Public Health Association of Australia:
Policy-at-a-glance – Biological and Toxin Weapons including Smallpox Policy

Key message: PHAA notes that:
1. Preparedness in response to the potential use of biological agents and toxins, including the smallpox virus, against civilians, can be effectively enhanced by strengthening public health infrastructure, particularly infectious disease surveillance and response capacities, which are keys to an effective response to any disease outbreak.
2. The World Health Assembly declared the world free of smallpox on 8 May 1980 following the success of the Global Program to Eradicate Smallpox.
3. However, the smallpox virus remains a possible public health problem through incidental and deliberate dissemination as a biological weapon.

Summary: PHAA calls on the Australian Government, national and international bodies, to review and update current policies on response preparedness to potential use of biological and toxin weapons including Smallpox in the light of recent international developments; progress in the development and in-vitro testing of new antiretroviral drugs; and the development of new vaccines.

Audience: Federal, State and Territory Governments, policy makers and program managers.

Responsibility: PHAA’s International Health Special Interest Group (SIG).

Date policy adopted: October 2017

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Biological and Toxin Weapons including Smallpox Policy Statement

The Public Health Association of Australia notes that:

1. There are 175 States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction.¹

2. The Convention states: Under all circumstances the use of bacteriological (biological) and toxin weapons and their development, production and stockpiling are effectively prohibited under article 1.¹

3. The UN recognises the importance of ongoing efforts by States parties to enhance international cooperation, assistance and exchange of equipment, materials and scientific and technological information for the use of bacteriological agents and toxins for peaceful purposes.¹

4. The World Health Assembly (WHA) declared the world free of smallpox on 8 May 1980, following the success of the Global Program to Eradicate Smallpox. However, the smallpox virus remains a possible public health problem through incidental and deliberate use as a biological weapon.

5. The Variola virus, an orthopox virus, is the etiological agent of smallpox. The most frequent mode of transmission is person-to-person spread via direct deposit of infective droplets onto the nasal, oral, or pharyngeal mucosal membranes with an infectious individual.²

6. Smallpox virus and related materials (whitepox virus, viral genomic deoxyribonucleic acid - DNA and other infectious material) are held at two World Health Organization (WHO) Collaborating Centres that are the authorised repositories of variole virus: the State Research Centre for Virology and Biotechnology (Koltsovo, Russian Federation) and the Centers for Disease Control and Prevention (Atlanta, Georgia, USA).¹, ³, ⁴

7. Although considered to be near-impossible to synthesise a pox virus in a laboratory setting, scientists at the University of Alberta have recently manufactured the horsepox virus which is closely related to the smallpox virus. The horsepox virus is harmless to humans and the “primary motivation for the research appears to be in order to test vaccines against smallpox”.⁵

8. In 2001, the deliberate dissemination of the biological toxin anthrax in the US (through contaminated letters) and subsequent advances in biotechnology, makes the threat of use of a biological toxin a realistic possibility.², ⁶
9. The scope of the International Health Regulations (2005) are to “prevent, protect against, control and provide a public health response to the international spread of disease…”. Member states must report outbreaks of four highly infectious diseases as public health emergencies of international and biological concern: Smallpox, Polio, new strains of human influenza, and Severe Acute Respiratory Syndrome (SARS).  

10. In December 2010, the World Health Organization (WHO) released the scientific review of Variola that demonstrated the immense progress made under the WHO mandate to characterise many different strains of variola virus; develop two antiviral drugs with distinct mechanisms of action; develop less reactogenic smallpox; and develop diagnostic tests for variola virus and other orthopox viruses.

11. An advisory group of independent experts convened by the WHO, reviewed the smallpox research programme in November 2013 and made the following recommendations with respect to the size and composition of the WHO smallpox vaccine stockpile:
   a. Countries donating vaccine to the WHO stockpile should provide the same vaccine that they hold in their domestic stockpile
   b. In case of smallpox outbreak, vaccination should be limited to close contacts and first responders who have direct contact with symptomatic patients, and to laboratory workers in direct contact with specimens.

12. The Eighth Review Conference of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, better known as the Biological Weapons Convention (BWC), was held in Geneva in November 2016. The convention, as the reigning body for regulating biological weapons, will continue to ensure that new biotechnologies continue to be used for peaceful purposes only.

The Public Health Association of Australia affirms the following principles:

13. That the preparedness in response to the potential use of biological agents including the smallpox virus against civilians can be effectively enhanced by strengthening public health infrastructure, particularly infectious disease surveillance and response capacities, which are keys to an effective response to any disease outbreak.
The Public Health Association of Australia resolves to undertake the following actions:

14. Urge the Australian Government to review and update its current policies on response and preparedness to potential use of biological and toxin weapons including Smallpox in the light of: progress being achieved in the application of the Biological Weapons Convention\(^1\) and the latest WHO review on the smallpox virus; progress in the development and in-vitro testing of new antiretroviral drugs; and the development of diagnostic tests and new vaccines.\(^{11}\)

15. Lobby the Australian Government to call on the Australian Society for Infectious Diseases to update its 2002 policy on Biological and Toxin Weapons.

16. Support bilateral and multilateral discussions on diverging issues under the BWC, to break down the existing divisions among States with the common goal of strengthening the BWC and thereby upholding the established norm against biological weapons.

17. Lobby the WHO, governments and development partners to provide continued and committed investment in ensuring capacity to implement and enforce International Health Regulation.

ADOPTED 2008, REVISED AND RE-ENDORSED IN 2017

*First adopted at the 2008 Annual General Meeting of the Public Health Association of Australia. The latest revision has been undertaken as part of the 2017 policy review process.*
References


