

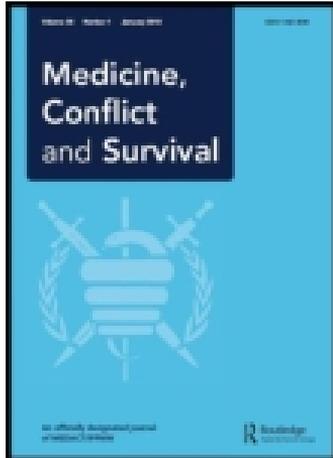
This article was downloaded by: [FU Berlin]

On: 20 September 2014, At: 17:53

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Medicine, Conflict and Survival

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/fmcs20>

Bioterrorism in the United States: A balanced assessment of risk and response

Victor W Sidel ^a

^a Montefiore Medical Center and Albert Einstein College of Medicine , 111 East 210 Street, Bronx, NY, 10467, USA E-mail:

Published online: 22 Oct 2007.

To cite this article: Victor W Sidel (2003) Bioterrorism in the United States: A balanced assessment of risk and response , *Medicine, Conflict and Survival*, 19:4, 318-325, DOI: [10.1080/13623690308409705](https://doi.org/10.1080/13623690308409705)

To link to this article: <http://dx.doi.org/10.1080/13623690308409705>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Bioterrorism in the United States: A Balanced Assessment of Risk and Response*

VICTOR W SIDEL

Montefiore Medical Center and Albert Einstein College of Medicine, NY 10467

There are many definitions of terrorism and numerous examples of the use of explosives and small arms, especially against civilians and with the objective of instilling fear. Although chemical and biological agents have only rarely been used by terrorists, there has recently been much concern about the threat of bioterrorism and the role of future health personnel in counteracting it. Rational setting of priorities requires the balance of risks against benefits in prevention and preparedness. Adverse effects of preparedness include inappropriate warnings, diversion of resources from other public health measures, both in the United States and overseas and constraints on civil rights. It is argued that the US should counteract the threat of bioterrorism by dealing with its root causes and by strengthening civil rights, international arms control and international law rather than by a self-defeating 'war on terrorism'.

KEYWORDS Biological weapons Bioterrorism Civil rights International law
 Public health Terrorism United States

Terrorism and Bioterrorism

'Terrorism' has been defined in many different ways. Most nation states define terrorism to exclude the actions of nation states; individuals and groups concerned about what they view as 'state terrorism' often use broader definitions of terrorism that include actions of nation states. Even when a generally acceptable definition can be found, individuals and groups called 'terrorists' by one side in a conflict may be viewed as 'patriots', 'fighters for justice', 'freedom fighters', or 'servants of God' by the other. Barry Levy and I have analyzed 109 definitions of 'terrorism'.¹ The most common definitional elements were *violence, force, political* and *fear*. We defined terrorism as 'politically motivated violence or the threat of violence, especially against civilians, with the intent to instil fear'. Actions of nation states as well as actions of individual and non-state groups may fall within that definition.

* This article is based on a presentation to Medact's Annual Conference, Tavistock Centre, London on 26 April 2003.

Commonly accepted examples of terrorism abound. Generally they include attacks that used small arms and light weapons, explosives and incendiaries. Examples of terrorist use of small arms and light weapons include the attack on Israeli athletes at the Munich Olympics, attacks by Basque separatists in Northern Spain and attacks on abortion service providers in the United States. Examples of use of explosives include bombings by the Irish Republican Army, the bombing of a US government office building in Oklahoma City and the attacks on the World Trade Center and Pentagon using fuel-laden aeroplanes as explosives. Incendiaries were used in a number of terrorist attacks on African-Americans in the southern US in the 1960s. Use of explosives and incendiaries by nation states that targeted non-combatants and were designed to produce fear have included attacks on Guernica, Warsaw, Rotterdam, Coventry and London by Nazi forces, attacks on Dresden and Hamburg by the Allies and attacks on Osaka, Tokyo, Hiroshima and Nagasaki by the US.

In contrast, chemical and biological weapons have rarely been used. Chemical weapons were used, allegedly by Iraq, in an attack on the Kurdish population of the Iraqi city of Halabja and the nerve gas sarin was used by the *Aum Shinrikyo* cult in the Tokyo subway.² Biological weapons were used by Japanese forces in China during the Second World War,³ by the *Rajneeshee* cult that sprayed salmonella bacteria in salad bars in Oregon⁴ and by a still-unknown individual or group in the US who disseminated anthrax spores through the post in 2001.

Despite the relative infrequency of their use, there has been much concern about bioterrorism – the use or the threat of use of biological agents, living organisms or the toxins produced by them – as terrorist weapons.⁵ Extraordinary public attention has been focused and extraordinary public resources have been committed to bioterrorism preparedness in the United States, much of it affecting public health policies and personnel.

Balancing Risks and Response

Rational setting of priorities for action in public health requires evaluation of:

- The risk of a public-health-endangering event;
- The consequences and costs of prevention of the event;
- The nature of any conflicts of interest in preventing or preparing for the event; and
- The consequences and costs of preparedness for the event.

Evaluation of risk includes identification of the nature of the potential event, the likelihood of its occurrence, the number of potential victims and the degree of potential harm. As noted, despite the current concern about

bioterrorism, the level of risk is low compared to other forms of terrorism. Furthermore, the risk of bioterrorism is much lower than that of other public health problems, including diseases caused by infectious agents, such as those causing tuberculosis, Severe Acute Respiratory Syndrome (SARS), AIDS and influenza, and other diseases such as cardiovascular disease, cancer and diabetes.

Evaluation of the consequences and costs of prevention of a bioterrorism event depend on the preventive methods used. Attempts to preventing terrorism arising inside the US have largely relied on surveillance and detention of people suspected of being potential terrorists. Attempts to prevent terrorism emanating from outside the US have largely been relegated to a 'war on terrorism'. There has been relatively little attention to reduction of the causes of potential terrorism, or to control of the weapons of terrorism.

Recognition of conflict of interest is an important, though often neglected, element in public health priority setting. Conflicts of interest in prevention of the health consequences of tobacco use or of environmental pollution are fairly clear, but conflicts of interest in prevention or response to terrorism are less clear. These conflicts include the desire for profit through the provision of equipment, supplies or consultation, for prestige through a public, visible role in prevention or preparedness and for power through participation in planning and execution of prevention or preparedness programmes. The enormous Federal investment in bioterrorism preparedness in the US has generated enormous profit, prestige and power to those engaged in it.

The consequences and costs of preparedness against bioterrorism have been hotly debated in the US. A number of potential benefits of preparedness have been advanced, including:

- Strengthened training and co-ordination for response to a bioterrorist event;
- Improved potential for treating illness and saving lives of surviving victims;
- Improved potential for providing psychological support for victims and families; and
- Reassurance to the community that services are prepared for a bioterrorist event.

Other 'collateral' benefits of preparedness that have been cited include prevention of violent local acts in response to a bioterrorist attack and prevention of inappropriate national responses, such as use of military force.

Those arguing for increased funding for bioterrorism preparedness state that the preparedness funding will be available for 'dual use', including funding of training of public health personnel, modernization of public

health facilities and improvement of communication and surveillance. Benefits that are alleged to accrue to the medical care infrastructure include the strengthening of emergency services and the stockpiling of emergency supplies.

These potential benefits of bioterrorism preparedness must, however, be balanced against the potential hazards – the possible ‘collateral damage’ – of bioterrorism preparedness,⁶ such as the adverse consequences of the methods used, the diversion of resources from needed public health programmes and constraints on civil rights.⁷

Adverse consequences of the methods used for bioterrorism response and preparedness include the consequences of inappropriate nature of warnings of an attack, inappropriate use of immunization and antibiotics and unnecessary isolation and quarantine. Numerous examples of these have occurred in the US and other countries over the past two years in response to bioterrorist threats or naturally occurring epidemics of diseases, such as SARS.

Diversion of resources from public health infrastructure and programmes are a particular problem in the US. A 1987 report by the Institute of Medicine found public health in the US severely underfunded.⁸ The health reform proposal put forth by the Clinton administration in 1993 estimated that the resources for essential services constituted only 55 per cent of needed resources. With state tax revenues down and virtually every state struggling with deficits, public health budgets at state and local level have been cut. Policy-makers contend that Federal grants to state and local health departments (2002, US\$1.1 billion; 2003, US\$940 million) for bioterrorism preparedness may have ‘dual use’, but most funding for bioterrorism preparedness is not fungible.⁹ Recent articles have documented diversion of funding to ‘bioterrorism preparedness’ from other urgent health needs.¹⁰

Diversion of resources from public health in the United States include diversion of funds needed for protection against other chemical risks – spills, leaks and explosives – and infectious diseases. Each year in the United States there are 60,000 chemical spills, leaks and explosions, of which 8,000 are classified as ‘serious’, with over 300 deaths. There are 76 million episodes of food-borne illness, leading to 325,000 hospitalizations and 5,000 deaths, most of which could be prevented. There are 110,000 hospitalizations and 20,000 deaths from influenza, a largely preventable illness, and there are 40,000 new cases and 10,000 deaths from HIV/AIDS.

Diversion of resources for public health outside the US reduce the resources that can help provide protection against diseases rooted in poverty, ignorance and absence of services. In India in 1999 there were 2 million new cases of tuberculosis, causing about 450,000 deaths. Effective treatment of tuberculosis in India costs about US\$15 per person treated. The United Nations has estimated that about US\$10 billion invested in safe water supplies could reduce by one-third the current 4 billion annual cases of diarrhoea that result in 2.2 million deaths.¹¹

Constraints on civil rights in the US related to terrorism preparedness and prevention include those imposed by the Model State Emergency Health Powers (MSEHP) Act, the USA Patriot Act, the Homeland Security Act and the Domestic Security Enhancement Act which has been proposed for enactment in 2003. The MSEHP Act is a 'model' for legislation that may be adapted by state legislators in the US, since public health is viewed as a State rather than a Federal function. The model act was drafted at Georgetown University Law Center and is being promulgated by the Communicable Diseases Center with a request for adoption by all state legislatures. If adopted by a state, the governor and/or the health commissioner of the state would have the power to declare a state public health emergency and to impose quarantines, to require immunizations and to conduct surveillance. The model act has been widely criticized for its lack of specificity, endpoints and mandated judicial review. Very few states have adapted any parts of it.

On the other hand, the USA Patriot Act – an acronym for the 'Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act' – was adopted by Congress on 26 October 2001. The Act undercuts civil rights for anyone who fits a specific profile as a 'terrorist'. It permits detention of immigrants, increases governmental surveillance power, grants the power to government to be informed of every number called from a particular telephone and sets up a new category of crime called 'domestic terrorism'. The Act has been severely criticized by the American Civil Liberties Union and other groups concerned with protection of human rights in the US.

The Domestic Security Enhancement Act of 2003, which has been called 'Patriot Act II', is currently pending before Congress. If adopted, it would:

- Give the government the power to strip US citizenship for provision of support to organizations labelled 'terrorist' (Section 501);
- Expand home searches and wiretaps without a warrant (Sections 103 and 104);
- Permit secret arrests (Section 201); and
- Provide new immunity for Federal agents who conduct illegal surveillance without judicial permission (Section 106).

These constraints on civil and human rights are likely to increase the risk of terrorist events, rather than prevent them.

War on Terrorism

The US launched a 'War on Terrorism' in response to the 11 September 2001 attacks and other threats. It declared the right to launch 'preventive' or 'pre-emptive' wars to prevent aid to terrorists, to destroy sites and funding for terrorist training and to induce fear of reprisal for future

terrorist attacks. However, critics charge that war causes increases in illness, disability and poverty that might be roots of future terrorism and causes people all over the world to view the US as an aggressor nation. They also charge that violence of this sort has the potential to incite further violence, rather than to prevent it. They note that there is no precedent in international law for the use of force as a pre-emptive or preventive measure when there has been no actual or imminent attack. Nazi Germany claimed that its attack on Norway in 1940 was a 'preventive' attack to deny the use of bases in Norway by Britain and France, but that claim was rejected by the Nuremberg Tribunal. Past authorizations by the Security Council for the use of force have been in response to actual invasion, large-scale violence or humanitarian emergency.

Furthermore, the US Constitution names the President the 'Commander-in-Chief of the Army and Navy of the United States', but limits the power to declare war to the US Congress. For example, in December 1941, after the bombing of Pearl Harbor, the Congress declared war on Japan, Germany and Italy. Despite the fact that the Congress has not declared war since then, the US has used its armed forces in a number of wars around the world.

Critics give the attack on Iraq initiated by the US and the United Kingdom in 2003 as an example. The US Congress had not declared war and the United Nations Security Council had not authorized the attack. Members of the Council, including Germany and France, objected to the attack and there were major public protests in the US, the UK and other countries.

Furthermore, the US used depleted uranium as a shell casing in the 1991 Gulf War, the Balkans and in Afghanistan, and the US and the UK used depleted uranium in the 2003 Gulf War. The US Department of Defense estimates that 320 metric tons of depleted uranium remain in Iraq, Kuwait and Saudi Arabia; others estimate the amount as closer to 1,000 metric tons. Critics claim that this use was a violation of the Hague Convention, which bans the use of 'poison or poisoned weapons', as well as the Geneva Conventions and the UN Charter.

The issue of potential hazards of responses to bioterrorism relates to US resistance to strengthening relevant international treaties and agreements. These include resistance to ratification or to strengthening of:

- The Comprehensive Nuclear Test Ban Treaty (CTBT);
- The Anti-Ballistic Missile (ABM) Treaty;
- The Nuclear Non-Proliferation Treaty (NPT);
- The Ottawa Anti-Personnel Mine Ban Treaty;
- The Biological and Toxin Weapons Convention (BWC);
- The Chemical Weapons Convention (CWC);
- The Statute of the International Criminal Court;
- The UN Small Arms Action Plan; and
- The Kyoto Protocol.¹²

Critics argue that instead of its military responses, the US might have attempted to prevent terrorism through international weapons constraints and the rule of law. This would include support for the International War Crimes Tribunal through signature and ratification of the Statute of the International Criminal Court and maintenance of civil liberties protections both at home and internationally. Attempts might also have been made to prevent terrorism through dealing with its causes and by control of:

- Small arms and light weapons – by restricting the arms trade and strengthening gun control in the US;
- Chemical weapons – by supporting the Office for Prohibition of Chemical Weapons and strengthening US legislation on prohibition of work on these weapons;
- Biological weapons – by strengthening the BWC to include a stringent verification protocol, enactment of enabling legislation by all nations and suspension of ambiguous ‘defence’ research in the US;
- Nuclear weapons – by controlling the transfer of fissile materials, ratifying the CTBT and adopting a Nuclear Weapons Convention.

Conclusion

In sum, the most powerful nation in the world may be unable to prevent or respond effectively to bioterrorism unless it alters its international and domestic policies. The US should work to remove the root causes of terrorism instead of making them stronger, strengthen strict weapons control treaties and legislation instead of weakening them and encourage greater respect for the United Nations and international law instead of subverting respect for them.

References

1. Levy BS, Sidel VW. Challenges that terrorism poses to public health. In: Levy BS, Sidel VW, eds. *Terrorism and Public Health*. New York: Oxford University Press, 2003: 4–18.
2. Lifton RJ. *Destroying the World In Order to Save It: Aum Shinrikyo, Apocalyptic Violence, and the New Global Terrorism*. New York: Henry Holt, 1999.
3. Harris SH. *Factories of Death: Japanese Biological Warfare 1932–45 and the American Cover-Up*. London: Routledge, 1994.
4. Torok TJ, Tauxe RV, Wise RP, Livengood JR, Sokolow R, Mauvais KA, et al. A large community outbreak of salmonellosis caused by intentional contamination of restaurant salad bars. *JAMA* 1997; 278: 389–95.
5. Sidel VW, Levy BS. Biologic weapons. In: Levy BS, Sidel VW, eds. *Terrorism and Public Health*. New York: Oxford University Press, 2003: 175–98.
6. Sidel VW, Gould RM, Cohen HW. Bioterrorism preparedness: co-optation of public health. *Medicine and Global Survival* 2002; 7: 82–9.
7. Sidel VW. Defense against biological weapons: Can immunization and secondary prevention succeed? In: Wright S, ed. *Biological Warfare and Disarmament*. Oxford: Rowman and Littlefield, 2002: 77–101.

8. Institute of Medicine, Committee for the Study of the Future of Public Health. *The Future of Public Health*. Washington, DC: National Academy Press, 1988.
9. *American Medical News* (AMA), 28 Oct. 2002.
10. Smith S. Anthrax vs. the flu: as state governments slash their public health budgets, federal money is pouring in for bioterror preparedness. *Boston Globe*, 29 July 2003.
11. Price of safe water for all: \$10 billion and the will to provide it. *New York Times*, 23 Nov. 2000.
12. Levy BS, Sidel VW. Preventing war and its health consequences: Roles of public health professionals. In: Levy BS, Sidel VW, eds. *War and Public Health*. New York: Oxford University Press, 1997: 388–93.

(Accepted 1 August 2003)

Victor W Sidel is Distinguished University Professor of Social Medicine at Montefiore Medical Center and Albert Einstein College of Medicine in the Bronx, New York and Adjunct Professor of Public Health at Weill Medical College of Cornell University in New York City. He is a past president of the American Public Health Association, of Physicians for Social Responsibility and of International Physicians for the Prevention of Nuclear War.

Correspondence: Montefiore Medical Center, 111 East 210 Street, Bronx, NY 10467, USA. Email: <vsidel@igc.org>.
