Small Arms and Health

HELP Network

April 2004

Encarta Encyclopedia, REUTERS/THE BETTMANN ARCHIVE

WHAT ARE SMALL ARMS?

- "Broadly speaking, small arms are those weapons designed for personal use,
- Light weapons are those designed for use by several persons serving as a crew.
- Ammunition and explosives form an integral part of small arms and light weapons

UN Panel of Experts (1997)

WHO SHOULD HAVE SMALL ARMS?

Military, law enforcement and selected security officials

Aboriginal peoples (Native Americans)

Civilian firearms ownership for sports, recreation and wildlife control, including target-shooting and managing pests.

Self-Defence When law enforcement is unable to adequately defend certain individuals, possession of handguns may be considered acceptable for purposes of self-defense. **In most developed countries, however, this is rare. The United States is the notable exception.**

DISTRIBUTION OF WEAPONS

- 688 million small arms and light weapons in the world (SAS 2003 639 million)
- 59% are in legal civilian possession,
- 38% are in the arsenals of national armed forces,
- 3% are held by police forces,
- far less than 1% are in the hands of insurgent groups[i].

Graduate Institute of International Studies (GIIS). ***Small Arms Survey 2002***: *Counting the Human Cost.* Geneva: Oxford University Press, 2002: p. 6, 103.

SCOPE OF DAMAGE

- Estimated 300,000* people die annually due to firearms used in armed-conflict situations.
- Of 49 regional conflicts waged since 1990, small arms and light weapons have been the weapons of choice in 46
- ICRC personnel: 60 percent of all weapons-related deaths and injuries
- * this figure is being debated-suffice to say it is in this order of magnitude, Wendy Cukier, Project Ploughshares

Respondents' Choice
(percent)
80
60
40
20
0
Handguns
Hand Grenades
Land Mines
Assault Rifles
Mortars
Artillery
Major Weapons

ICRC

WHY USE SMALL ARMS?

- low cost
- durable
- easy to produce
- easy to operate
- easily concealed and trafficked past legal restrictions
- deadly

WHY USE SMALL ARMS?

- **AK-47s**
- manufactured in over 40 countries
- $15 in Angola large sack of maize

Scientific American Boutwell and Klare
Also Small Arms Survey

MEDICAL EFFECTS

- death and injury
  - organs or vital structures
  - rupture of major vessels
  - shattering of bones
  - brain
  - severing of the spinal cord.
- rehabilitation
- psychological consequences
  - survivors
  - families of victims (survivors or not)
  - perpetrators
- health care resources

INDIRECT COSTS BROAD DETERMINANTS OF HEALTH

- Social
  - climate of fear
  - increased incidence of robberies and assaults

  Environmental
  - natural resources destroyed
  - forced to flee their homes, eat or burn whatever they can find
  - irrelevant to victim and perpetrator alike.

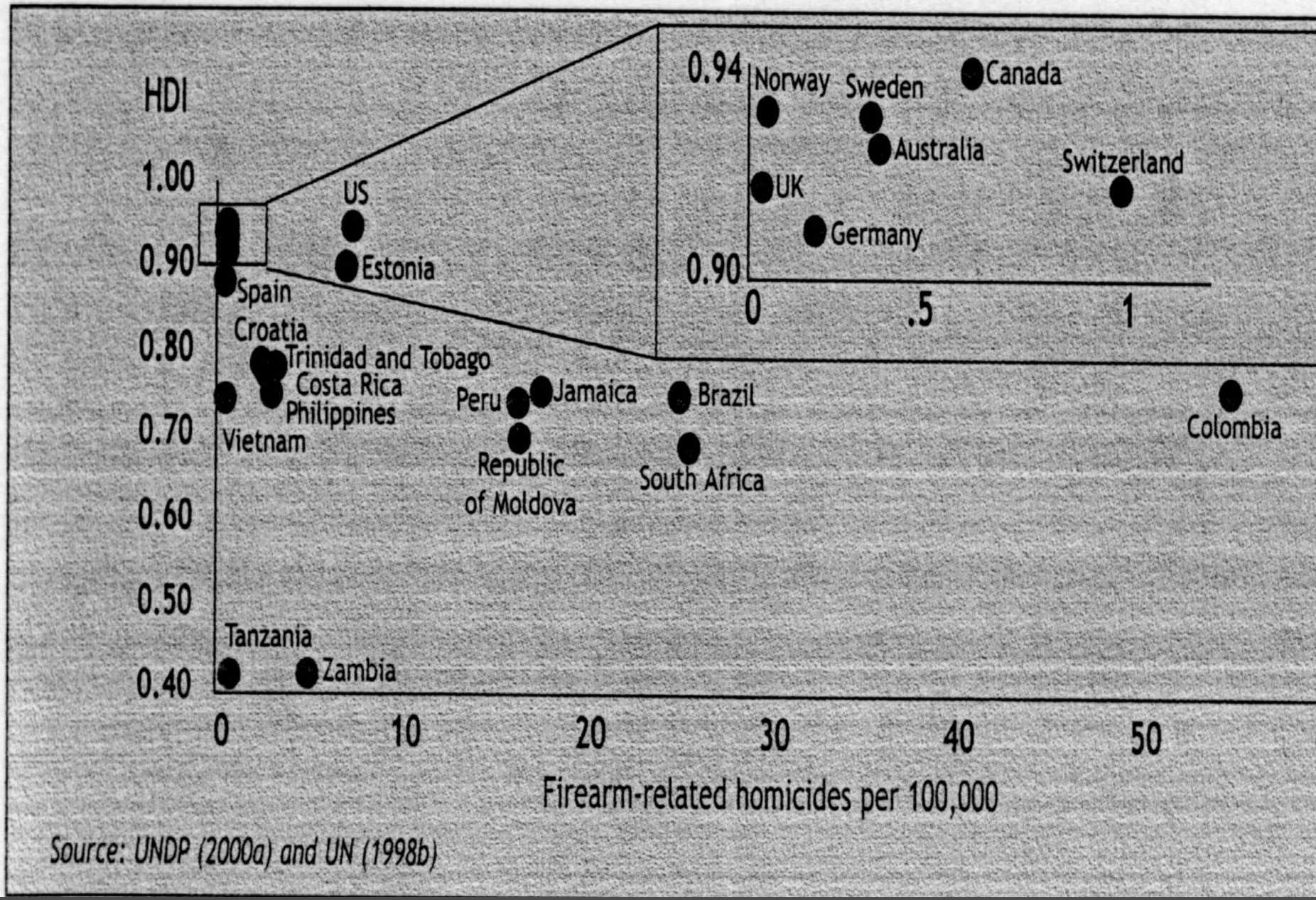
INDIRECT COSTS BROAD DETERMINANTS OF HEALTH

- Economic costs
  - direct of purchase low $10 billion*, $4-7 billion** of $850 billion US spent annually on military forces around the world ($400 billion in the US)
  - cost of treatment and other medical services,
  - value of lost productivity
  - interruption of basic services
  - damage to government investment, business and tourism
- * Scuentific American Boutwell and Klare ** Small Arms Survey 2002

OTHER EFFECTS

- Latin America 15% of GDP (SAS 2001 p 4Latin American Development Bank)
  - Colombia 25% of the GDP (O. Viera, Ryerson 1998)
- Relief Operations (Scientific American Boutwell and Klare)
  - Relief efforts 1990's increased from $1 billion to $5 billion a year,
  - Long-term development aid dropped
  - Relief operations hampered, suspended when aid workers themselves become targets of attack. 2 times ICRC personnel killed in Chechnya and Rwanda alone in 1990's than since WW II
- Higher socioeconomic status (HDI) less violence
- Less violence also tend to achieve higher socioeconomic status.

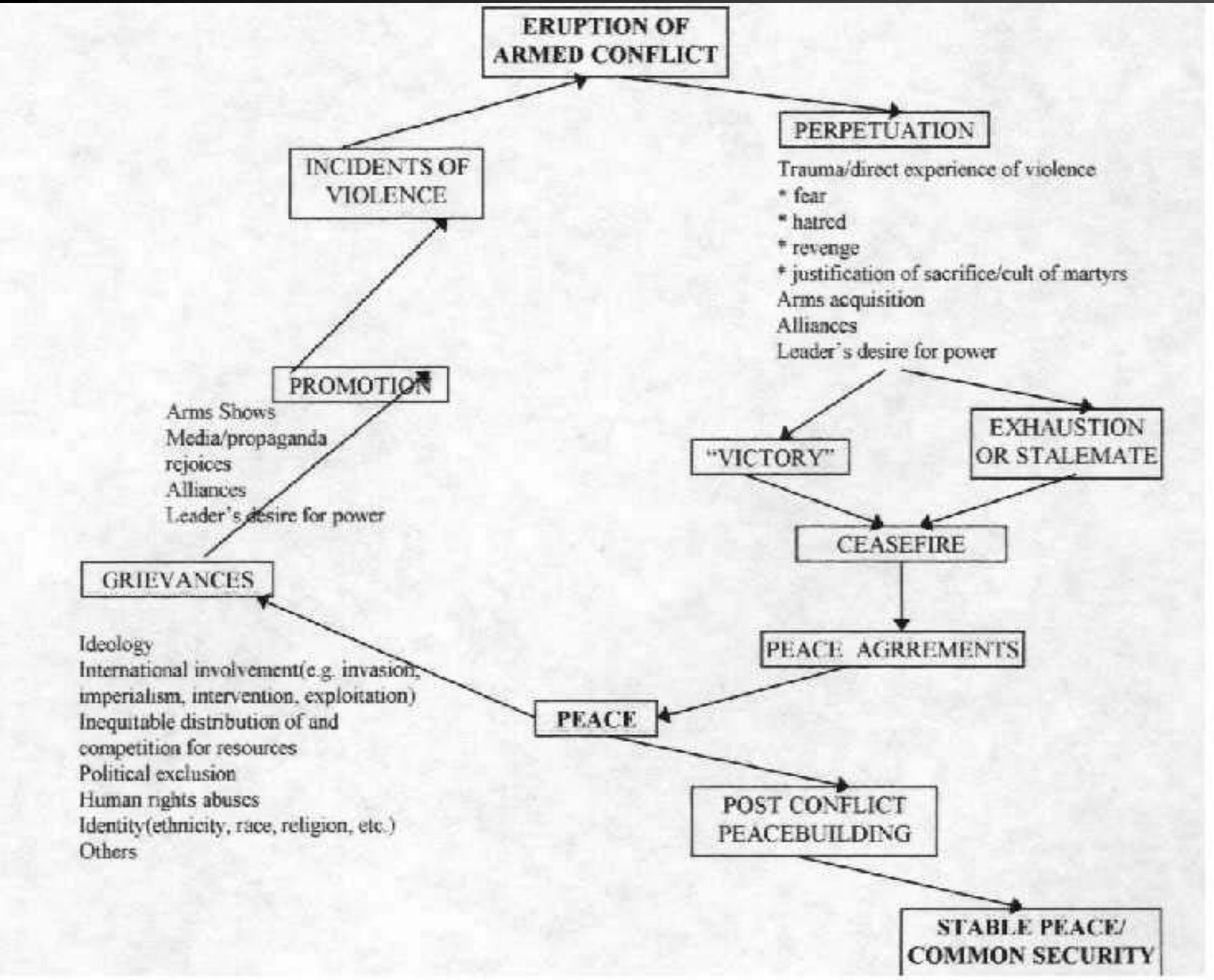
Figure 6.7 Is there a relationship between human development and firearm homicide?



Source: UNDP (2000a) and UN (1998b)

OTHER EFFECTS-WORSENING CONFLICT

- Root causes
  - historical grievances
  - economic deprivation
  - inequitable distribution of resources
  - human rights abuses
  - demagogic leadership
  - absence of democratic process
- Weaponisation undermines stability
  - Small arms prolong and exacerbate conflicts
  - Transformed into armed conflicts that may cross borders.
  - Hamper non-violent conflict resolution peace-building
  - Insecurity to spiralling demand for, and use of, such weapons
  - Santa Barbara



Joanna Santa Barbara in Arya: Croatian Medical Journal: Physicians and Global Security

WOMEN

- Men - Perpetrators, up to 90% of direct victims
- Women and children disproportionate number of non-combatant accounting for more than 35% of these casualties in war situations**
- More vulnerable to secondary effects include the psychological, social and family violence.
- Peace- higher levels of violent crimes, domestic assault, sexual violence, suicides
- ** ICRC Arms Transfers and International Humanitarian Law, Geneva 1997

WOMEN

- Weapons may become a symbol of male power
- Women's perception of security differs-presence of small arms in the household as threatening while many men feel more secure in the presence of a weapon *
- Manufacturers of small arms are increasingly targeting women as potential users of small arms, capitalizing on their need for safety from men, to sell weapons.

- *Cukier, W., M. Anto and A. Kooistra, “Gendered Perspectives on Small Arms Proliferation and Misuse: Effects and Policies” in V.A. Farr and K. Gebre-Wold, eds., Brief 24: *Gender Perspectives on Small Arms and Light Weapons*, p. 25-39. Bonn: BICC, July 2002.

CHILDREN

- AS VICTIM
  - Death
  - Orphaned
  - Amputation
  - Sexual violence

CHILDREN

- **AS VICTIMISERS**

- Ultralight automatic weapons do not require the precision aiming and physical strength
  - Victimisers as victims
    - robbed of their childhoods
    - losing ties to family
    - knowing little else other than war
    - addicted to drugs
    - accustomed to a certain lifestyle
    - numb to violence
    - traumatised by their own nightmares

CHILDREN

“Small children have big dreams. Small arms cause big tragedies. Clearly, the two do not mix.”

And yet, from war zones to inner city streets to suburban classrooms, this combustible blend is wreaking havoc and ruining lives[i].

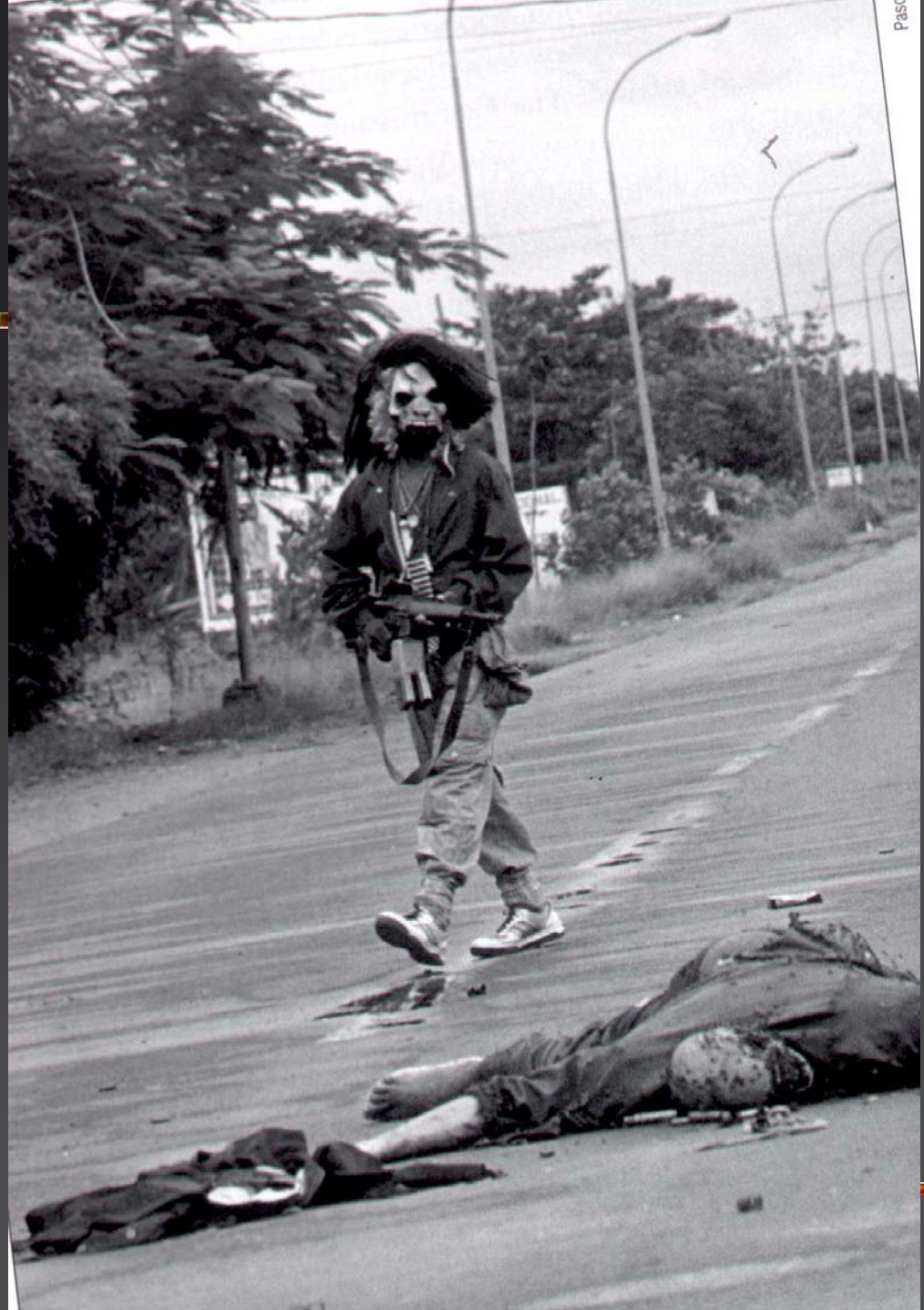
[i] Frechette, Louise. Speech quoted in United Nations Daily Highlights, “Deputy Secretary-General opens exhibit highlighting impact of small arms proliferation on children”, 20 July 1999: http://www.hri.org/news/world/undh/1999/99-07-20.undh.html.

REGIONAL PERSPECTIVES

- AFRICA
  - Liberia Sierra Leone
  - South Africa
- SOUTH AMERICA
  - Brazil
  - Colombia
- CENTRAL AMERICA
  - Costa Rica
  - El Salvador
  - Honduras
- ASIA
- Afghanistan
- CANADA

AFRICA

- Liberia
  - 100 irregular troops
  - AK-47 assault rifles, a few machine guns and some hand grenades (Boutwell and Klare Scientific American)
- Sierra Leone
  - 50,000 lives, 100,000 deliberately injured and mutilated (Boutwell and Klare Scientific American)
- South Africa (Cukier Gun Free South Africa)
  - 25,000 murdered in 1997
  - 15,000 killed 1990-98 in political violence



SOUTH AMERICA

- Brazil (Chapdelaine Cukier, IPPNW)
  - 50,000 murders per year
  - 88% with firearms.
  - Up 320% since 1979
  - Majority of deaths in the 15-19 year age due to external causes.
  - Injuries more common than Deaths
- Colombia
  - 18,000 firearm murders per year
  - 80% of homicides
  - increase of 366%
  - 25% of GDP

CENTRAL AMERICA

Greg Puley, Arias Foundation, Castellanos J. in Goldnick, Muggah and Waszink: Stray Bullets

- Costa Rica
  - per capita income of $2640
- abolished its army in 1948, spared direct effects of the civil wars
  - conduit of weapons to Colombia
  - **1987 and 1998 its firearm murder rate has climbed from 4 to 5.94 per 100,000.**
  - Homicides by small arms has increased from 48%-53%
- Honduras
  - per capita GDP of $660
  - Civil war Nicaragua, Honduras transit point
  - AK 47s could be purchased cheaply (less than $20) and easily along the border.
- **Murder rate is 45-50/100,000, a strong majority of these by firearms.**
- CID/ GALLUP poll May 1998 to February of 1999) crime and violence greatest problem facing Hondurans, far greater than Hurricane Mitch

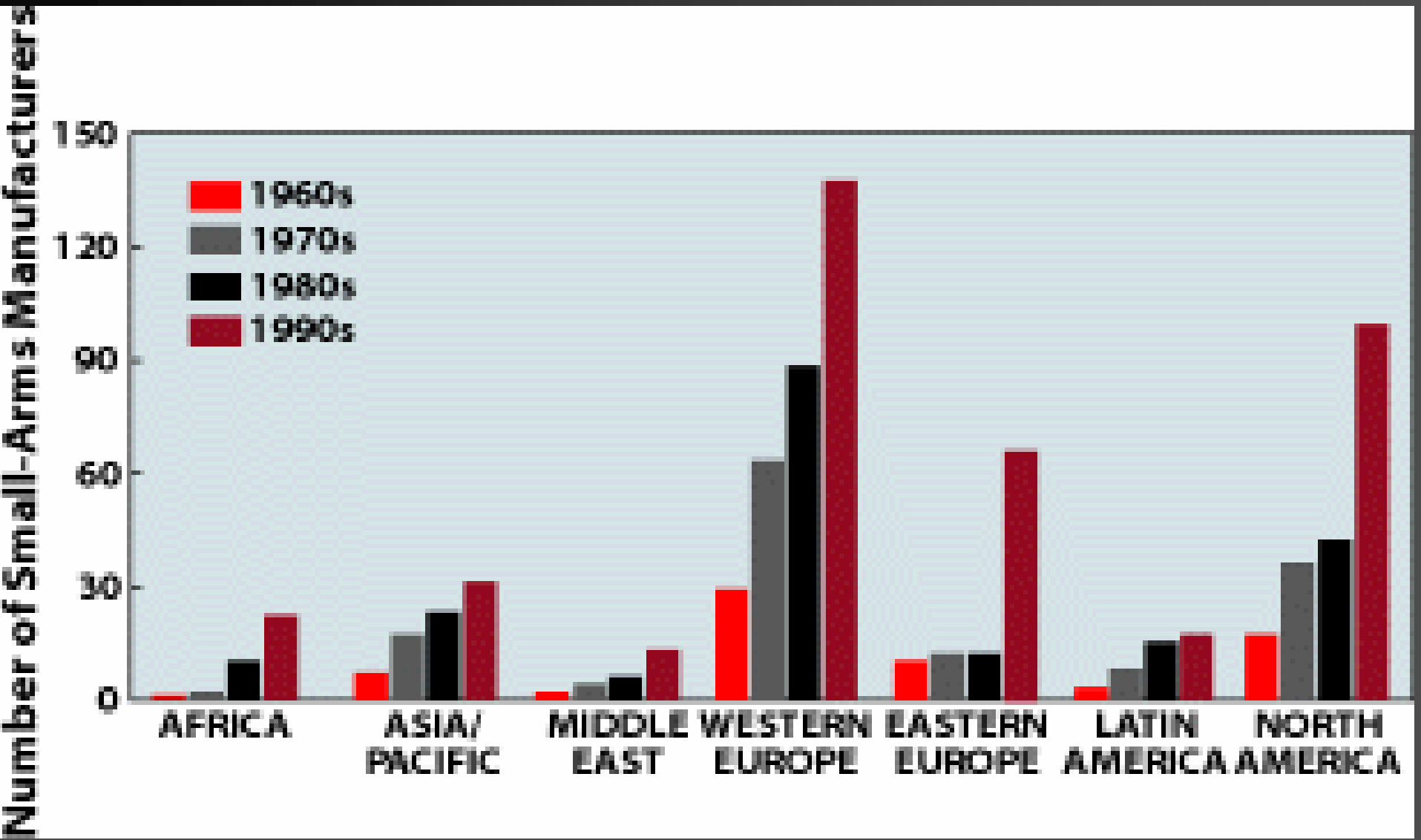
CENTRAL AMERICA

- El Salvador (Cruz, Beltran)
- **murder rate similar to Colombia about 90/100,000**
- over 75% of these are caused by firearms
- over 60% of violent deaths in total are caused by firearms or explosives.
- 7% of 13-19 year old admitted carrying a gun to school
- vast majority of weapons in the country remain pistols and revolvers.

ASIA

- AFGHANISTAN
- Meddings, ICRC *
- Study of Injuries
- 5 years before the region came under uncontested control, 6 month hiatus, then 1.5 years post peace
- Weapons injury declined only 20-40%.
- High rate of non-combat injury
- 80 deaths per 100,000, 50% of those were firearm related.
- Rate of gun deaths actually increased!
- *Meddings, D. “Weapons Injuries During and After Periods of Conflict: Retrospective Analysis”, *British Medical Journal* 315, 1997: 1417-1420.


Hunter
SHOT GUN
QASAM
QASAM
QASAM


Number of Small-Arms Manufacturers
150
120
90
60
30
0
1960s
1970s
1980s
1990s
AFRICA
ASIA/ PACIFIC
MIDDLE EAST
WESTERN EUROPE
EASTERN EUROPE
LATIN AMERICA
NORTH AMERICA

ARMS TRADE: THE BOOMERANG EFFECT

- U.S., $463 million worth of small arms and ammunition to 124 countries in 1998(Boutwell and Klare, Scientific American)
- 30 were at war or experiencing persistent civil violence in 1998
- in 5 U.S. or U.N. soldiers on peacekeeping duty have been fired on or threatened with U.S.-supplied weapons "boomerang" effect

CANADA/US COMPARISONS

Table 1: US/CANADA COMPARISONS

	Canada	US	US/CAN	
Population (1995)	29.5 m	263 m	8.9x	
Estimated Number of All Firearms (1993)	7 m	223 m	31.9x	
Estimated Number of Handguns (1993)	1 m	77 m	77x	
Firearms Per Capita (1995)		.24	.84	3.5X
1995 Firearms Death and Crime Statistics (per 100,000)				
Accidental deaths with Firearms (ER-codes)		0.17	0.5	2.9x
Homicides with Firearms (ER-codes)	.5	6.0	12x	
Suicides with Firearms (ER-codes)	3.1	7.0	2.3x	
Total Deaths from Firearms(ER-codes)	3.8	13.7	3.6X	
Murder (UCR)	2.0	7.6	4.1x	
Murder with Firearms (UCR)	**0.6**	**5.2**	**8.7x**	
Murder with Handguns (UCR)	**0.3**	**4.6**	**15x**	
Murder without Firearms (UCR)	**1.4**	**2.4**	**1.7x**	

- W. Cukier, Firearms Regulation: Canada in International Context, Chronic Diseases in Canada, April, 1998. J. Chronic Diseases in Canada Cukier Vol 19 p25-33 table 1

From Wendy Cukier

Crime Statistics (Rate per 100,000)

Sources: Centre for Justice Statistics; FBI Uniform Crime Reporting Data, Bureau of Justice Statistics,

Statistics Canada Homicide Survey

Crime Statistics (Rate per 100,000)		Canada	US	US/ Can
Total Homicides	2001	1.8	5.5	3.2x
Homicides with Guns	2001	0.6	3.7	5.9x
Homicides without Guns	2001	1.2	2.2	1.8x
Homicides with Handguns*	2001	0.3	2.9	10x
Robberies with Guns	1998	18	63	3.5x
Robberies without Guns	1998	78	102	1.3x

*

From Wendy Cukier

eg. Canadian Experience (Cukier)

- Handguns are restricted weapons and have required registration and special permits since the 1930's. There are 1 million handguns in Canada.
- Military weapons were banned in 1977, 1991 and 1995
- Licensing and registration of rifles and shotguns was introduced in 1995

PREVENTABLE DEATHS?

- WHO estimates homicide rates
- Japan at 0.6 per 100,000
- United States 7 per 100,000
- Brazil 25 per 100,000

PUBLIC HEALTH PRIORITY?

- estimated 200,000 people non-conflict situations Cukier
- 500,000 deaths=one death for every minute tuberculosis (2.9 million), HIV/AIDS (2.3 million) and malaria (1.5-2.7 million). youngest and healthiest of society
- Represent c. one quarter of the 2.3 million deaths due to violence[i],[ii], 42% are suicides, 38% are homicides and 26% are war-related[iii],[iv]

- i] Krug, E.E., ed. *World Report on Violence and Health*Geneva: WHO, 2002:
- http://www5.who.int/violence_injury_prevention/main.cfm?p=0000000675#Appendix%204.
- [ii] United Nations Development Programme (UNDP). *UNDP Human Development Report 2000*. New York: Oxford, 2000: p. 36: http://hdr.undp.org/reports/view_reports.cfm?year=2000.
- [iii] Reza, A., J.A. Mercy, and E.E. Krug. "Epidemiology of Violent Deaths in the World", *Injury Prevention* (7), 2001: 104-111: www.injuryprevention.com.
- [iv] WHO. "Small Arms and Global Health", paper prepared for SALW talks. Geneva: July 2001: http://www5.who.int/violence_injury_prevention/download.cfm?id=0000000158.

A PUBLIC HEALTH APPROACH TO SMALL ARMS

- Based on evidence and science and involve various disciplines of expertise, including epidemiology, but also psychology, sociology, criminology, economics, education and medicine.1
- A harm-reduction approach begins with the premise that the weapons, by their very nature, are designed to kill, harm or threaten other beings in a particular context. Given the accepted utility of legal firearms in society, the goal is not typically a ban, as was the case with antipersonnel mines, but regulation or “harm reduction”.

1 Wendy Cukier

Firearm-related deaths in the United States and 35 other high- and upper-middle-income countries

EG Krug, KE Powell and LL Dahlberg

Background	The Forty-Ninth World Health Assembly recently declared violence a worldwide public health problem. Improved understanding of cross-national differences is useful for identifying risk factors and may facilitate prevention efforts. Few cross-national studies, however, have explored firearm-related deaths. We compared the incidence of firearm-related deaths among 36 countries.
Methods	Health officials in high-income (HI) and upper-middle-income countries (UMI) with populations greater than one million were asked to provide data using ICD-9 codes on firearm-related homicides, suicides, unintentional deaths and deaths of undetermined intent, as well as homicides and suicides for all methods combined. Thirty-six (78%) of the 46 countries provided complete data. We compared age-adjusted rates per 100 000 for each country and pooled rates by income group and geographical location.
Results	During the one-year study period, 88 649 firearm deaths were reported. Overall firearm mortality rates are five to six times higher in HI and UMI countries in the Americas (12.72) than in Europe (2.17), or Oceania (2.57) and 95 times higher than in Asia (0.13). The rate of firearm deaths in the United States (14.24 per 100 000) exceeds that of its economic counterparts (1.76) eightfold and that of UMI countries (9.69) by a factor of 1.5. Suicide and homicide contribute equally to total firearm deaths in the US, but most firearm deaths are suicides (71%) in HI countries and homicides (72%) in UMI countries.
Conclusions	Firearm death rates vary markedly throughout the industrialized world. Further research to identify risk factors associated with these variations may help improve prevention efforts.

Keywords	Firearms, violence, suicide, homicide, cross-cultural comparison, developed countries, epidemiology
Accepted	21 August 1997

In 1990, self-directed and interpersonal violence caused 2.7% of the world's disability adjusted life years (DALY) lost—the numbers of years of life lost from premature death combined with the loss of health from disability.[1] This percentage is projected to increase to 4.2% in 2020. In view of what it described as a dramatic increase in the incidence of intentional injuries, the Forty-Ninth World Health Assembly recently adopted a resolution declaring violence a leading worldwide public health problem and urged member states to assess and develop science-based solutions to the problem.[2]

Violence can be defined as the intentional use of physical force—against another person or against oneself—which results in or has a high likelihood of resulting in injury or death.[3] Much of the previous research conducted on violent deaths has focused on homicide or suicide. In some countries, firearms are the most frequently used weapons in homicide and suicide. This is particularly true in the United States, where 71% of homicides and 61% of suicides are firearm-related.[4] In 1993, a firearm was involved in the deaths of 39 595 people in the US (15.6 per 100 000), making firearm injuries the seventh leading cause of death.[5]

Most of the research on firearm-related deaths has focused on individual countries.[6–11] To our knowledge, only two descriptive epidemiological cross-national studies of firearm mortality have been published; one used the same data source as this paper and was restricted to children <15 years old.[12] and the other was restricted to firearm homicides among males 15–24 years of age.[13] International comparisons of firearm-related

Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Mailstop K60, 4770 Buford Hwy, Atlanta, GA 30341, USA.

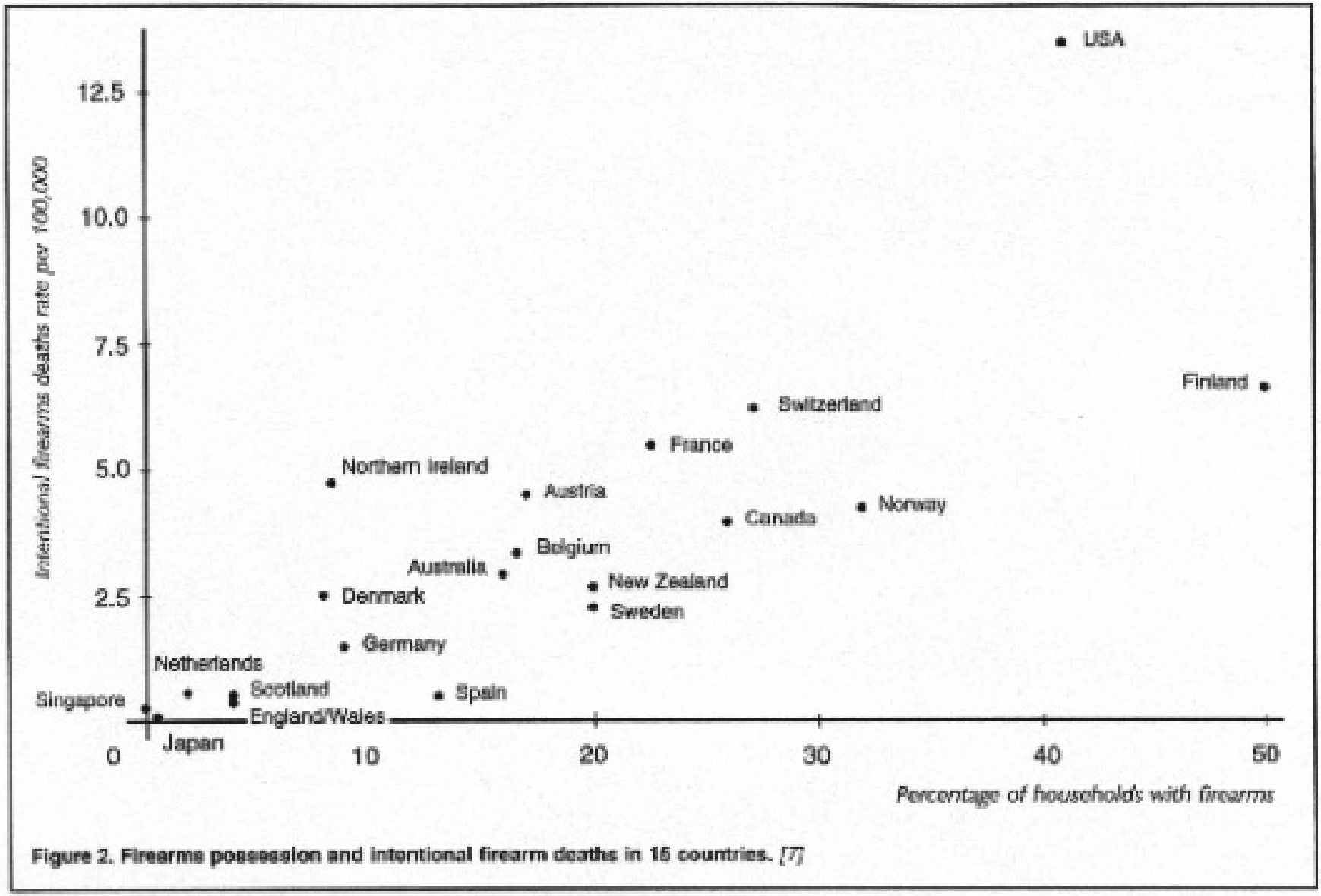
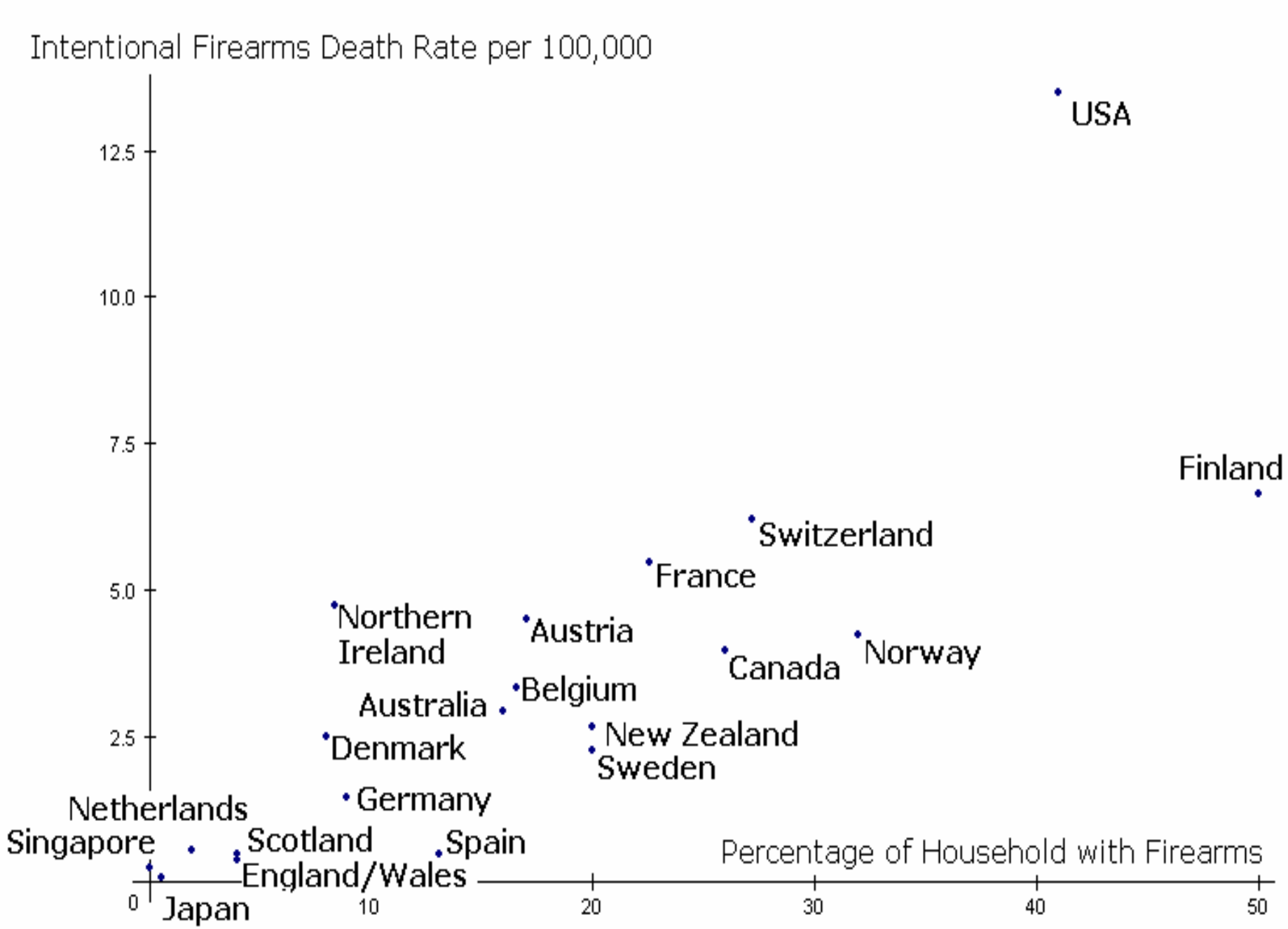


Figure 2. Firearms possession and intentional firearm deaths in 15 countries. [7]

From Wendy Cukier



From Wendy Cukier

Angiosarcoma — Continued

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Rates of Homicide, Suicide, and Firearm-Related Death Among Children — 26 Industrialized Countries

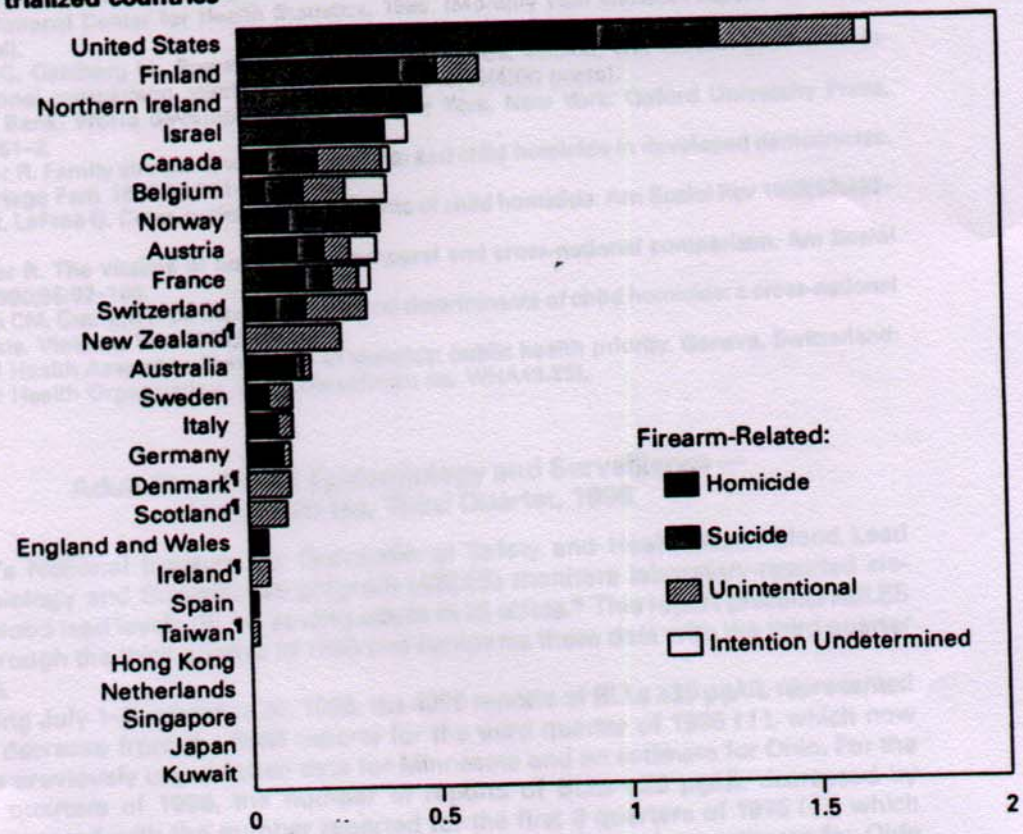
During 1950–1993, the overall annual death rate for U.S. children aged <15 years declined substantially (*1*), primarily reflecting decreases in deaths associated with unintentional injuries, pneumonia, influenza, cancer, and congenital anomalies. However, during the same period, childhood homicide rates tripled, and suicide rates quadrupled (*2*). In 1994, among children aged 1–4 years, homicide was the fourth leading cause of death; among children aged 5–14 years, homicide was the third leading cause of death, and suicide was the sixth (*3*). To compare patterns and the impact of violent deaths among children in the United States and other industrialized countries, CDC analyzed data on childhood homicide, suicide, and firearm-related death in the United States and 25 other industrialized countries for the most recent year for which data were available in each country (*4*). This report presents the findings of this analysis, which indicate that the United States has the highest rates of childhood homicide, suicide, and firearm-related death among industrialized countries.

In the 1994 *World Development Report* (*5*), 208 nations were classified by gross national product; from that list, the United States and all 26 of the other countries in the high-income group and with populations of ≥1 million were selected because of their economic comparability and the likelihood that those countries maintained vital records most accurately. In January and February 1996, the ministry of health or the national statistics institute in each of the 26 countries were asked to provide denominator data and counts by sex and by 5-year age groups for the most recent year data were available for the number of suicides (*International Classification of Diseases, Ninth Revision* [ICD-9], codes E950.0–E959), homicides (E960.0–E969), suicides by firearm (E955.0–E955.4), homicides by firearm (E965.0–E965.4), unintentional deaths caused by firearm (E922.0–E922.9), and firearm-related deaths for which intention was undetermined (E985.0–E985.4); 26 (96%) countries, including the United States, provided complete data*. Twenty (77%) countries provided data for 1993 or 1994; the remaining countries provided data for 1990, 1991, 1992, or 1995. Cause-specific rates

*Complete data were provided by Australia, Austria, Belgium, Canada, Denmark, England and Wales, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Kuwait, Netherlands, New Zealand, Northern Ireland, Norway, Scotland, Singapore, Sweden, Spain, Switzerland, Taiwan, and the United States. In this analysis, Hong Kong, Northern Ireland, and Taiwan are considered as countries.

Homicide, Suicide, and Firearm-Related Deaths — Continued

FIGURE 1. Rates* of firearm-related death† among children aged <15 years — 26 industrialized countries§



*Per 100,000 children aged <15 years and for 1 year during 1990–1995.
†Homicides by firearm (*International Classification of Diseases, Ninth Revision*, codes E965.0–E965.4), suicides by firearm (E955.0–E955.4), unintentional deaths caused by firearm (E922.0–E922.9), and firearm-related deaths for which intention was undetermined (E985.0–E985.4).
§All countries classified in the high-income group with populations ≥1 million (*5*) that provided complete data. In this analysis, Hong Kong, Northern Ireland, and Taiwan are considered as countries.
¶Reported only unintentional firearm-related deaths.

Organization (*10*). Cross-cultural comparisons may identify key factors (e.g., attitudinal, behavioral, educational, socioeconomic, or regulatory) not evident from intranational studies that could assist in the development of new country-specific strategies for preventing such deaths.

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SPECIAL ARTICLE

FIREARM REGULATIONS AND RATES OF SUICIDE

A Comparison of Two Metropolitan Areas

JOHN HENRY SLOAN, M.D., M.P.H., FREDERICK P. RIVARA, M.D., M.P.H., DONALD T. REAY, M.D., JAMES A.J. FERRIS, M.D., M.R.C.PATH., AND ARTHUR L. KELLERMANN, M.D., M.P.H.

Abstract To investigate a possible association between firearm regulations and suicide, we compared the incidence of suicide from 1985 through 1987 in King County, Washington, with that in the Vancouver metropolitan area, British Columbia, where firearm regulations are more restrictive.

The risk of death from suicide was not found to differ significantly between King County and the Vancouver area (relative risk, 0.97; 95 percent confidence interval, 0.87 to 1.09). The rate of suicide by firearms, however, was higher in King County (relative risk, 2.34; 95 percent confidence interval, 1.90 to 2.88), because the rate of suicide by handguns was 5.7 times higher there. The difference in the rates of suicide by firearms was offset by a 1.5-fold higher rate of suicide by other means in the Vancouver area. Persons 15 to 24 years old had a higher suicide rate in King County than in the Vancouver area (relative risk, 1.38; 95 percent confidence interval, 1.02 to 1.86). Virtually all the difference was due to an almost 10-fold higher rate of suicide by handguns in King County.

We conclude that restricting access to handguns might be expected to reduce the suicide rate in persons 15 to 24 years old, but that it probably would not reduce the overall suicide rate. (N Engl J Med 1990; 322:369-73.)

SUICIDE is a major public health problem in the United States. In 1980 nearly 27,000 persons took their own lives, making suicide the 10th most common cause of death overall and the third most common cause among adolescents and young adults.[1] Given that 57 percent of the cases of suicide in the United States involve firearms,[2] much attention has been focused on the relation between the availability of firearms and the rates of suicide in communities. Citing the frequently impulsive nature of suicidal urges and the high case-fatality rate from injuries inflicted by firearms as compared with other methods of suicide, some persons have urged gun control as a means of reducing suicide rates.[3,4]

One method of evaluating the potential effect of gun-control laws on suicide rates in the United States is through comparisons with the situation in other countries. However, such comparisons of suicide rates and degrees of gun control are usually flawed because of the presence of many differing socioeconomic, cultural, and behavioral factors.

We studied the relation between firearm regulations

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Supported by a grant (CCRO-02570-02) from the Centers for Disease Control.

International correlations between gun ownership and rates of homicide and suicide

Martin Killias, Dr. iur., Lic. phil.

Objective: To examine international correlations between reported rates of household gun ownership and rates of homicide and suicide with a gun.
Design: Survey.
Population: People who responded to a telephone survey conducted by the 1989 International Crime Survey in 11 European countries, Australia, Canada and the United States.
Results: Positive correlations were obtained between the rates of household gun ownership and the national rates of homicide and suicide as well as the proportions of homicides and suicides committed with a gun. There was no negative correlation between the rates of ownership and the rates of homicide and suicide committed by other means; this indicated that the other means were not used to "compensate" for the absence of guns in countries with a lower rate of gun ownership.
Conclusion: Larger studies are needed to examine more closely possible confounding factors such as the national tendency toward violent solutions, and more information on the type and availability of guns will be helpful in future studies. Nevertheless, the correlations detected in this study suggest that the presence of a gun in the home increases the likelihood of homicide or suicide.

Objectif : Examiner les corrélations internationales entre le nombre rapporté d'armes à feu par ménage et les taux d'homicide et de suicide au moyen d'une arme à feu.
Conception : Sondage.
Population : Personnes qui ont répondu à un sondage téléphonique dans le cadre de l'enquête internationale sur la criminalité de 1989 dans 11 pays européens, l'Australie, le Canada et les États-Unis.
Résultats : Des corrélations positives ont été établies entre le nombre d'armes à feu par ménage et les taux nationaux d'homicide et de suicide ainsi que les proportions d'homicides et de suicides commis avec une arme à feu. Il n'y avait aucune corrélation négative entre le nombre d'armes à feu et les taux d'homicide et de suicide commis par d'autres moyens, cela indique que les autres moyens ne sont pas utilisés pour «compenser» l'absence d'arme à feu dans les pays où le nombre d'armes à feu est moins élevé.
Conclusion : Des études plus importantes sont nécessaires pour examiner le plus étroitement possible les facteurs confusionnels, comme une tendance nationale envers les solutions violentes, de plus, un plus grand nombre de renseignements sur le type d'armes à feu et l'accès à celles-ci seront utiles dans les études ultérieures. Les corrélations décelées dans cette étude suggèrent néanmoins que la présence d'une arme à feu au domicile augmente la probabilité d'homicide ou de suicide.

Reprint requests to: Professor Martin Killias, Faculté de droit, Université de Lausanne, CH-1015 Lausanne, Switzerland

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Injuries and Deaths Due to Firearms in the Home

Arthur L. Kellermann, MD, MPH, Grant Somes, PhD, Frederick P. Rivara, MD, MPH, Roberta K. Lee, RN, PhD, and Joyce G. Banton, MS

Objectives: **Determine the relative frequency with which guns in the home are used to injure or kill in self-defense, compared with the number of times these weapons are involved in an unintentional injury, suicide attempt, or criminal assault or homicide.**

Methods: **We reviewed the police, medical examiner, emergency medical service, emergency department, and hospital records of all fatal and nonfatal shootings in three U.S. cities: Memphis, Tennessee; Seattle, Washington; and Galveston, Texas.**

Results: **During the study interval (12 months in Memphis, 18 months in Seattle, and Galveston) 626 shootings occurred in or around a residence. This total included 54 unintentional shootings, 118 attempted or completed suicides, and 438 assaults/homicides. Thirteen shootings were legally justifiable or an act of self-defense, including three that involved law enforcement officers acting in the line of duty. For every time a gun in the home was used in a self-defense or legally justifiable shooting, there were four unintentional shootings, seven criminal assaults or homicides, and 11 attempted or completed suicides.**

Conclusions: **Guns kept in homes are more likely to be involved in a fatal or nonfatal accidental shooting, criminal assault, or suicide attempt than to be used to injure or kill in self-defense.**

Key Words: **Injury, Firearms, Epidemiology.**

Forty percent of American homes contain one or more firearms.[1] People own guns for many reasons, including hunting, target shooting, and collecting. Guns are also owned, at least in part, for self-defense.[2,3] Fear of crime is widespread, and many consider keeping a gun in the home a reasonable precaution.[2–7] Handgun owners are more likely than owners of rifles or shotguns to cite "self-defense" as their most important reason for owning a gun.[2,6] People who keep guns for self-defense are more likely to keep at least one gun loaded and unlocked than people who keep guns for other purposes.[7]

The belief that keeping a gun provides protection from crime is widespread, but the wisdom of this strategy is far from clear.[8] The gun that is kept loaded and readily available for protection may also be reached by a curious child, an

volved in an unintentional shooting, a criminal assault, or a suicide attempt.

PATIENTS AND METHODS

The data used in this analysis were drawn from a population-based study of fatal and nonfatal gunshot injuries in three U.S. cities: Memphis, Tennessee; Seattle, Washington; and Galveston, Texas.[13] Reports from police, medical examiners, and ambulance crews were linked with records from hospital emergency departments, trauma centers, and community hospitals to identify every gunshot injury that was severe enough to prompt the victim to seek emergency medical treatment. A detailed description of the methodology for case identification is published elsewhere.[13]

Flawed Gun Policy Research Could Endanger Public Safety

Daniel W. Webster, ScD, MPH, Jon S. Vernick, JD, MPH, Jens Ludwig, PhD, and Kathleen J. Lester

Introduction

One of the most important recent trends in firearm policy in the United States is the enactment of laws making it easier for citizens to legally carry concealed guns in public. Knowing the effect of these laws on the public's health is critical for both health advocates and policymakers. A recent study by John Lott, Jr. and David Mustard concludes that these laws were responsible for substantial reductions in violent crime.[1] Even before its publication in 1997, the study received extensive and largely uncritical media attention. Proponents of liberalized gun carrying laws have attempted to use the study to influence policymakers. We find Lott and Mustard's conclusions unsupportable because of serious flaws in the study, most of which bias the results toward finding crime-reducing effects.

More than half of the states now have some form of so-called shall-issue law governing the carrying of concealed firearms. Under these laws, local authorities "shall" issue a permit to any citizen who passes a criminal history background check and meets other objective criteria (such as a minimum age requirement). By comparison, many states still have "may-issue" concealed-carry laws. As the name implies, under may-issue laws, state officials have considerable discretion in deciding whether to grant a permit, often requiring the applicant to demonstrate some special need to carry a concealed gun. The amount of discretion varies depending on the specific language of the state law. This discretion can also create substantial within-state variation in the issuance of [illegible] fewer permits issued in urban areas.

Both proponents and opponents of shall-issue laws believe that the laws have important implications for public health. Proponents claim that arming citizens enhances public safety by enabling potential victims to protect themselves and acting as a deterrent against violent crime.[2,3] Opponents claim that an increase in the number of people carrying guns will increase the lethality of spontaneous confrontations[4] and spur criminals to resort to more lethal means during street robberies.[5]

Research on the effects of increased gun carrying by civilians is incomplete, but the weight of evidence suggests that more gun carrying leads to more deaths. Although criminals are sometimes deterred from victimizing someone they believe to be armed, they are also more likely to carry guns to protect themselves against possibly armed victims.[6] This may explain why robbers are more likely to use a gun in cities where gun ownership is higher, and why robbery homicide rates are higher in those cities.[5] McDowall, Loftin, and Wiersema studied the effects of shall-issue legislation in five cities in three states.[7] They found that shall-issue laws were associated with significant increases in firearm homicides in three of the five cities. They also found that Florida's shall-issue law was associated with an increase in homicides for the state

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Editor's Note. See related editorial by Morgenstern (p 899), comment by Kellermann (p 910), and article by Cummings et al. (p 974) in this issue.

TREATMENT-SUPPLY AND DEMAND

- primary, secondary or tertiary prevention
- harm reduction
- host, vector and agent
- supply and demand

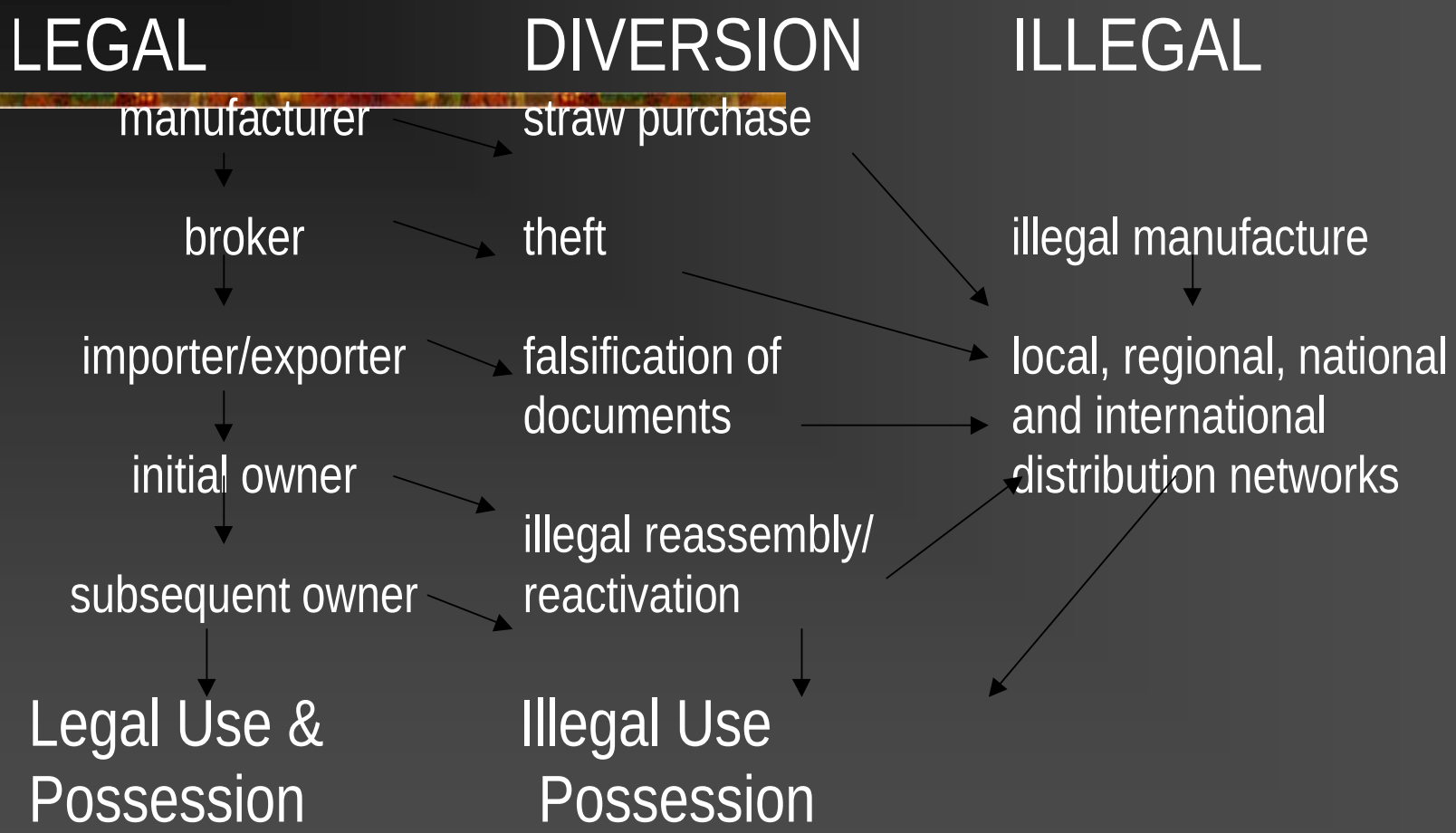
SUPPLY OF ARMS

- **Licit Supply**
- Legally Manufactured and Traded
- - wholesaler
- - brokers
- - dealer
- - initial owner
- (Individuals, Organizations, States)
- - secondary owner
- **Gray**
  - "Leakage" through
  - - "loss"
  - - theft
  - Diversion
  - - illegal sales
  - - false documentation
- - illegal trade/export/
  - import

- Illicit Supply
- Illegally Manufactured and Traded
- local, regional and international distribution networks

From Wendy Cukier

Where do the illegal guns come from?



From Wendy Cukier

Virtually Every Illegal Firearm Begins As A Legal Firearm

- Legal firearms are sometimes misused by their owners (whether civilians or state officials)
- Legal firearms are stolen or illegally sold from civilians, dealers, state stockpiles
- Illegal firearms are smuggled in from the other countries

SUPPLY SIDE

- INTERNATIONAL
  - TRANSPARENCY
  - UN
- REGIONAL APPROACHES
  - EUROPEAN
  - OAS
  - ECOWAS
- INTERNATIONAL LAW
  - HUMANITARIAN LAW
- CODES OF CONDUCT
- POST CONFLICT: BUYBACK SCHEMES AND AMNESTIES

ARIAS FOUNDATION

- Major parts of these criteria for arms exports include: -**obligations arising under decisions of the United Nations Security Council**-
- **obligations arising under international treaties** by which the Contracting Parties are bound; -**transfers** of arms, the use of which is **prohibited under international humanitarian law** because they are incapable of distinguishing between combatants and civilians or are of a nature to cause superfluous injury or unnecessary suffering and
- -obligations arising under **customary international law.**

- Contracting Parties shall not license international transfers of arms in circumstances in which there exists a reasonable risk that the arms would:
- 1.be **used in violation of the prohibitions on: the threat or use of force; threat to the peace**; breach of the peace or acts of aggression; or unlawful interference in the internal affairs of another State;
- 2.be **used to commit serious violations of human rights**;
- 3.be used to commit serious violations of international humanitarian law applicable in international or non-international armed conflict;
- 4.be **used to commit acts of genocide or crimes against humanity**;
- 5.be diverted and used to commit any of the acts referred to in the preceding sub-paragraphs.

- Contracting Parties shall avoid licensing international transfers of arms in circumstances in which there are reasonable grounds for considering that the transfer in question would:
- 1. be used for or to facilitate the commission of violent crimes;
- 2. **undermine have an adverse effect on political stability, and regional security or economic development**; or
- 3. be diverted and used in a manner contrary to the preceding sub-paragraphs.

- Contracting Parties are also obliged to **modify their national laws in such a fashion and to file mandatory annual reports** to an international registry of international arms transfers on all aspects relating to arms transfers from or through their jurisdiction.

DEMAND SIDE- RISK FACTORS FOR VIOLENCE

- Socioeconomic factors
- poverty
- rates of broken homes
- alcoholism
- history of violence
- illicit drug use
- predictors of individual and group violence both in first and third world settings
-
- **Yet research indicates that societies with these problems and without guns do not have the same rate of death and injury**

DEMAND SIDE

- education and awareness-building to reverse cultures of violence and promote cultures of peace;
- creating international norms and cultural attitudes against the possession of guns
- programs to reintegrate former combatants into local society and provide real economic opportunities;
- link small arms control and collection programs specifically to development and anti-poverty measures.

DEMAND SIDE

- security sector reform, weapons collection and destruction, post-conflict re-construction and reintegration, community engagement and awareness strategies, cultural reorientation and education projects, long-term development initiatives, government reform (transparency, accountability and effectiveness), and community-based programs to build confidence through social/economic growth and income generation

MOZAMBIQUE ARTWORK

Sculptures created from destroyed weapons in **Mozambique**

From Weapons to Art — Armes Transformeés en art

From Weapons to Art — Armes Transformeés en art

A Component Summary of a Project to Transform 'Arms into Ploughshares'

There are five (5) distinguishable components of the Tools for Arms Project:

A/ Weapons collection
B/ Destruction of weapons
C/ Exchange of incentives
D/ Civic education
E/ Transformation into artwork.

IANSA: Global network of 550+ NGOs in 100 countries

- Gun control
- Human rights
- Women's Development
- Faith-based
- Humanitarian
- Peace
- Welfare
- Public health
- Trade unions
- Research
- Legal
- Children's
- Victims

	Global	Regional	National	Local
Voluntary agreements	PoA UN Principles	EU Code of conduct, Bamako Declaration	National commissions	Local amnesties
Legislation	Firearms Protocol	OAS Convention ECOWAS Mor'm	Brazilian gun law	Chicago handgun ban
(Proposed)	Marking & tracing Brokering Convention ATT	EU Code of Conduct	Guatemalan gun law	Malawi local police reform
Research	WHO, SAS, HDC, UNiFem, GRIP	UNLiReC, ISS, GRIP, Szeged	ISER Brazil, FOSDA, WINAD	Bogota & Cali study
Info sharing	IANSA SAS	OSCE Document on best practices SASA-Net	HELP Network National points of contact	
Weapons coll / destruc	UNDP	SEESAC Australian aid > Pacific	Cambodian Flames of peace	Mendoza Argentina RJ Brazil
Court action	Prosecution of brokers	Opposing UK gun lobby in ECHR	US Lawsuits Canadian defence of gun law	California towns
Enforcement measures	Marking	SADC police cooperation	Police reform Kenya	Viva Rio database
Awareness	Control Arms WHO campaign	UNLiReC West African Council of Churches	Armas ni de juguete - ElSalv Media campaign	Gun Free schools Sth Africa

Rebecca Peters IANS from KKC

Points of action

- Regulation of market
- Who can make, import, sell, buy, own, possess, carry guns
- To whom guns can be sold / given
- Which guns can be made, imported, sold, bought, owned
- How many guns can be made, sold, bought, owned
- Where guns can be sold, carried, stored

IANSA STRATEGY

- take measures to counter demand;
- improve data collection and information sharing;
- prevent and combat illicit transfers through developing legally binding instruments on marking and brokering;
- control legal transfers between states to reduce the risk that weapons will be used in human rights violations;
- control the availability,
-

IANSA STRATEGY

- use and storage of small arms within states, including strong domestic firearms regulation and a ban on civilian possession of military weapons;
- collect and destroy surplus weapons from both civil society and regions of conflict;
- increase transparency/accountability;
- enhance resources to support effective implementation;
- support research and information sharing; and improve coordination between government and civil society at all levels

Types of initiatives

- Voluntary agreements
- Embargoes
- Legislation
- Research
- Information sharing
- Weapons collection / destruction
- Enforcement measures
- Security sector reform
- Prosecution, Litigation
- Awareness, confidence
- Monitoring all the above
- Funding all the above

SCOPE FOR RESEARCH

- general intro: population/economy
  - direct effects: death, injury, violent crime
  - indirect effects: armed conflict, forced migration, organized crime,
  - effects on specific populations: by gender, ethnicity, region, age, under 15, 15-24 etc.
  - economic costs-direct and indirect, ways of measuring
  - firearms ownership (% of households, types of guns. What's allowed by law?

SCOPE FOR RESEARCH

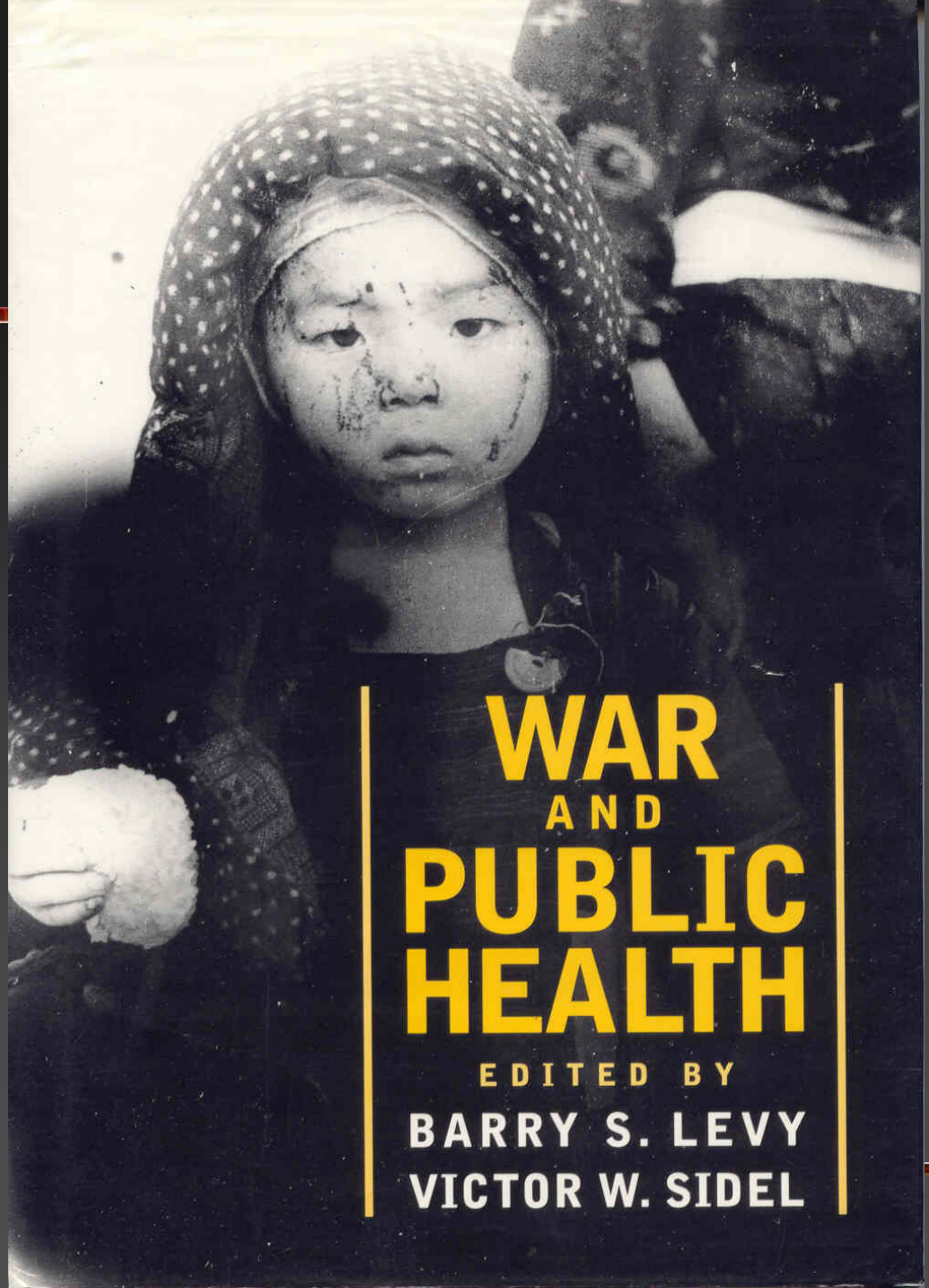
- - firearms regulations (what's illegal), and ability to enforce.
  (Prohibitions, penalties, registration, safe storage...)
  weapons recovered in crime-ie. specific type of weapon-whether
  AK-47, handguns or shotguns are actually associated with most homicides?
  Overall homicide rates and suicide rates and proportion of each caused by small arms.
  causes of demand - main reasons why people own firearms

SCOPE FOR RESEARCH

- Production and trade
  - domestic and international sources
  - legal and illegal sources

  - National role in exports and brokering

  - National role in regional and international efforts (Vienna Convention,
  UN Conference on Illicit Trade in Small Arms..., etc.)



WAR AND PUBLIC HEALTH

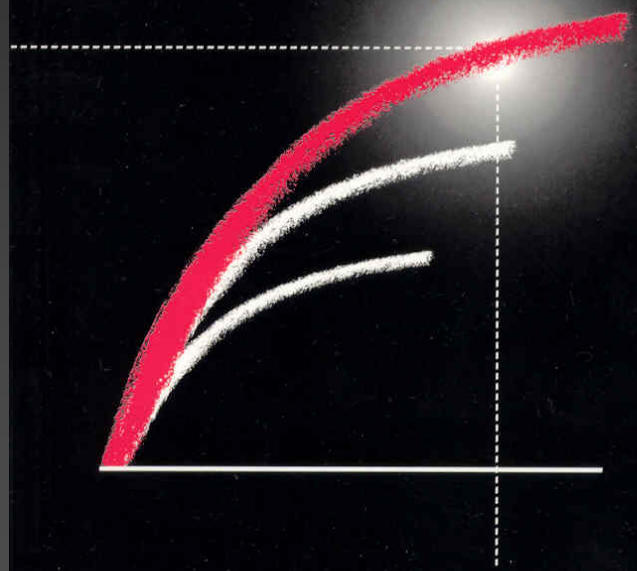
EDITED BY

BARRY S. LEVY

VICTOR W. SIDEL

Small Arms Survey 2001

Profiling the Problem



OXFORD

A Project
of the Graduate Institute
of International Studies, Geneva

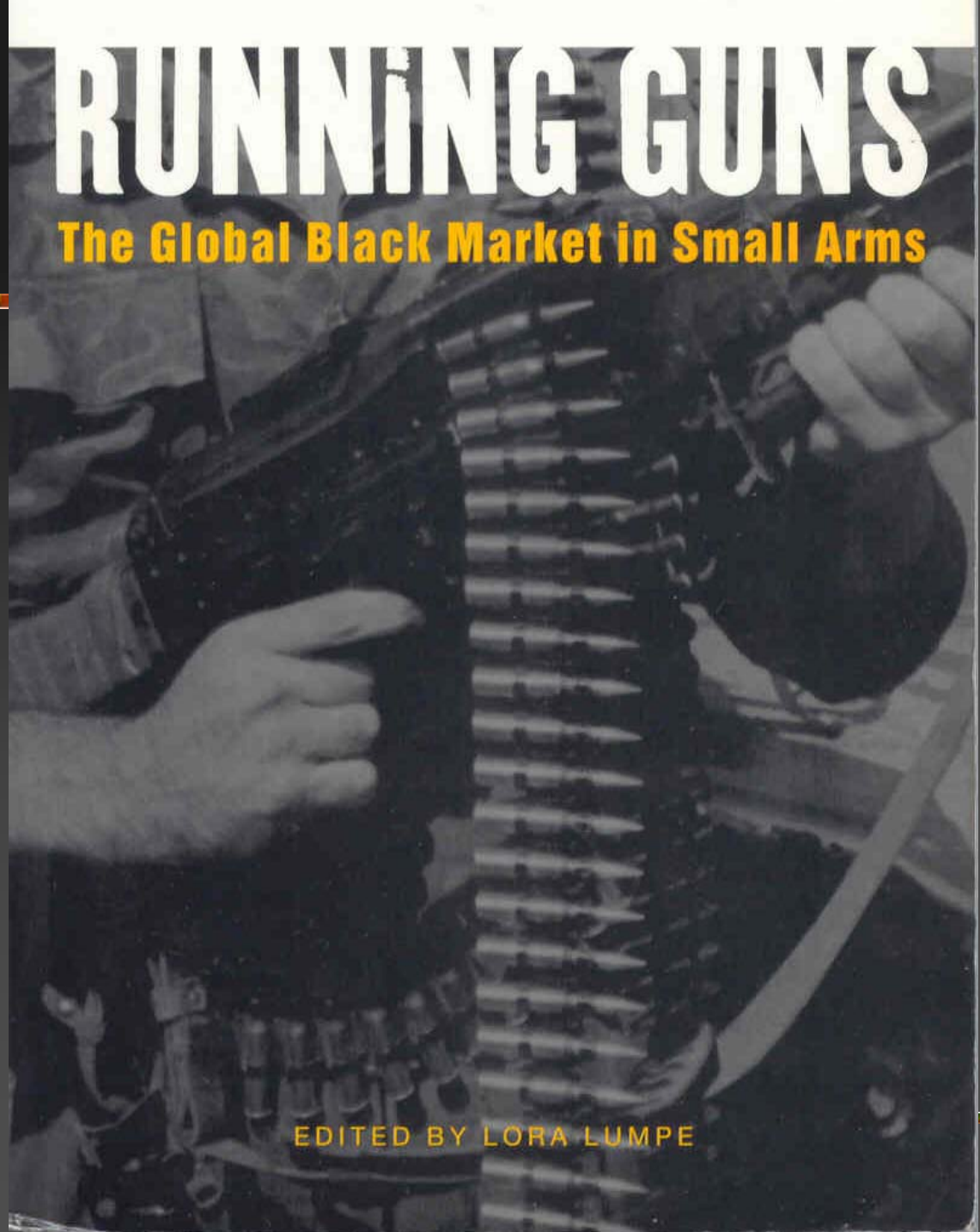
La disponibilité des armes

et la situation des civils dans les conflits armés

Étude présentée par le
Comité international de la Croix-Rouge

RUNNING GUNS

The Global Black Market in Small Arms



EDITED BY LORA LUMPE

FINAL REPORT

Executive Summary
Conference Papers

Aiming for Prevention:

International Medical Conference on

Small Arms, Gun Violence and Injury

Research, Advocacy, and Action for Health

September 28 - 30, 2001
Paasitorni Conference Centre, Helsinki, Finland

Hosted by International Physicians for the Prevention of Nuclear War IPPNW www.ippnw.org
Finnish affiliate Physicians for Social Responsibility PSR-Finland www.kaapeli.fi/~lsv

UN General Assembly

NEIL ARYA, Physicians for Global Survival, Canada: For many reasons, this conference has not focused on the effects of small arms in developed nations that are not at war. The adverse health effects of small arms are well known to emergency room physicians, trauma surgeons, psychiatrists, paediatricians and family doctors. **A physician is not concerned with whether the shooting was a suicide, accident or homicide, whether the perpetrator was a gang member, a soldier or a law-abiding gun owner. What matters to us is whether the patient will survive and if so, what his or her future health will be. Ultimately though, what matters to physicians is whether this ongoing tragedy can be prevented.**

Every year since 1972, over 30,000 people have died from gunshot in the United States. Guns there are the leading cause of death in the 15-24 age category, and in Canada the third leading cause. The direct cost of deaths and injuries due to firearms in the United States has been calculated as being $14,000 and $38,000, respectively. The total cost of firearm-related problems has been estimated at $495 per person in the United States. These tolls –- human and financial -– are why major physicians' organizations recognize gun injuries as a major public health problem. In the United States, all large and highly respected medical organizations, including the American Medical Association, have been strong advocates for stricter gun control. I urge you, both as a professional and as a private citizen, to do what you can to reduce the toll of the global epidemic of death and injury from small arms. http://www.un.org/News/Press/docs/2001/DC2792.doc.htm

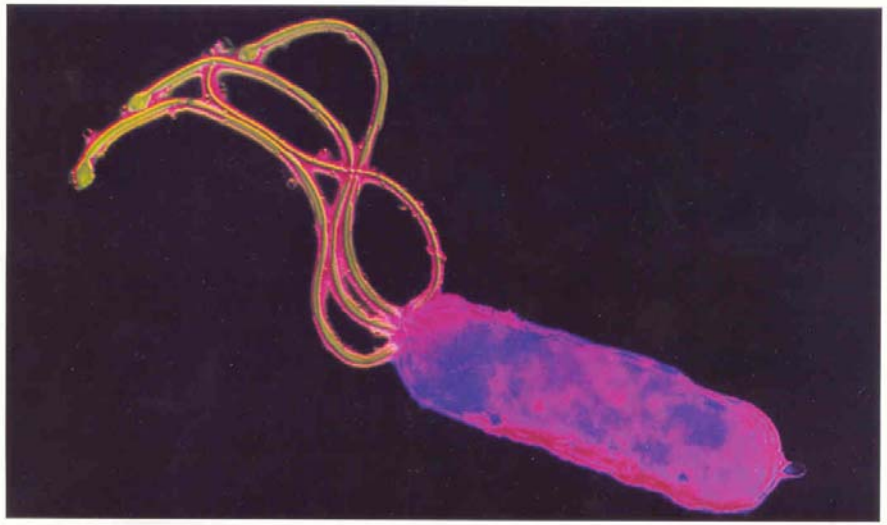
NRA Responds

- Neil Arya of Physicians for Global Survival in Canada asserted that physicians don't care where a shooting was the result of a suicide, accident or homicide, or whether the shooter was a gangster, a soldier, or a law-abiding gun owner. In other words, his group sees no distinction between a gangster murdering a robbery victim, a victim saving her life by shooting the gangster, a Nazi soldier shooting a Jew, and an American soldier shooting a Nazi soldier.
- http://www.nationalreview.com/kopel/kopelprint080301.html

27 April 2002

BMJ

324:987–1046 No 7344 27 APRIL 2002 *Clinical research* ISSN 0959-8138



How best to test for *H pylori*?

Breath testing is sometimes enough p999, p1012

bmj.com

investigated. Valproate or carbamazepine should be

6 Cookson JC. Lithium: balancing risks and benefits. *Br J Psychiatr* 1997;171:120-4.

Confronting the small arms pandemic

Unrestricted access should be viewed as a public health disaster

Physicians throughout the world bear witness to the terrible consequences of small arms. But do we truly understand the impact and the epidemiology of the small arms pandemic, and can we devise effective strategies for prevention as we have for other major public health issues? The capacity for collecting consistent, reliable, and relevant data is limited by various cultural, economic, infrastructural, and logistic factors even in developed countries not at war. Nevertheless, we have some solid data on the size of the problem and indicators suggestive of possible solutions.

The United States, for instance, has over 28 000 deaths a year from small arms—accidents, suicides, and homicides—the highest rate in the developed world.[1] In that country firearms are the leading cause of death among 15-24 year olds, slightly ahead of vehicle crashes, and the third leading cause of death in those aged under 15.[2] While the US murder rate without guns is roughly equivalent to that of Canada (1.3 times), its murder rate with handguns is 15 times the Canadian rate.[3] Countries with similar cultural, economic, and ethnic make up but with different gun possession rates also have widely differing firearm death rates, roughly correlating with the percentage of households with guns.[4] For example, Britain's firearm death rate is about 0.3 in 100 000 while the US rate is 10.6.[5] Households with firearms are three times more likely to have murders and five times more likely to have suicides (due to all causes) than similar households without firearms.[6,7] These data suggest that firearm deaths may be preventable by controlling the supply and possession of guns.

Data from the developing world are less clear, especially in conflict situations. In many post-conflict countries in Central America and Africa only a tiny percentage of guns are registered, estimates of the total in circulation vary widely, and reporting of casualties may be affected by fear of the authorities. Nevertheless, small arms were unarguably the primary cause of death in wars in the 1990s, accounting for about 300 000 deaths a year.[8] Together with the estimated 200 000 people who die each year from firearms in non-conflict situations these deaths represent about a quarter of the 1.8-2.3 million deaths due to violence in a typical year in the 1990s.[9,10] The victims are often the youngest and healthiest members of society. Male combatants are the major perpetrators and direct victims of small arms violence, but in many conflicts non-combatants—disproportionately women and children—account for a large proportion of direct casualties and may also suffer the psychological and social burdens of increased domestic violence.

Impacts have also been evaluated in economic terms. Small arms purchases account for perhaps US$10bn (£6.9bn; €11bn) each year, a relatively small proportion of the roughly $850bn spent on military forces annually worldwide.[11] Yet the economic consequences can be far greater. In Colombia violence primarily related to small arms has been calculated as costing up to 25% of the country's gross domestic product (OV Vieira, Workshop on International Small Arms/Firearms Injury Surveillance and Research, Toronto, 1998).

Unless weapons are removed when hostilities end, casualties may not be substantially reduced. In the

mid-1990s in Afghanistan, for example, Meddings found a decline in the rate of weapons related injury, before and after a particular region came under uncontested control, of only 20-40% when weapons remained in circulation.[12]

Supply side strategies such as buyback and amnesty schemes have been tried in countries such as the United Kingdom and Australia. In response to massacres at Dunblane and Port Arthur, those countries tightened regulations, the former banning handguns and the latter semiautomatic rifles. British citizens voluntarily turned in 250 000 weapons, while the Australian buyout programme netted 750 000. Law enforcement officials in both countries affirm the effectiveness of these measures in reducing damage by these weapons.

Many argue that a supply side approach alone is inadequate, and various demand side measures have been proposed. Awareness building and educational programmes to promote cultures of peace; international norms that stigmatise the possession of guns; and programmes to reintegrate former combatants into society and to provide real economic opportunities have all been postulated to reduce harm from small arms, but are more difficult subjects of study. In Mozambique a unique project, Tools for Arms, combines supply and demand side approaches. The buyback of weapons, the metal of which is turned into art, provides compensation for gun owners, giving them new economic opportunities.

International humanitarian law may be applied to restrict weapons that cause damage disproportionate to war aims. Whole classes of weapons could be banned from civilian possession, just as landmines and other indiscriminately harmful weapons have been banned from military and civilian use. Although it seems clear that restrictions on the possession of weapons are necessary to prevent harm due to small arms, such restrictions are fiercely opposed by highly organised, wealthy, and influential groups such as America's National Rifle Association. The failure to reach meaningful agreement to control illegal manufacture and trafficking in small arms at the recent United Nations conference on the illicit trade in small arms and light weapons was partly the result of the lobbying of these groups.

Public health models could be used to evaluate the effectiveness of each preventive approach. International Physicians for the Prevention of Nuclear War (IPPNW) has used the public health paradigm to call for the abolition of nuclear weapons and to support the global ban on landmines. With the convening of an international medical conference on small arms last autumn in Helsinki, IPPNW announced its intent to campaign for policies that can reduce firearms related injuries. The conference drew more than 200 participants—physicians, researchers, social scientists, peace activists, representatives of governments and international agencies, and students—from six continents to address gaps in our knowledge, propose areas for research, and ponder educational and advocacy strategies.

The next steps will be to determine data on which to base recommendations for policy change and community action; standardise databases and collection methods across the world; heighten awareness about the public health and social consequences of small arms among local, national, and international policy makers; and inform professional colleagues, students, and the public about the multiple causes and the devastating consequences of small arms violence.

Neil Arya *family doctor and president of Physicians for Global Survival*

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(neilarya@hotmail.com)

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Health care and the European Union

BMJ Responses

- **Electronic letters published:**

- **Arya's errors**
  - Sean F Oberle (6 May 2002)
- **Gun crime and gun ownership**
  - Nigel R Clay (10 May 2002)
- **Ropes and carving knives to be banned in Australia**
  - Roger KA Allen (13 May 2002)
- **A Political or Public Health Discussion?**
  - Neil Arya (22 May 2002)
- **Gun control and a better world.**
  - Roger KA Allen (23 May 2002)

BMJ Response

Arya's errors 6 May 2002

- Sean F Oberle, n/a
  Falls Church VA 22043
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- Dr. Neil Arya's most egregious error was his statement, "In that country [the USA] firearms are the leading cause of death among 15-24 year olds, slightly ahead of vehicle crashes, and the third leading cause of death in those aged under 15." Neither claim is true.

- In the last year for which comprehensive data are available (1999), for 15-24 year-olds, firearm deaths (6,795) were 31.3% lower than motor vehicle accident deaths (9,893). In only three years in the early 1990s (1992-1994) did firearm deaths exceed vehicle crash deaths for this age group, and since then, firearm death have fallen precipitously – down 41% from its high rate of 30.60 per 100,000 in 1993 to 17.99 per 100,000 in 1999 (see chart below). Indicators are that 2000 will show similar decreases once more detailed data become available from the Centers for Disease Control and Prevention (CDC) – the number of firearm deaths for the population as a whole continued the seven year decline in 2000, so it is reasonable to expect that the decline also occurred in this age group.

- As for the leading causes of death for those under 15, according to CDC data, firearm deaths are not second; they are eighteenth. In 1999, there were 489 firearm deaths among children 0-14 (all intents: homicide, suicide and accidental). The seventeen more frequent causes of death were: Congenital anomalies: 6,930; short gestation: 4,392; SIDS: 2,648; motor vehicle accidents: 2,298; malignant neoplasm: 1,430; maternal pregnancy complications: 1,399; respiratory distress: 1,110; placenta cord membranes: 1,025; drowning: 958; suffocation: 981; fire/burn: 680; bacterial sepsis: 691; circulatory system disease: 667; atelectasis: 647; influenza/pneumonia: 543; chronic respiratory disease: 529; heart disease: 490 (Source: source: http://webapp.cdc.gov/sasweb/ncipc/leadcaus10.html).

- Deaths from guns and vehicle accidents ages 15-25, 1990-1999 (rates per 100,000 in parentheses)

- Firearm Vehicle Accidents 1990 9,542 (25.86) 12,458 (33.76) 1991 10,502 (28.86) 11,532 (31.69) 1992 10,506 (29.00) 10,174 (28.08) 1993 11,204 (30.98) 10,378 (28.70) 1994 11,056 (30.60) 10,545 (29.18) 1995 9,778 (27.02) 10,470 (28.93) 1996 8,766 (24.21) 10,440 (28.83) 1997 8,173 (22.31) 10,056 (27.45) 1998 7,420 (19.94) 9,858 (26.49) 1999 6,795 (17.99) 9,893 (26.19)

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- A Political or Public Health Discussion?
- As we attempt to move the stage of debate on the problem of small arms morbidity and mortality to the public health domain, we must recognize that politics will intrude. A clear and comprehensive response to the issues posed by Mr. Oberle and by Drs. Clay and Allen requires a broad perspective, drawing from available data and trends found in legislative, criminal, and epidemiologic--medical and public health--literature. In their consideration of the small arms pandemic, the letter writers have cited literature from at least five countries on three continents, primarily non-medical- pro-gun websites and daily newspapers.
- I share Dr. Clay's concern about "political opinion fleshed out with carefully selected statistics" and the importance of avoiding factually incorrect statements.

The gun lobby attempts to turn the debate of what primarily should be a health issue (in terms of suffering and death) into a circular dispute between competing sets of numbers, experts, and interpretations.

- These tactics distract attention from the merits of relevant studies and from appropriate conclusions. While letters to the editor citing protective effects of guns are abundant, particularly in the US, I am unaware of any articles in the major medical literature that support such claims. This would suggest either a publication bias by medical editors who deliberately screen out well-drafted research or a lack of credible research on the protective effects of guns. I would suggest that the latter is more likely.
- While Mr. Oberle's biases do not disqualify him from commenting on these issues, readers should know that he writes prolifically for a pro-gun lobby website, www.keepandbeararms.com, both as an analyst and as an organizer of advocacy campaigns against domestic gun control measures such as the Brady bill in the US. Nevertheless, his contention that the most recent figures show MVA deaths again ahead of small arms in the age 15-24 age category in the US appears to be correct, although the latest studies have not yet been published in the peer-reviewed literature. I cited the most recent (1997) peer-reviewed study on small arms and children by the CDC, but am happy to amend the phrase "slightly ahead" to "slightly behind" when comparing gun deaths to motor vehicle deaths for this age group. This is hardly an "egregious error" and the raw numbers still speak to the magnitude of the problem. Moreover, a difference between mortality from MVAs and small arms of even 20%--whether ahead or behind—may be statistically interesting but is not significant from a clinical or public health policy decision-making point of view. Most physicians would not be impressed with these statistical variations, given the order of magnitude differences between US firearm death rates and those of Australia or Britain. Mr. Oberle's use of CDC data comes as a pleasant surprise, by the way, since many pro-gun advocates and US "experts" whose articles are quoted on the webpage for which he writes have questioned the CDC as an information source and have lobbied against funding the CDC's research into violent death.

- The other writers question whether these gun deaths are truly preventable, or whether legislation or the numbers of weapons have any impact, either positive or negative, on gun crime, violent crime, or the total death rate. These are serious issues.

- Dr. Clay's references to the Sporting Shooters Association of Australia website, the Daily Telegraph, the Sydney Morning Herald, and Ted Koppel in the National Review, again raise the question of bias. Recent data on the Canadian, US, British, and Australian situations, provided by Phil Alpers from the Harvard Injury Control Research Center at the Harvard School of Public Health, Roland Browne from the National Coalition on Gun Control (Australia) and Amelie Baillargeon, and Mark Anto from the Coalition for Gun Control (Canada) refute Dr. Allen's contention that violent crime has increased dramatically in countries where access to guns has been limited. Violent crime in Canada declined annually from 1992-99 with a slight (3%) increase in the year 2000 [Centre for Justice Statistics (2001)]. The literature simply does not support the contention that people who desire to kill themselves or others will always manage to find a way and that attempts to limit access to instruments are therefore useless. To the contrary, Killias found no evidence that substitution of instruments for homicide and suicide takes place in societies that have reduced access to guns.

- Readers can look at original sources should they wish to develop their own conclusions. A few suggestions for the countries cited in the letters are found below . I would suggest caution in interpreting cross- country comparisons, keeping in mind the differences in data collection methodologies. For example, the US data defines "criminal homicide" as "murder and non-negligent manslaughter" and excludes "deaths caused by … attempts to kill, assaults to kill..." (www.jrsa.org/jaibg/UCR_methods.htm) while the Canadian data includes these latter categories.

- As for Dr. Allen's tongue-in-cheek call for the banning of ropes, knives, and cars, Chapdelaine found that gunshot wounds have 5 to 15 times the mortality rate of knife wounds. Handguns have somewhat less utility than ropes, knives, and cars for purposes other than violence or threats of violence. Many physician friends in my country, Canada, who happen to be gun owners, have welcomed registration of all firearms and the banning of handguns as a somewhat effective measure for controlling misuse. They accept such regulation as their collective responsibility as Canadian citizens.

- Dr. Clay questions my statement that "Law enforcement officials in both countries affirm the effectiveness of these measures in reducing damage by these weapons," and criticizes the lack of references. I apologize for the oversight and conclude with quotations from an open letter of the Attorney-General of Australia, the Hon. Daryl Williams, AM QC MP, written to Charlton Heston of the NRA on March 22, 2000, affirming the measures and questioning data similar to those reported by Dr. Clay.

- Attorney-General Williams cites figures from the Australian Bureau of Statistics showing that "firearms are being used less often in murder, attempted murder, assault, sexual assault and armed robbery in 1998 compared with 1997." He concludes, in a rather decisive fashion, that "There are many things that Australia can learn from the United States. How to manage firearm ownership is not one of them. The 54 firearm-related homicides in Australia in 1998 equate to a rate of only 0.28 per 100,000 people. I have been advised that this compares to a rate which is in the order of 4 per 100,000 in the United States. Now that you have the facts, I request that you withdraw immediately the misleading information from your latest campaign."

- Neil Arya

Small Arms, Physicians and Politics

NEIL ARYA

Physicians for Global Survival, Ottawa K1R 6P1

Figures for deaths from private use of small arms, particularly in children and young people, are summarized and responses to the discussion of these figures in a recent editorial in the *British Medical Journal* are considered. It is contended that the figures highlight a major public health problem, particularly in the United States. Further, this article emphasizes that the politicization of the debate by the US gun lobby should not be allowed to obscure the conflict-related consequences of small arms in the developing world.

KEYWORDS Morbidity, Mortality, Public health, Small arms, United States

Introduction

Medical statistics will be our standard of measurement:
we will weigh life for life and see where the dead lie thicker.
Rudolf Virchow, *Die Medizinische Reform* No.1, p.182, Berlin, G. Reimer, 1848.

The following articles give breadth and depth to the small arms problem and represent the quality and scope of work presented at the IPPNW Conference in Helsinki, in October 2001. This brought together a range of individuals and groups including government leaders, United Nations and World Health Organization representatives, public health doctors, researchers, activists, victims and humanitarian non-governmental organization (NGO) representatives from six continents, all with special expertise in the subject of health and small arms. The articles by Nelson Arboleda on Colombia and Owens Wiwa on Nigeria show the relationship between weapons not just with death and injury, but with the creation of a climate of fear, human rights abuses, displacement of people and even closures of health facilities. Kiflemariam Gebre-Wold illustrates the importance of cultural perceptions of security on demand and demonstrates connections between field research, training and public education. David Meddings sensitizes us to limitations and challenges for research, using his experience with the International Committee of the Red Cross in Cambodia and Afghanistan. Wendy Cukier and Stephen Hargarten give

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HANDGUNS

RESPONSE TO COLUMBINE

ARM TEACHERS

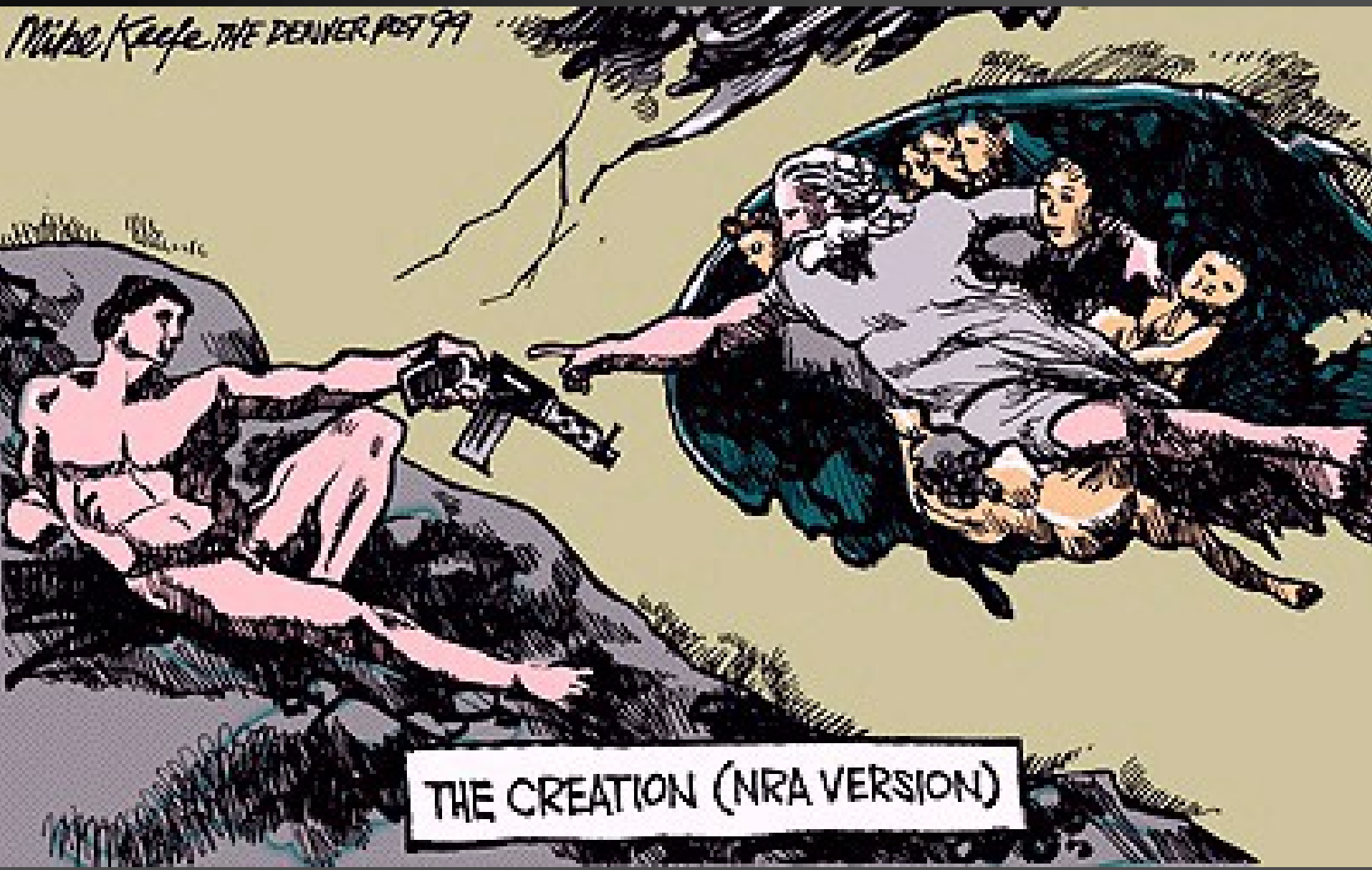
Matthew Engel
Tuesday October 22, 2002
The Guardian

RESPONSE TO 9/11

ARM PILOTS

Matthew Engel
Tuesday October 22, 2002
The Guardian


NRA
W
HESTON


Mike Keefe THE DENVER POST 99
THE CREATION (NRA VERSION)


COMMANDMENT VI:
THOU SHALL
NOT KILL
Swell. Another pacifist, anti-gun liberal wimp.
CHARLTON HESTON
MIKE THOMPSON

Peace through Health Working Model

Stage of Prevention

Primordial	Primary	Secondary	Tertiary
	Pre-conflict	Conflict	Post-conflict

Character

Who we are,
What we represent:
e.g. Altruistic Intelligent

- **Altruism** - Evocation and Broadening
- **Personification** of "Enemy"
- **Solidarity** - Extension of
- **Dissent** and Non-cooperation
- **Diplomacy**

Knowledge

What we know,
What our training is

- **Public Health** - Epidemiology, Prevention
- **Psychological** - analysis of conflict, cycles of violence, post traumatic stress, concepts eg. psychic numbing, conflict mediation/transformation
- **Principles and Practice:** lessons from General Systems
- **Medical Ethics**

Activity

What we do,
How we practice

- **Teaching :** Communication of knowledge
- **Sensitizing :** Putting a human face on suffering
- **Maintaining** structural integrity for society
- **Healing** of communities: Physical, Psychological, Social, Spiritual

Each of the above

- **Supraordinate Goals** - Construction of
- **Redefinition** of the Situation