate in what are considered unjust war campaigns of their governments, such as Israel in the Occupied Territories, the US in Vietnam and Iraq, or Russia in Chechnya, or to oppose weapons systems such as nuclear weapons, is an example of *Non-cooperation and Dissent*. IPPNW, MSF, UNICEF, ICRC and PAHO have all

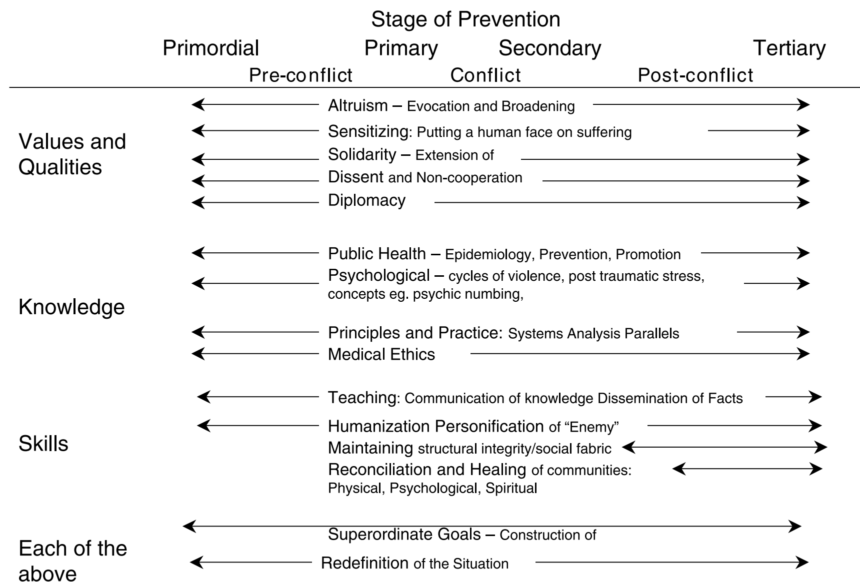

Figure 24.1. Peace through health working model

used credibility and fame to engage in *Diplomacy* at the highest levels. The final category identified by MacQueen et al. – *Redefinition of the Situation* – may be the most interesting. IPPNW turned what ostensibly was a military and political issue, nuclear war, into a medical one, as the bombs would indiscriminately target civilians and a disproportionate number of healthcare personnel to which traditional medical responses were useless. The International Campaign to Ban Landmines (ICBL) similarly de-legitimized the use of landmines as an instrument of war.

The assets of the MacQueen et al. classification have been incorporated into a knowledge–skills–values paradigm used in many disciplines, including medicine in a model used by the author in Figure 24.1 (adapted from Arya 2004a). This has also been of interest to other sectors of society.

Assets of health workers: a knowledge–skills–values paradigm

Knowledge assets

Among the major assets of physicians in zones of conflict is *epidemiology* – measuring death and disease and determining causality. As such, they can measure effects of war and violence as they impact on health directly, including mortality and morbidity, but also the indirect health effects via epidemic illness, refugee movement, infrastructure damage, deprivation of basic needs and effects on mental health. Such efforts have been made on issues ranging from nuclear weapons, small arms and landmines to effects of militarism and economic sanctions and war. Further, the *mental health* expertise of health professionals in diagnosis, treatment and rehabilitation of trauma and stress has been invaluable in projects. Traditional tenets of *medical ethics* to gain trust and confidence of parties in conflict include confidentiality, impartiality, beneficence and non-malefiscence (Hippocratic Oath website). The recent Medical Professionalism Charter accepted by the American College of Physicians and the European Federation of Internal

Medicine and promoted by many other medical bodies (ABIM) considers the primacy of patient welfare, patient autonomy and social justice leading to important professional responsibilities.

The Responsibility to Protect report (ICISS 2001) produced by the International Commission on Intervention and State Sovereignty, composed of former military, political and diplomatic leaders from around the world including former heads of states, international legal experts, NATO generals and UN officials, was meant to develop criteria to prevent genocides. It seems to have reflected such ethical principles from the medical world as Autonomy, Beneficence, Non-Maleficence, and Altruism and Primum non Nocere (first of all, do no harm) (Arya 2003c). Other criteria for outside military intervention, including Right Authority, have Right Intention, use force only as a Last Resort and, with Proportionate Means, in the case of Incapacitance of the patient State, seem very familiar to medical practitioners. These principles might be used to guide any outside intervention in world affairs (Arya 2005). Finally, lessons from the realm of medicine such as the failure of a simplistic 'hard power' approach might have analogies in world affairs (Arya 2006).

Practice skills

The name 'doctor' is derived from Latin 'docere' to teach. Educating is important for adherence to treatment recommendations and allied professionals such as nurses, physiotherapists, occupational therapists, social workers, psychologists and pharmacists may be even better adapted and trained in teaching. Health professionals can contribute to healing of individuals and communities, development of a civic identity and maintenance of structures, giving a sense of order to people's lives when all else is in disorder thereby facilitating post-conflict rebuilding. They can communicate knowledge about war zones, daring to go where no one else will. James Orbinski, who had been the MSF physician in Kigali, chose to use MSF's Nobel Prize acceptance speech (Orbinski, Nobel website) to highlight the effect on the civilian populations of Grozny, Chechnya, due to bombing. Orbinski claimed that the humanitarian act is 'to relieve suffering, to seek to restore autonomy, to witness to the truth of injustice, and to insist on political responsibility'. Political and military leaders try to dehumanize 'the enemy' be they Jew in Nazi Germany, Soviet during the Cold War, or Iraqi, Libyan or Serb in the recent past (Keen 1986). Doctors in practice must personify their patients, including the 'undesirable' and marginalized in society, whom they treat as individuals worthy of respect with dignity and human rights (patient-centredness).

Values and qualities

Physicians, whom society sees as bright, altruistic individuals, and perhaps having power over life and death, have disproportionate access to leadership allowing them to engage in diplomacy as well as to the media allowing them to engage in dissent and non-cooperation. In working with individuals, the sense of solidarity is meaningful to people with whom they work and they can sensitize both political leaders and media to such suffering.

Stages of war

The second element to the model adapted by the author from McMaster work refers to stages of war. Yusuf et al. (1998) describe how war may be viewed as analogous to a disease. As such, it has risk factors and may allow preventive manoeuvres or interventions during pre-war, during

and post-war stages at the primordial, primary, secondary and tertiary stages paralleling a medical model of prevention, treatment and rehabilitation.

Primordial prevention involves looking at not just proximate causes of disease, but root causes, the underlying disease conditions, preventing the 'risk factors' for conflicts from developing in the first place. These would include poor governance, human rights deficits, education deficits, economic and social inequalities, ecological degradation, community and cultural disintegration. Primary prevention refers to modification of these risk factors and concerns prevention of war from breaking out when a situation of conflict already exists, or from escalating to more dangerous levels. 'Peacekeeping', limitation of arms, combating propaganda and diplomacy are examples of such efforts. Secondary prevention refers to the situation where war has already broken out (the disease has manifested itself) and where the effects of war can be treated. These efforts might be termed 'peacemaking'. Once the damage has taken place, health workers can be involved in Tertiary prevention, and analogous to rehabilitation in medicine and ecological restoration for environmentalists would be post 'hot' war 'peace-building' (Melf 2004).

The knowledge – skills – values framework and the stages of action are incorporated into the model shown in Figure 24.1.

Deficits of knowledge, skills and values in health workers

Despite the major assets possessed by health workers, to truly work effectively for peace, they must incorporate the efforts, knowledge, skills and values of other professionals, often in a team. What, then, are some of the deficits of health workers?

Knowledge deficits

The biomedical focus of medical training on the pathological basis of disease, leaves physicians with major deficits even when trying to deliver healthcare in war zones. Nurses and other allied health professionals seem better equipped to approach problems more holistically. Understanding nonviolence, violence and conflict analyses, reconciliation and conflict resolution/transformation are among the many parts of Peace Studies that might be useful for health workers to act constructively in war zones. So are knowledge of intercultural communication, peace processes, international human rights norms, humanitarian law, human security and codes of conduct.

Skills deficits

These include the ability to monitor events and effect continuous political analysis, conflict resolution, negotiation and mediation. From anthropology case studies, key informants, participant observation and focus group interviews may help to understand the nature of conflict and its resolution and in the design of culturally appropriate and sensitive interventions. The Butterfly Garden in Sri Lanka shows how other professionals' expertise may be incorporated and how resilience may be fostered rather than merely treating trauma in a medical way.

Values deficits

These are important as the knowledge, skills and access of physicians in particular makes them even more dangerous without a firm moral compass. Complicity with torture in military

dictatorships, with apartheid and currently in Abu Ghraib and Guantanamo occur when physicians forget professional obligations for individual gain in terms of what they see as a greater good (Marks 2005; Miles 2004). In the fictional media, bad apple physicians, the Hannibal Lecters and Dr Evils of the world, can represent the highest form of evil. Self-assured physicians occupying positions of leadership such as Radovan Karadic may perpetrate tremendous evil. Where things go wrong, they can go wrong on a large scale from Harold Shipman to Josef Mengele.

Seidelman (1995), quoting Kater (1983), recounts that of all occupational groups in Germany at the time, the medical profession had the largest membership in the Nazi party (44.8 per cent of all licensed physicians were party members). Nazi racial policies derived from the medical profession itself. Public population health, or 'Volksgesundheit', provided a scientifically legitimate vehicle for the achievement of their political goal of racial purification or hygiene, and sterilizations of those with hereditary conditions or deemed 'unfit' were performed in hospital under general anaesthetic and later using radiation. The rationalizations and ability to perpetrate genocide continues in the nuclear age (Lifton and Markusen 1990). The Nuremberg Code (1949) was meant to standardize the ethical role of physicians towards research subjects.

Critique of the model

This evolving model has been critiqued as too biomedical and reductionist in design rather than a more holistic, ecological 'systems' approach. Further it may be Eurocentric, and focusing on outsiders, neglecting local capacities and internal resources. Some would say that the deficit/asset model may not be promotional for either health or peace. Finally it is focused on health professionals, especially doctors. Each of these criticisms has some validity, but the model is not meant to encompass all of the peace productive capacity of societies, nor is it meant to be static, but as a tool to explore mechanisms for those outside immediate zones of 'hot' conflict to contribute to its prevention, mitigation and resolution.

Mitigating conflict through the peace through health model?

A critical part of this model is to establish at what point in the conflict organizations should work. IPPNW has been a *primary prevention* organization designed to prevent nuclear war and later all war, while MSF has primarily been active during and after conflict to help societies rebuild (*secondary and tertiary prevention*). The ICRC assists victims during wars and with rehabilitation afterwards (*secondary and tertiary prevention*). To a far lesser extent, they try to help in *primary prevention* and with root causes (*primordial prevention*). The International Society of Doctors for the Environment (ISDE) and Physicians for Human Rights (PHR) are examples of medical organizations with an international scope, but with specific foci related to root causes (*primordial prevention*), only peripherally related to prevention of war. IANSA and the ICBL often use a health, humanitarian or human rights message as a central focus for advocacy work. Both work on *primary prevention* of violence and war by reduced access to weapons and on tertiary prevention with victim assistance and rebuilding post-war. The McMaster University Peace through Health group has restricted its field activities in Croatia, Sri Lanka and Afghanistan to primary and *tertiary prevention* mental health work, meant to prevent resumption of conflict, and generally avoided presence during active conflict. These types of activities are demonstrated in Figure 24.2. Rodriguez-Garcia et al. (2001), from

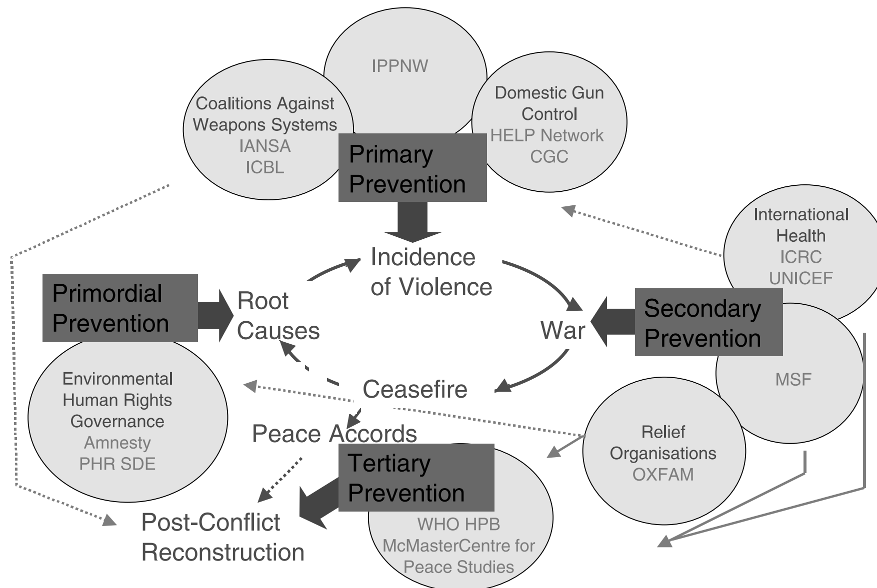

Figure 24.2. Breaking the chain of war: medical peace action in a framework of prevention

George Washington University, have described how organizations may work at various stages of conflict.

The model suggests that we should restrict activity to those where our knowledge, skills and values make us credible. For instance, in anti-nuclear activism, IPPNW cannot be credible if it concentrates efforts on legal, economic, political or military aspects. Coalitions and partnerships may assist in addressing peace knowledge and deficits. This model could be applied to other sectors of society not currently identified by the multi-track model, such as legal professionals, human rights workers, engineers, scientists, artists, athletes and musicians, and help them develop frameworks for their work using their unique characteristics (knowledge, skills and values) at various stages of conflict.

While it is true in general that activities might be restricted, the highly successful MSF campaign for essential drugs (MSF website), which targets globalization and trade indirectly while concentrating on basic health needs, shows how we can operate outside of these parameters. The WHO and the ICRC, with greater resources and staff, are able to participate in all stages, but each division must restrict its foci to its area(s) of expertise.

Dilemmas in PtH

Issues related to aid such as funding being short term and inflexible, oblivious to changing conditions on the ground, evaluations and goals which are inappropriately Western centric, and difficulties transitioning between humanitarian relief work and development work are well known among practitioners. Less well described are, 'Can work in war zones be apolitical or impartial?' 'Do our models of intervention in mental health designed in the West really work for trauma?' Are locals willing to work within these Western frameworks for added resources?' 'Are some of the most needy people avoiding seeing mental health professionals because of stigma?'

The bio-medicalization of trauma concerns many in the Global South, particularly those from traditional cultures where healing normally takes place in communities and within religious traditions. Stigma associated with biomedical practitioners and the neglect of family, school and community both in terms of etiology and in terms of healing, neglect of the social meaning of suffering, development of agency and resilience remain the subject of heated debate (Giacaman et al. 2005; Summerfield 1998).

The ICRC, UN and nation states stick to principles of neutrality or non-interference, often to the frustration of many of their field workers. Yet James Orbinski asks, 'Can rape be considered merely a complex gynaecologic emergency?'

How do we look at collaboration and partnership where there is a tremendous power differential as between Israel and Palestine?

The Canadian International Scientific Exchange Programme (CISEPO) of the University of Toronto seeks to build bridges to peace in the Middle East with a cooperative hearing aid project and academic exchanges to train paediatric cancer specialists, trying to keep work 'below the politics' (CISEPO website). Such work (Skinner et al. 2005) has drawn the criticism that one cannot stay outside of politics in the area (Jabbour 2005). In fact, politics prevented the congenital hearing loss project from screening more than 1,000 Palestinians, while 8,000 each of Israelis and Jordanians were screened. Most Palestinian academic institutions have called for public boycotts of all Israeli universities as arms of the state (Santa Barbara 2005a). It is unclear how this model seeks to address disparities of conditions, issues of structural violence (social justice, equity) and dignity. The programme itself is not well known and therefore has faced organized opposition. If there were greater success, how might this be addressed?

The 'Healing across the Divides' project, led by Norbert Goldfield, with two decades of work in the region, is designed 'to assist Israeli/ Palestinian health care organizations to improve the health of Israelis and Palestinians via increased health professional mediated health and human rights improvements and policymaker decisions.' Choosing its partners carefully, it acknowledges the difference of conditions, seeks to address inequalities and capacity building while contributing to the dignity of all sides. It is currently engaged in a diabetes study in Israeli and Palestinian villages, largely working with civil society partners (Healing Divides website).

Evaluation tools

A major shortcoming of this discipline is that evaluation of PtH projects in the field is not yet well developed (Vass 2001). This may be true for Peace Studies generally. How do we bring intellectual rigour to such a field? Health studies may offer some methodologies.

Mary Anderson describes some resistance to evaluation by those on the ground. Often field workers say it is: 'Too soon'; 'Too complicated'; 'Too intangible'; 'Unnecessary'; 'A donor agenda' (Anderson and Olson 2003). But the positives seem to outweigh the negatives. These include ensuring effectiveness and accountability, avoiding wasting resources on ineffective efforts, answering stakeholders, increasing support for a programme and contributing to the scientific knowledge base.

Evaluation may be done at any stage. Formative evaluation is meant to gain information to guide or improve programme development, while summative evaluation is meant to render a summary judgement about critical aspects of a programme performance vis à vis specific goals and objectives. We might assess theoretical components, conceptualization and design, do a 'needs' assessment, look at process operations, implementation and delivery and finally impacts or outcomes, cost effectiveness or efficiency.

Components (groups of closely related programme activities), Inputs (programme resources), Activities (identifiable programme tasks), Outputs (products of programme activities), Goals (general statements about desired programme direction (objectives and indicators) and Outcomes (short term and long term). Such evaluation planning may help identify underlying assumptions, reveal stakeholder expectations, describe cause and effect relationships and serve as a starting point for discussion and the resolution of differences. The Peace through Health model identifies some of the unique inputs available to health professionals.

Outcomes

Anderson's Reflecting on Peace Practice (RPP) approach suggests positive outcomes at a peace writ large, macro-level might include not just stopping direct violence, but building a just and sustainable peace predicated on creation of reform of institutions, prompting participants to increasingly resist provocation to violence, and causing them to develop their own initiatives for peace (Anderson 1999, 2003).

Joanna Santa Barbara (2005b) suggests PtH projects may look at more concrete impacts such as the abolition of war as an institution, prevention of specific outbreaks of violence, limiting harm and ending episodes of violence when they occur, rehabilitation of people and social systems after violent conflicts with a goal of preventing further violence, addressing structural and cultural causes of direct violence such as poverty, and stimulation of other sectors of society (e.g. education, media, justice systems) towards parallel action as viable goals.

Ken Bush (2003) determined six macro-level outcomes: Dismantling the culture of war, Living with compassion and justice, Building intercultural respect, reconciliation and solidarity, Promoting human rights and responsibilities, Living in harmony with the earth, and Cultivating inner peace.

Each of these indicators are certainly reflective of the Galtung definition of peace. Violence, according to Galtung, may be considered avoidable insults to basic human needs including Survival needs, Well-being needs, Freedom needs and Identity needs (death, misery, repression and alienation), with war being an extreme form of collective violence impacting on each. A typology of violence might include *direct* acts, not only physical violence, but psychological (e.g. verbal threat), social (act of exclusion) and spiritual (act of desecration), i.e. reduction of human potential bodily, but also mentally, socially and spiritually, *structural* hidden 'violent processes' built into the social system expressing itself in unequal opportunities (i.e. inequality in the distribution of income, education opportunities, etc.), *cultural* (religion, ideology, language, art, science) and *ecological*. Peace, by contrast, can be defined as not merely the absence of direct, cultural and structural violence (negative peace), but a state of complete loving, harmonious acts to elicit the good in each other (direct peace), of complete equitable, horizontal relations (structural peace) and of complete positive culture, which promotes peace and non-violence (cultural peace) (Galtung 1996). Perhaps it is this definition which should be used to measure outcomes.

Outputs

At a field level, Bush's Peace and Conflict Impact Analysis (PCIA) (Bush 1998, 2003) is intended to evaluate project outputs. Bush feels that pre-assessment location (infrastructure), timing (opportunity), political, military and socioeconomic context (stability/structures) and environmental context are all important considerations to determine dynamics and risk. Areas of potential Peace and Conflict Impact (PCI) include: Conflict Management Capacities and

Peace-building, Military and Human Security, Political Structures and Processes, Economic Structures and Processes, Social Reconstruction and Empowerment. Post-project, Bush feels that we might measure changes in access to individual or collective material and non-material resource effects on socioeconomic tensions, effects on privilege, hierarchies and dependencies, changes in political economy and governance challenges. But how objectively measurable are these paths to peace and project outputs?

Anderson cautions that goals at a programmatic level must not worsen divisions, increase danger of local participants, reinforce structural or overt violence, divert human and material resources from productive peace activities, increase cynicism or disempower the local people from a local peace-building perspective. Insiders and outsiders each play a role and projects can be directed at the interpersonal or structural level and can try to involve more people or key people. Knowing where we are and who our target audience is, is of utmost importance for a programme (Anderson 2004).

Anne Bunde Birouste and Anthony Zwi, of the Health and Conflict Research Project of the University of New South Wales School of Public Health (UNSW 2004), have developed a concise, yet comprehensive set of filter questions on such issues relevant to outputs. These have been field tested in Sri Lanka, the Solomon Islands and East Timor, and are to be used at the design, monitoring and assessment phases of health projects in areas of armed conflict. Questions are in five major categories of Cultural Sensitivity, Conflict Sensitivity (Trust and Conflict awareness and responsiveness), Social Justice (Equity and non-discrimination, Gender), Social Cohesion, (Community cohesion, Psychosocial well-being), and Good Governance (Community capacity building and empowerment, Sustainability and coordination, Transparency and accountability).

Efficiency

Even if we could measure and compare these categories, would it allow determination of cost-effectiveness? I would argue that the model in Figure 24.1 demonstrates many of the capacities (knowledge, skills and values) of health workers for peace and are key to determining efficiency. Other efforts to define efficiency among health workers for peace in the Global South include a project called Peace Works. Funded by a Reebok human rights award, young Filipino physician Ernest Guevarra has gathered together health and peace workers from Timor, Chechnya, Chiapas and Rwanda (Santa Barbara 2004).

What is in store for Peace through Health in the next 20 years?

Peace through Health will need to improve in terms of evaluation. It is one thing to propose an alternative discourse, another to justify it with evidence. Peace through Health practitioners are increasingly sought after for training. From the former Yugoslavia to El Salvador, communities developing social reconstruction are seeking training in nonviolence, reconciliation and conflict analysis from Peace through Health academics and practitioners.

Medicos Salvadoreños para la Responsabilidad Social MESARES, and the IPPNW Medical Students Chapter (E-MESARES), hope to incorporate Peace through Health training in partnership with PtH practitioners and academics in Canada. In the 1980s, more than 160,000 Central Americans died in wars or civil violence, and many more were wounded. Over two million people fled their homes, often to neighbouring countries at peace such as Costa Rica, stressing the social fabric even of these peaceful countries (Guerra de Macedo 1994). Going

beyond the documentation of health effects of small arms (Paniagua et al. 2005) and the achievement of policy changes with regard to small arms, the project is meant to build capacity, especially among youth, to formulate proposals to help resolve violence. Using medical students trained in peace-building education and field application to act as facilitators, they hope to improve individual and community mental health, and to help empower communities to develop their own individually managed violence prevention projects, built on the Problem Solving for Better Health (PSBH) model of the Dreyfus Health Foundation. The PSBH or Solpromesa model is an innovative and flexible approach viewing violence as an individual and group responsibility, requiring coordination with local authorities and community leaders. It is aimed at strengthening local capacities with the optimal use of existing internal resources as it seeks health solutions to problems of violence.

Many view Peace through Health as an overall paradigm for their health work. I expect that in the next few years we will see a convergence of: (a) work that we consider health as a bridge to peace, (b) work on social determinants, and (c) work on environmental and eco-system health, as the linkages between each become apparent. Peace through Health may influence other health disciplines as we realize concrete ways to act on non-biomedical determinants of health. Work on humanitarian assistance and development from the Global North will become more obvious as self-interest and one might hope that a model of solidarity will develop. Unlike many other parts of peace studies, Peace through Health ventures and interventions are often student-led, including the Nuclear Weapons Inheritance Project (NWIP), which is bringing students together in nuclear weapons states, and ReCAP, which is doing Peace Education in Palestinian refugee camps (IPPNW Students website).

One could anticipate an expansion of the role of epidemiology to stimulate social change. Physicians and epidemiologists will continue to use their projections such as represented by the Harvard Study Team, Collateral Damage and Johns Hopkins team in Iraq to predict and document the effects of war and social violence, gaining credibility and respect beyond that of politicians and generals (Murray et al. 2002). We hopefully will be able to offer more peaceful but also cheaper, more effective and sustainable alternatives to war.

In our most optimistic dreams we would see governments and medical practitioners recognizing the mistakes of the past. We might hope that governments could move beyond the traditional 'realist' security agenda, past a human security agenda (Arya 2003c) to seeing their role as health promoters with health and well-being explicitly accepted as the overriding goal of governments (Arya 2003d, 2005). To achieve this will require them to embrace peace in all its forms: direct, structural, cultural and ecologic. Perhaps we can transform the realm of medicine from a pathogen, hard-power, threat-based, 'realist' model to a more holistic, eco-system approach.

Rudolf Virchow, one of the giants of medicine, said, 'If medicine is to fulfil her great task, then she must enter the political and social life.' 'Politik ist weiter nichts als Medizin im Grossen' – Politics is nothing more than medicine on a grand scale (Virchow 1848). Virchow would have been pleased to see medicine and health entering the realm of peace.

Appendix: web links

Education

Peace through Health

University of Waterloo
http://grebel.uwaterloo.ca/academic/undergrad/f05outlines/pacs301.pdf

http://www.fes.uwaterloo.ca/ers/faculty/narya.htm
Contact: Neil Arya narya@uwaterloo.ca

McMaster University
www.humanities.mcmaster.ca/peace-health
http://www.humanities.mcmaster.ca/peace-health/PtHCourse/PtHCourse.htm
Contacts: Joanna Santa Barbara Joanna@web.ca Neil Arya narya@uwaterloo.ca, Rob Chase chaser@cc.umanitoba.ca

Tromsoe University
Medical Peace Work
http://uit.no/sih/7665/1
www.medicalpeacework.org
Contact: Klaus Melf Klaus.melf@fagmed.uit.no

Erlangen University
Krieg. Trauma. Gesundheit: Ärztliche Verantwortung in Gewaltprävention und Friedensförderung
http://www.gesch.med.uni-erlangen.de/eth/lehre/gte_5.html#gast
Contact: Stephan Kolb s.kolb@klinikum-nuernberg.de

International organizations

Health as a Bridge for Peace http://www.who.int/hac/en/
Violence and Injury Prevention www.who.int/violence_injury_prevention/violence/en/
Health and Human Rights www.who.int/hhr/en/
PAHO http://www.disaster-info.net/catalogo/English/dd/Ped/helidcat.htm
UNICEF http://www.unicef.org/

Non-governmental organizations

International Physicians for the Prevention of Nuclear War www.ippnw.org www.ippnw-students.org
Doctors Without Borders http://www.msf.org/
International Committee of the Red Cross http://www.icrc.org/
Physicians for Human Rights http://www.phrusa.org/

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Notes

1 Concepts in this section on perils of humanitarian aid are largely derived from Anderson (1994) and Peters 1996.
2 Source material for this section and good references on humanitarian ceasefires include Galli (2001), Guerra de Macedo (1994), Hess and Pfeiffer Large (1997), Manenti (2001), Peters (1996), Rodriguez-Garcia (2001), UNICEF (1996) and WHO (1997).
3 Further recommended reading and source material on WHO Health as a Bridge to Peace includes Large (1997), Manenti (2001), Peters (1996), Rodriguez-Garcia (2001), and WHO (1997)

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