



Australian Government

Department of Health

Smallpox Emergency Management Plan

Domestic health emergency response plan for
a deliberate release of smallpox



Certificate of Amendment

The Department of Health (Health) will review the Domestic Health Response Plan for the Deliberate Release of Smallpox (Smallpox Plan) as appropriate. Recommendations for amendments or suggestions for improvement may be made at any time to:

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Information on the current version can be obtained from the [Department of Health Website](#).

Amendment No	Issue Date	Amended By	Date

Authority

The Smallpox Plan was developed by the Department of Health, in collaboration with the National Health Emergency Management Standing Committee (NHEMS) of the Australian Health Protection Principal Committee (AHPPC). The Smallpox Plan was endorsed by the AHPPC on 18 December 2019.

The Smallpox Plan has been developed under the auspices of the *National Health Emergency Response Arrangements* (NatHealth Arrangements 2009).

The Smallpox Plan is **Annex A** of the Health CBRN Plan (the Domestic Health Response Plan for Chemical, Biological, Radiological or Nuclear Incidents of National Significance) and as such should be read in conjunction with the plan.

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1 Context

1.1 Overview

Smallpox has been eradicated as a naturally occurring infectious illness. Its cause, the variola virus, has been effectively contained. The re-introduction of this viral infection would constitute a Public Health Emergency of International Concern (PHEIC) under the International Health Regulations (2005) (IHRs). Any delays in reporting or responding to smallpox cases may severely impact disease containment.

A single confirmed or probable case of smallpox will initiate activation of the Smallpox Plan. Other criteria for activation of the Smallpox Plan include:

- reports of suspected smallpox cases once an outbreak has been confirmed elsewhere; and
- reports of human exposures to an environmental source containing smallpox virus.

The Smallpox Plan sets out the agreed mechanisms through which coordination of the national health response to a deliberate release of smallpox will occur.

The Smallpox Plan is an annex of the Health Chemical Biological Radiological or Nuclear Incidents of National Significance Plan (Health CBRN Plan). The Health CBRN Plan sets out the agreed mechanisms through which coordination of the overarching national health response to a CBRN Incident of National Significance (CBRNINS) will occur, including links with other sectors, and should be read in conjunction with the Smallpox Plan.

1.2 Aim

This plan aims to promote more effective planning, better preparedness, and a more rapid, integrated and consistent health response to a deliberate release of smallpox.

Increased preparedness and coordinated support will also help to minimise the impact on the health system of the affected jurisdiction(s), support scaling up of the jurisdictional response and ensure individuals affected by the event have access to optimal medical care.

1.3 Activation authority

Smallpox is a Tier 1 Security Sensitive Biological Agent (SSBA), a nationally notifiable disease, and a listed human disease under the *Biosecurity Act 2015*. On notification from the affected jurisdiction(s) of a suspected or confirmed case of smallpox the Chief Medical Officer (CMO), as Chair of the Australian Health Protection Principal Committee (AHPPC) or nominated delegate, will activate the Smallpox Plan.

1.4 In scope

This plan is confined to the domestic and deliberate release of smallpox and focuses on the activities of the health sector.

The deliberate release of variola virus may relate to political, ideological, criminal or revenge motivations.

A single case of Smallpox would be considered a CBRNINS and would have the potential to overwhelm local/regional response resources. This may be due to the nature of the event, the requirements for isolation/quarantine and contact tracing, the level of media interest, community concern or the current capacity of health system. It is acknowledged that Australia's health system frequently functions at or near capacity.

1.5 Out of scope

The following are outside the scope of this plan:

- deployment, command, control or coordination of the affected jurisdiction's own resources;
- medical care or coordination of resources at the incident site;
- forensic investigation or crime prevention activities related to the incident;
- notification processes involving jurisdictional police, emergency services or support agencies;
- movement of resources, personnel and equipment provided under this plan after arrival at a jurisdictional reception centre;
- rehabilitation of the incident site and community recovery activities; and
- overseas incidents.

1.6 Target audience

The Smallpox Plan is intended for use by Australian, state and territory government health agencies involved in managing or supporting a response to a threatened or deliberate release of the variola virus. This includes health authorities, ambulance services and the Department of Health. This plan may also be a useful guide to health pathology and laboratory activities during a response to a deliberate release of variola virus or for other agencies involved in the overall response.

The Smallpox Plan should be read in conjunction with the Health CBRN Plan and the Communicable Diseases Network Australia (CDNA) Smallpox Series of National Guidelines (SoNG) and the Public Health Laboratory Network's (PHLN) Smallpox Laboratory Case Definition (LCD).

2 Smallpox – the disease

2.1 Infectious agents

Smallpox is caused by infection with either of the closely related variola viruses: variola major and variola minor. Variola viruses are double stranded deoxyribonucleic acid (DNA) viruses in the genus *orthopoxvirus*, which also includes vaccinia (used to produce the smallpox vaccine), monkeypox and cowpox.

Variola virus is thought to be unlikely to survive on its own for more than 24 hours when exposed to normal environmental conditions (ambient temperature, usual humidity and sunlight). The infectious dose is unknown (in aerosol form it may be very low, i.e., only 10–100 virions). 10 to 20 secondary cases may develop from each primary case. Recent modelling indicated that an overall reproductive number of $R_0=4.6$ was estimated and vaccine coverage of 82% of the population would be required to control the epidemic.

Variola major virus causes a severe illness with an overall fatality rate of 30% or more while variola minor causes a milder illness with a fatality rate of 1% or less.

The World Health Organization (WHO) classified smallpox into five phenotypes:

- ordinary (the most frequent type, accounting for 90% or more of cases);
- vaccine-modified (mild and occurring in previously vaccinated persons);
- flat;
- sub-clinical; and
- haemorrhagic (both rare and very severe).

2.2 Reservoir

Smallpox is a human disease with no known animal or environmental reservoir. There is no carrier state.

2.3 Mode of transmission

During the smallpox era, naturally occurring smallpox infection was predominantly spread by close contact with a case, such as those living in the same household. Smallpox had household or close contact attack rates of up to 88%. Transmission occurred primarily via the respiratory tract (droplet spread) and to a lesser extent through direct contact such as from pustules. Close contact is usually required (i.e. within two metres).

Less commonly, spread occurred from contaminated fomites such as bed linen or clothing. The duration of infectivity of fomites is unknown, but likely to be no more than a couple of days. Spread through fine particle aerosols could occur if cough was present. Two hospital-based outbreaks resulting from airborne spread through air corridors have been described. The conjunctivae or the placenta were occasional portals of entry of infection.

Cases with more severe illness transmit smallpox more effectively than those with mild or moderate illness.

2.4 Incubation period

The incubation period for smallpox is 7–17 days; most commonly 12–14 days to onset of prodromal illness and 2-3 days more to onset of rash.

2.5 Infectious period

Cases are not believed to be infectious prior to the onset of symptoms. Cases should be regarded as infectious from the onset of fever. Cases are most infectious from onset to the first seven to ten days of rash.

As a precaution, and for the purposes of contact tracing, the infectious period is from 24 hours before recognition of fever or other prodromal symptoms until the last scabs from the rash fall off.

Cases have occurred after contact with corpses. The duration of infectivity in corpses is unknown.

2.6 Clinical presentation

Typically smallpox infection has a two to three day prodromal stage which is characterised by the acute onset of fever $\geq 38^{\circ}\text{C}$ and constitutional symptoms such as malaise, headache, prostration, severe back pain and occasional abdominal pain and vomiting.

Two to three days after symptom onset a maculopapular rash develops in which individual lesions containing infectious virus appear over a one to two day period. Over the next six or more days, the virus progresses through successive stages of macules, papules, vesicles, pustules and then crusted scabs.

Vesicles are filled with clear fluid and often have a depression in the centre. The vesicles change to pustules which are round and usually start to scab over about eight or nine days after the rash onset. Scabs fall off leaving depigmented skin and, over time, frequently scars.

Classically, the rash commences on the mucosa of the mouth and pharynx, then face, hands, forearms (including the palms and soles of the feet) before occurring on the torso. The rash usually spreads to involve most of the body over a 24 hour period.

2.7 Case definition

Both **probable cases** AND **confirmed cases** should be notified.

Confirmed case

A confirmed case requires **laboratory definitive evidence** only.

Laboratory definitive evidence

1. Isolation of variola virus, confirmed at the Victorian Infectious Disease Reference Laboratory (VIDRL); OR
2. Detection of variola virus by nucleic acid testing, confirmed at VIDRL.

Probable case

A probable case requires either:

1. **clinical evidence** and **laboratory suggestive evidence**; OR
2. **clinical evidence** AND **epidemiological evidence**.

Laboratory suggestive evidence

1. Detection of a poxvirus resembling variola virus by electron microscopy (EM); OR
2. Isolation of variola virus pending confirmation; OR
3. Detection of variola virus by nucleic acid testing pending confirmation.

Clinical evidence

Credible clinical smallpox as judged by an expert physician such as an infectious diseases physician, specialist microbiologist or public health physician

Epidemiological evidence

An epidemiological link to a confirmed case.

Suspected case

1. Clinical syndrome consistent with smallpox as judged by an expert physician such as an infectious diseases physician, specialist microbiologist or public health physician; this may include an illness with acute onset of fever ≥ 38 °C followed by a rash characterised by firm, deep seated vesicles or pustules in the same stage of development without other apparent cause; and
2. The case does not meet the probable or confirmed case definition.

2.8 Laboratory confirmation

Initial testing for smallpox should be undertaken at the Physical Containment level 4 (PC4) National High Security Quarantine Laboratory (NHSQL) at VIDRL. Confirmatory testing is undertaken at VIDRL.

Test

Polymerase Chain Reaction (PCR) is the primary diagnostic modality employed for detection of smallpox, and collection of appropriate vesicle swabs for this purpose is a priority. Rapid diagnosis is performed using variola-specific and orthopox real-time PCRs. Any positive result in either method must be confirmed using alternative PCR assays targeting different gene segments followed by sequence analysis to verify specificity.

Security Sensitive Biological Agent

Smallpox is a Tier 1 Security Sensitive Biological Agent (SSBA) under the *National Health Security Act 2007 (NHS Act 2007)* and requires storage in a Physical Containment (PC) Level 4 Laboratory.

The list of SSBA defines which biological agents are of security concern. Tier 1 agents are those agents that pose the highest level biosecurity risk to Australia.

2.9 Vaccination

The smallpox vaccine is currently the only way to prevent smallpox, although there has been work on antivirals, such as tecovirimat (approved for use in the USA in 2018), to treat the disease. The vaccine is made from a vaccinia virus, another pox-type virus related to smallpox, which cannot cause smallpox. The vaccine helps the body develop immunity to smallpox and was successfully used to eradicate smallpox from the human population.

In the absence of any clear evidence that smallpox may re-emerge or that it is used in an act of bioterrorism or bio-crime, the risk of adverse events from the vaccine outweighs the risk from the disease.

The National Medical Stockpile (NMS) is the main source of smallpox vaccine in Australia. The Secretary of the Department of Health and the CMO have authority to approve an NMS deployment on request from the state or territory authorities.

2.10 Public health objectives

- To maintain vigilance, and rapidly identify, isolate, and treat human cases and prevent transmission to their contacts; and
- To rapidly create a ring of immunity around identified cases by identifying primary higher and lower risk contacts and providing vaccination to these contacts.

Key elements of the public health response critical to controlling an outbreak include:

- rapid identification of cases;
- rapid contact tracing of all cases;
- rapid isolation of infected cases; and
- rapid roll out and ring vaccination of contacts.

For more information on the public health response including the clinical aspects of smallpox, infection control and vaccination please see the Smallpox SoNG.

A one page summary of the key information regarding smallpox is available at [Annex 1](#).

3 Governance

A single, probable or laboratory confirmed case of smallpox would be considered a health incident of national significance (INS) and lead to the activation of this plan.

3.1 Operational responsibility

The affected state or territory would have responsibility for the operational management of the incident. Jurisdictional legislative arrangements would determine the command and control of the response, which is usually lead by the police agency. The use of the agent smallpox is likely to elevate the significance of the incident, particularly if considered a terrorist, or potential terrorist incident, so that jurisdictional police will be working closely with Health and Australian Government agencies.

In a response to a deliberate release of smallpox, the Australian Government may coordinate strategies across Australian Government agencies through the Australian Government Crisis Committee (AGCC). Coordination between the Australian Government and states and territories will be conducted through the National Crisis Committee (NCC).

(Further information on the coordination of the broader response is available in the Health CBRN Plan and for whole of government (WoG) response arrangements in the Australian Government Crisis Management Framework (AGCMF) and the National Counter-Terrorism Plan (NCTP)).

3.2 Health sector response

Health sector activities will be managed by the relevant jurisdictional health agencies. This will include public health activities, clinical management of cases, implementation of the vaccination strategy; identification of needs, negotiation with the Australian Government for support (if required). (A summary of public health priorities is provided in [Annex 2](#), and outlined in detail in the Smallpox SoNG). The CMO will lead the coordination of national aspects of the response, through AHPPC. The national response will provide support for jurisdictional needs, develop and disseminate national data and a national picture of the outbreak; ensure consistent messaging and communication with health professionals and the public liaise with Australian Government agencies and international counterparts; and support best practice, through advice for medical professionals.

The national response will also include management of the use of the NMS, particularly access to vaccine, through the coordinated deployment of vaccines to the affected jurisdiction and coordinated vaccination of health care workers, cases and contacts.

3.3 Stages



Planning, management of the preparation for, and the response to a smallpox incident of national significance (INS) will be a staged process. Australian Governments follow the comprehensive approach to emergency management and look at emergencies as part of an ongoing cycle of activities in the four areas of:

- Prevention;
- Preparedness;
- Response; and
- Recovery.

To facilitate the more detailed planning required, response activities are divided into three stages:

- Standby;
- Action; and
- Standdown.

The Health National Incident Room (NIR) will advise relevant Australian Government and state and territory health authorities of changes in stages.

Management of a deliberate release of smallpox will be consistent with this approach. The following sections consider how this approach will be applied specifically to a smallpox response and provide a summary of priority activities in each stage.

3.4 Prevention

At the Australian Government level, to limit opportunities for acts of bioterrorism or bio-crime using harmful biological agents such as smallpox, Health manages the SSBA Regulatory Scheme under the *NHSA 2007*, and the *National Health Security Regulations 2018*. This scheme includes standards for the handling, storage and transport of samples from affected animals or persons. The scheme serves to limit access to biological agents of security concern.

Vaccination against smallpox is currently the best way to prevent further transmission of disease if exposure to case has occurred. Actions that should be taken as soon as possible following the trigger event include vaccination of first responders (front line health care workers and those working in relevant laboratories).

3.5 Preparedness

Table 1: PRIORITY HEALTH ACTIVITIES BY STAGE – PREPAREDNESS

Preparedness	
Ongoing	
State/territory health authority	<ul style="list-style-type: none"> • Develop and review health specific jurisdictional counterterrorism plans (or health aspects of

Preparedness	
Ongoing	
	<p>broader counterterrorism plans) in consultation with police;</p> <ul style="list-style-type: none"> • Establish and maintain hospital decontamination and protective equipment resources and procedures; • Maintain a list of health facilities/resources and their bioterrorism response capabilities including capacity to isolate/quarantine case and relevant contacts; • Develop and implement bioterrorism response training programs for health-care workers and emergency workers who would be called upon to respond to an incident; • Establish a mechanism to rapidly identify capacity for including relevant surge workforce in the event of a smallpox outbreak; • Consider a list of HCWs and high-risk laboratory personnel who may be appropriate for vaccination; • Manage pre-deployed NMS items and jurisdictional stockpile items; • Develop databases for registration of exposed or symptomatic patients, clinical presentation of patients, Post Exposure Prophylaxis (PEP) or therapy administered and adverse reactions to these, and mortality or recovery; • Develop and maintain plans and logistical support for rapid distribution of vaccine and PPE as required.
Ambulance service	<ul style="list-style-type: none"> • Establish and maintain plans/SOPs to support engagement in a response; • Develop and implement bioterrorism response training programs.
Australian Government Department of Health	<ul style="list-style-type: none"> • Encourage national consistency and interoperability of key national level incident capabilities;

Preparedness	
Ongoing	
	<ul style="list-style-type: none"> • Establish and maintain processes for sharing information between jurisdictions and the Australian Government; • Ensure availability of capacity/capability to detect biological agents of public health/security concern; • As part of the NMS, maintain stocks of determined vaccines and develop vaccine rollout and administration strategy; • Develop and maintain plans and logistical support for rapid deployment of NMS items as required; • Review relevant legislation that may be required to be enacted; • Develop and maintain awareness of availability of items which may be used in a response such vaccines and PPE; • Regularly assess the vaccine inventory, expiry dates and location of stocks in the NMS; • Agree protocol for surge public health workforce to undertake contact tracing; • Prepare summary information on case detection, diagnostic testing, clinical management; and decontamination control for hospitals and doctors' surgeries. <i>Do not distribute at this stage.</i>
Public Health Laboratory Network (PHLN)	<ul style="list-style-type: none"> • Develop guidance on testing methodologies, containment methods, transport and packaging for agents of security concern.
Australian (Counter) Bioterrorism Laboratory Network (ABLN)	<ul style="list-style-type: none"> • Develop and maintain nationally-consistent guidelines for the detection, characterisation and surveillance of biological threat agents; • Advice on funding and resources needed to address capacity and capability related to biological threat agents; • Provide laboratory capacity.

<p>Communicable Disease Network Australia (CDNA)</p>	<ul style="list-style-type: none"> • Agree protocols for syndromic surveillance in emergency departments; • Prepare teaching aid for vaccine providers on techniques for the use of bifurcated needles; • Prepare content of educational materials on smallpox; • Regularly review the Smallpox SoNG; • Prepare content for posters to be displayed in hospitals and doctor's surgeries concerning procedures for decontamination if a patient presents without prior decontamination. <i>Do not distribute at this stage.</i>
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3.6 Response

Table 2: **PRIORITY HEALTH ACTIVITIES BY STAGE – STANDBY**

<p>Standby</p> <p>Trigger: Notification of a credible threat or suspected incident (pending confirmation).</p>	
<p>State/territory health (affected jurisdiction)</p>	<ul style="list-style-type: none"> • Manage health aspects of the incident; • Liaise with other jurisdictional agencies; • Prepare communications materials; • Monitor health system capacity; • Request items from the NMS as required; • Provide a report on the situation at CDNA, PHLN, NHEMS and AHPPC teleconferences; • Activate health emergency operations centre; • Implement syndromic surveillance protocols; • Activate logistical support for rapid distribution of PPE and vaccine; • Activate logistical support for surveillance and contact tracing; • Review isolation and quarantine logistics and sites; • If a vaccine is available, consider vaccination of the high-risk laboratory personnel;

Standby	
Trigger: Notification of a credible threat or suspected incident (pending confirmation).	
	<ul style="list-style-type: none"> • Establish liaison officers within jurisdiction i.e. police; • Establish communications channels within jurisdiction and with Australian Government agencies; • Participate in AHPPC, CDNA, Jurisdictional Executive Group (JEG) and PHLN teleconferences.
Ambulance separate	<ul style="list-style-type: none"> • Establish ambulance EOC; • Manage pre-hospital response.
State/territory health (non-affected jurisdiction)	<ul style="list-style-type: none"> • Consider availability of resources, including staff and equipment; • Participate in AHPPC teleconferences to provide resource information and coordinate cross-jurisdictional assistance.
Australian Government Department of Health	<ul style="list-style-type: none"> • Liaise with the affected jurisdiction; • Place NIR workforce on standby; • Alert AHPPC members to the potential need to respond; • Convene an AHPPC, CDNA JEG, NHEMS and PHLN teleconferences to provide briefing on the situation, consider potential needs and determine resource availability. • Activate Health CBRN and Smallpox Plans, on advice from AHPPC; • Liaise with other Australian Government agencies in particular Home Affairs, Defence and the Australian Federal Police; • Develop and distribute Situation Reports (SitReps) and ministerial briefing and disseminate to other agencies as appropriate; • Advise the National Health Emergency Media Response Network (NHERM) of the current situation.

Standby	
Trigger: Notification of a credible threat or suspected incident (pending confirmation).	
	<ul style="list-style-type: none"> • Commence operational planning; • Assess the adequacy of NMS stocks, and obtain additional supplies if necessary; • On approval of the CMO, deploy supplies of the stockpile as required to strategic locations as identified by state/territory health authorities; • Assess the adequacy of vaccine stocks; • Review and update the summary information on case detection, diagnostic testing, clinical management, and infection control; • Notify relevant reference laboratories; • Review content of educational materials. Consider disseminating; • Review summary information on case detection, diagnostic testing, clinical management, and decontamination control for hospitals and doctors' surgeries.
ABLN	<ul style="list-style-type: none"> • Notify clinical laboratories.
AHPPC	<ul style="list-style-type: none"> • Advise on activation of the Smallpox plan; • Identify jurisdictional capacity.
CDNA	<ul style="list-style-type: none"> • Convene teleconferences to share and evaluate the latest developments in communicable disease surveillance; • Provide technical, public health and policy advice to AHPPC concerning the management of Smallpox.
PHLN	<ul style="list-style-type: none"> • Consider levels and locations of existing laboratory testing capacity to advise AHPPC; • Confirm appropriateness of current laboratory testing guidelines; • Notify clinical laboratories.

Standby	
Trigger: Notification of a credible threat or suspected incident (pending confirmation).	
National Critical Care and Trauma Response Centre (NCCTRC)	<ul style="list-style-type: none"> • Provide advice regarding vaccinated AUSMAT availability and capabilities; • Prepare to deploy AUSMAT teams if required.

Table 3: PRIORITY HEALTH ACTIVITIES BY STAGE – ACTION

Action	
Trigger: One or more probable or laboratory confirmed cases of smallpox.	
State/territory health authority (affected jurisdiction)	<ul style="list-style-type: none"> • Coordinate jurisdictional planning and operational health activities; • Implement surge public health workforce to contact trace; • Manage clinical care of infected patients; • Integrate health activities into the broader jurisdictional response; • Identify and define the need for Australian Government assistance and provide request to Health NIR (the State Emergency Controller will make any requests for assistance from the broader Australian Government through Home Affairs EMA); • Manage arrangements for isolation and quarantine of cases and contacts; • Request vaccine from NMS as required (this goes to the normal Health channels, not through AHPPC or EMA); • Establish jurisdictional reception area(s) to receive national and international assistance; • Manage receipt, deployment and ongoing welfare of incoming health resources; • Provide regular situation updates to the NIR/ AHPPC; • Manage jurisdictional briefing requirements, such as MO;

Action	
Trigger: One or more probable or laboratory confirmed cases of smallpox.	
	<ul style="list-style-type: none"> • Manage communication with public/media related to jurisdictional health matters; • Manage surge capacity in health care system; • Consider the use of forensic officers to coordinate/manage evidence collection in health facilities; • Implement reference laboratories staff rosters to deal with virus identification and additional workload, if required; • Monitor the use of replication competent vaccine in populations with a relative contraindication to use “as listed in the Smallpox SoNG” including pregnant women, children <12 months; • Distribute FAQ sheets for the public concerning signs, symptoms, and treatment and preventative measures. <i>As required:</i> • Notify the Department of Health of all new cases and notify the local police where criminal activity is suspected.
Ambulance service	<ul style="list-style-type: none"> • Provide initial triage, on site pre-hospital treatment and transportation of casualties within the jurisdiction; • Support on scene integration of additional health services, if required.
State/territory health (non-affected jurisdiction)	<ul style="list-style-type: none"> • Deploy staff and equipment to affected jurisdiction if required; • Maintain own jurisdictional health services in the context of a national emergency.
Australian Government Department of Health	<ul style="list-style-type: none"> • Convene AHPPC teleconferences to provide situational updates, coordinate inter-jurisdictional health resources and determine key public messages; • Implement AHHPC decisions; • Coordinate an NIR Incident Management Team (IMT);

Action

Trigger: One or more probable or laboratory confirmed cases of smallpox.

- Activate the NIR
- Deploy additional NMS items if required;
- Manage communication, through the NHERN, with public/media related to national health matters;
- Maintain and update the departmental Health website with information for the public and health professionals;
- Advise stakeholders of move to Action stage of the Smallpox and Health CBRN plan;
- Maintain situational awareness and produce SitReps for distribution to health sector and WoG counterparts;
- Coordinate input to WoG SitReps if required;
- Liaise with other Australian Government agencies regarding use/ deployment/ integration of assets;
- Collate national data;
- Analyse data and advise on national or unusual trends;
- Participate in WoG committees;
- Provide briefing as required, including to MO;
- Communicate the national status of an event to the media and general public;
- Communicate with the international community through the WHO;
- Report to the WHO under the IHRs;
- In a national terrorist situation, work closely with the National Security and Crisis Media Section of Home Affairs which, under current National Security Public Information Guidelines and the NCTP, will ensure information is shared and disseminated through existing channels;
- Connect the health sector to the security intelligence framework by ensuring there is appropriate health representation on relevant committees;

Action	
Trigger: One or more probable or laboratory confirmed cases of smallpox.	
	<ul style="list-style-type: none"> • Liaise and share relevant information and data with Agriculture; • Liaise and share relevant information with the Department of Foreign Affairs and Trade regarding possible travel warnings.
AHPPC	<ul style="list-style-type: none"> • Coordinate health sector resources across the Australian Government and jurisdictions such as: <ul style="list-style-type: none"> • hospital bed capacity for treatment and/or isolation or quarantine; • health workforce capacity; • health equipment and supplies. <p>Develop a consistent national approach to:</p> <ul style="list-style-type: none"> • surge and shift arrangements; • specialist, critical care management and operating suite availability. <ul style="list-style-type: none"> • Provide advice on: <ul style="list-style-type: none"> ○ specific treatments e.g. vaccine; ○ disposal of bodies and contaminated articles; ○ mental health support. • Provide high level strategic advice to WoG committees on the coordination of national health response; <ul style="list-style-type: none"> • Plan for an ongoing demand for medical services late in the response and into the recovery stage.
CDNA	<ul style="list-style-type: none"> • Convene teleconferences to provide specialist assistance and coordinate public health actions; • Provide technical, public health and policy advice to AHPPC.
PHLN	<ul style="list-style-type: none"> • Undertake laboratory testing for the variola virus; • Support smaller jurisdictional laboratories as needed;

Action	
Trigger: One or more probable or laboratory confirmed cases of smallpox.	
	<ul style="list-style-type: none"> • Share information regarding the situation and issues relevant to laboratory testing for the incident.
ABLN	<ul style="list-style-type: none"> • Deploy/use/advise appropriately protected emergency service personnel to collect samples and transport them in a safe manner consistent with relevant regulations and maintaining chain of custody.
NCCTRC	<ul style="list-style-type: none"> • Deploy AUSMAT teams if required.

Table 4: PRIORITY HEALTH ACTIVITIES BY STAGE – STANDDOWN

Standdown	
Trigger: All consequence management actions requiring national coordination have been completed	
AHPPC	<ul style="list-style-type: none"> • AHPPC will authorise the stand down of the coordinated national health response when all consequence management actions requiring national coordination have been completed (acknowledging recovery efforts will be occurring and potentially ongoing) and there is no likelihood of any additional immediate tasking; • Debrief health authorities of the Smallpox Plan (disseminate post activation report and recommendations).
Australian Government Department of Health	<ul style="list-style-type: none"> • Communicate change of stage to stakeholders; • Transition Health assets and arrangements to business as usual.

3.7 Recovery

It is possible that an affected jurisdiction, which has managed an incident without external support for the acute response, may require health support during the recovery phase. This may be accessible through the Smallpox Plan.

Table 5: PRIORITY HEALTH ACTIVITIES BY STAGE - RECOVERY

<p>Recovery</p> <p>Trigger: Commences with Action stage</p> <p>Recovery following a smallpox incident is a shared national and jurisdictional responsibility, with the bulk of activities being delivered by jurisdictions.</p>	
<p>State/territory health authority</p>	<ul style="list-style-type: none"> • Identify resources deployed or consumed in the response (on replenishment of cache); • Repatriate casualties to home jurisdictions (refer to EMA statement about transport); • Provide health support for site decontamination; • Undertake operational debriefing and development of post activation report and recommendations; • Deliver mental health services; • Facilitate support to ongoing governmental coronial and criminal investigations.
<p>Australian Government Department of Health</p>	<ul style="list-style-type: none"> • Coordinate support for ongoing health recovery processes as needed; • Coordinate repatriation of deployed medical teams and their equipment (EMA if deployed under COMDISPLAN); • Identify resources deployed or consumed in the response (on replenishment of cache); • Provide health support for site decontamination; • Undertake operational debriefing and development of post activation report and recommendations; • Deliver mental health services.
<p>AHPPC</p>	<ul style="list-style-type: none"> • Coordinate support for ongoing health recovery processes as needed; • Debrief health authorities on use of the Smallpox Plan; • Disseminate post activation report and recommendations and seek comment; • Make changes to plans and arrangements as required.

4 Communications

Communications will be an important component of managing an outbreak of smallpox, particularly as the deliberate nature of a release is likely to cause considerable public concern.

While responsibility for communications with the public about the incident itself, management of cases and public health arrangements will lie with the jurisdiction, the high significance of even one case of smallpox will mean public messaging should be coordinated with Australian Government agencies from the outset. Like other aspects of the response, communications related to health activities or issues are likely to be only one part of the government communications message.

Sharing of information with domestic counterparts will follow normal arrangements, as set out in the Health CBRN Plan. The strong likelihood of deliberate release means there may be limitations in what may be shared, both with counterparts and with the public, due to forensic investigations and national security concerns.

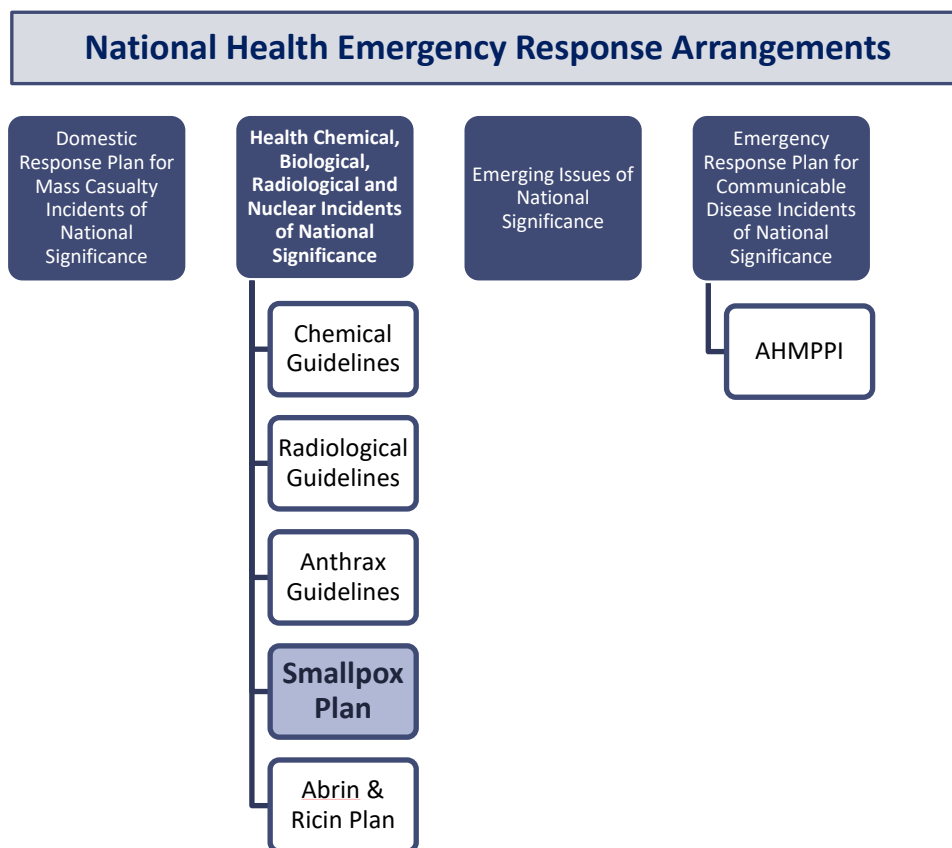
International interest in any case of smallpox will be intense. Communication with the WHO and other international parties will be the responsibility of Health and other Australian Government agencies. As a state party to the IHRs Australia is required to immediately notify the WHO of any confirmed case of smallpox.

Please refer to the Health CBRN Plan for the overarching communication response.

5 Using this plan

5.1 Relationships with other plans

The highest level health sector emergency plan is the *National Health Emergency Response Arrangements 2009* (NatHealth Arrangements), which broadly sets out how the Australian Government and state and territory governments will work together to manage health emergencies. The NatHealth Arrangements sets out four plans, which have been developed to manage health emergencies of different types. The Health CBRN Plan and the Smallpox Plan sit under the NatHealth Arrangements.



It is likely that the Smallpox Plan will operate concurrently with other national level plans. The most likely of these are the Emergency Response Plan for Communicable Disease Incidents of National Significance: National Arrangements (National CD Plan) and the NCTP and Handbook.

The AGCMF outlines the arrangements enabling the Australian Government’s ‘all hazards’ crisis management approach, along a continuum of prevention, preparedness, response and recovery.

5.2 Resilience

A number of mechanisms and activities currently operate to support the resilience of our health system including the NMS.

The NMS is a strategic reserve of drugs, vaccines, antidotes and protective equipment. It is intended for use in the national response to a public health emergency which could arise from natural causes or terrorist activities. The items held have been stockpiled to increase Australia's level of self-sufficiency during a time of high global and domestic demand and service delivery pressures.

Note: Further information on resilience mechanisms can be found in the Health CBRN Plan.

5.3 Plan administration

Plan evaluation

Health will coordinate evaluation of the Smallpox Plan via:

- inclusion in national exercises; and
- inclusion in AHPPC exercises and drills.

Smallpox Plan exercises will have the following aims:

- to educate participating agencies and stakeholders about the response and Smallpox Plan processes, their roles and the roles of other agencies; and
- to refine and improve the Smallpox Plan processes.

Plan review

Health will coordinate periodic reviews and evaluation of the Smallpox Plan through the AHPPC. A major review will be conducted every five years. It will also be reviewed, if required, following activation of the plan or learnings from capability audits, exercise outcomes, and operations.

5.4 Legislation and international obligations

A list of legislation and international obligations which support the activities in this plan is available at [Annex 5](#).

Table 3: PRIORITY HEALTH ACTIVITIES BY STAGE – ACTION

<p>Action</p> <p>Trigger: Request for assistance; incidents in multiple jurisdictions; a high level of public concern/ media involvement requiring national public messaging.</p>	
<p>State/territory health authority (affected jurisdiction)</p>	<ul style="list-style-type: none"> • Coordinate jurisdictional planning and operational health activities; • Manage clinical care of casualties; • Integrate health activities into the broader jurisdictional response; • Identify and define the need for Australian Government assistance and provide request to Health NIR (the State Emergency Controller will make any requests for assistance from the broader Australian Government through EMA); • Establish jurisdictional reception area(s) to receive national assistance; • Manage receipt, deployment and ongoing welfare of incoming health resources; • Provide regular situation updates to the NIR/ AHPPC; • Manage jurisdictional briefing requirements, such as MO; • Manage communication with public/media related to jurisdictional health matters; • Manage surge capacity in health care system; • Consider the use of forensic officers to coordinate/manage evidence collection in health facilities; • Implement staff rosters for reference laboratories to deal with toxin identification and additional workload; • Initiate logging of data on the national database of exposed or symptomatic patients, clinical presentation of patients, nature of PEP or therapy administered and adverse reactions to these, and mortality or recovery. Particular attention to be paid to adverse reactions in pregnant women and children in respect to off-label indications;

Action	
Trigger: Request for assistance; incidents in multiple jurisdictions; a high level of public concern/ media involvement requiring national public messaging.	
	<ul style="list-style-type: none"> • Distribute FAQ sheets for the public concerning signs, symptoms, and treatment and preventative measures as required. • Notify the local police and Department of Health of new cases where criminal activity is suspected.
Ambulance service	<ul style="list-style-type: none"> • Provide initial triage, on site pre hospital treatment and transportation of casualties within the jurisdiction; • Support on scene integration of additional health services, if required.
State/territory health (non-affected jurisdiction)	<ul style="list-style-type: none"> • Deploy staff and equipment to affected jurisdiction if required; • Maintain own jurisdictional health services in the context of a national emergency.
Australian Government Department of Health	<ul style="list-style-type: none"> • Convene AHPPC teleconferences to provide situational updates, coordinate inter-jurisdictional health resources and determine key public messages; • Implement AHHPC decisions; • Activate NIR Incident Coordination Team (ICT); • Manage communication, through the NHEMRN, with public/media related to national health matters; • Advise stakeholders of move to Action stage of the Abrin or Ricin Plan and Health CBRN Plan; • Maintain situational awareness and produce Sitreps for distribution to health sector and WoG counterparts; • Coordinate input to WoG SitReps if required; • Liaise with other Australian Government agencies regarding use/ deployment/ integration of assets; • Collate national data; • Analyse data and advise on national or unusual trends;

<p>Action</p> <p>Trigger: Request for assistance; incidents in multiple jurisdictions; a high level of public concern/ media involvement requiring national public messaging.</p>	
	<ul style="list-style-type: none"> • Participate in WoG committees; • Provide briefing as required, including to MO; • Communicate the national status of an event to the media and general public; • In a national terrorist situation, work closely with the National Security and Crisis Media Section of Home Affairs which, under current National Security Public Information Guidelines, must approve all communications activities; • Connect the health sector to the security intelligence framework by ensuring there is appropriate health representation on relevant committees.
AHPPC	<ul style="list-style-type: none"> • Coordinate health sector resources across the Australian Government and jurisdictions such as: <ul style="list-style-type: none"> • hospital bed capacity; • health workforce capacity; • health equipment and supplies. • Develop a consistent national approach to: <ul style="list-style-type: none"> • surge and shift arrangements; and • specialist, critical care management. • Provide advice on: <ul style="list-style-type: none"> • decontamination and use of personal protective equipment; • specific treatments e.g. antibiotics and antidotes; • mental health support. • Provide high level strategic advice to WoG committees on the coordination of national health response to a deliberate release of abrin or ricin; and • Plan for an ongoing demand for medical services late in the response and into the recovery stage.

Action	
Trigger: Request for assistance; incidents in multiple jurisdictions; a high level of public concern/ media involvement requiring national public messaging.	
CDNA	<ul style="list-style-type: none"> • Convene teleconferences to provide specialist assistance and coordinate public health actions; • Provide technical, public health and policy advice to AHPPC.
NHEMS	<ul style="list-style-type: none"> • Convene teleconferences to provide specialist assistance and coordinate public health actions; • Provide technical, public health and policy advice to AHPPC.
PHLN	<ul style="list-style-type: none"> • Undertake laboratory testing for the detection of agents of security concern; • Support smaller jurisdictional laboratories as needed; • Share information regarding the situation and issues relevant to laboratory testing for the incident.

Table 4: PRIORITY HEALTH ACTIVITIES BY STAGE – STANDDOWN

Standdown	
Trigger: All consequence management actions requiring national coordination have been completed	
AHPPC	<ul style="list-style-type: none"> • Authorise the stand down of the health response when all consequence management actions requiring national coordination have been completed (acknowledging recovery efforts will be occurring and potentially ongoing) and there is no likelihood of any additional immediate tasking. • Debrief health authorities and disseminate post activation report and recommendations.
State/territory health authority	<ul style="list-style-type: none"> • Facilitate support to ongoing governmental coronial and criminal investigations. • Continue management of jurisdictional response activities, according to jurisdictional assessment.

Standdown	
Trigger: All consequence management actions requiring national coordination have been completed	
Australian Government Department of Health	<ul style="list-style-type: none"> • Communicate change of stage to stakeholders; • Transition Health assets and arrangements to business as usual.

Table 5: PRIORITY HEALTH ACTIVITIES BY STAGE – RECOVERY

Recovery	
Trigger: Commences with Action stage	
Recovery following an abrin or ricin incident is a shared national and jurisdictional responsibility, with the bulk of activities being delivered by jurisdictions.	
State/territory health authority	<ul style="list-style-type: none"> • Identify resources deployed or consumed in the response (on replenishment of cache); • Coordinate repatriation of deployed medical teams and their equipment (EMA if deployed under COMDISPLAN); • Provide health support for site decontamination; • Undertake operational debriefing and development of post activation report and recommendations; • Coordinate the delivery of mental health services.
Australian Government Department of Health	<ul style="list-style-type: none"> • Coordinate support for ongoing health recovery processes as needed; • Identify resources deployed or consumed in the response (on replenishment of cache); • Provide health support for site decontamination; • Undertake operational debriefing and development of post activation report and recommendations.
AHPPC	<ul style="list-style-type: none"> • Coordinate support for ongoing health recovery processes as needed; • Debrief health authorities on use of the Abrin and Ricin Plan; • Disseminate post activation report and recommendations and seek comment;

Recovery

Trigger: Commences with Action stage

Recovery following an abrin or ricin incident is a shared national and jurisdictional responsibility, with the bulk of activities being delivered by jurisdictions.

- Make changes to plans and arrangements as required.

6 Annexes

Annex 1: Smallpox summary

Identification

- A systemic viral disease presenting with a characteristic skin eruption. Preceding the appearance of the rash is a prodrome of sudden onset, with high fever ≥ 38 °C, malaise, headache, prostration, severe backache, and occasional abdominal pain and vomiting.
- After 2–4 days, the fever fades and a deep-seated rash develops in which individual lesions containing infectious virus progresses through successive stages of macules, papules, vesicles, pustules and then crusted scabs. The lesions have a characteristic peripheral (centrifugal) distribution (including the palms and soles). Lesions are usually well circumscribed and at the same stage of development in a given area. There is usually no surrounding inflammatory flare.

Infectious agent

- Variola virus, a species of *Orthopoxvirus*

Occurrence

- Formerly a worldwide disease, no known human cases has been reported or has occurred since 1977.
- Global eradication was certified by the World Health Organization (WHO) in 1979 and sanctioned by the World Health Assembly (WHA) in May 1980.

Mode of transmission

- Infection usually occurs via the respiratory tract (droplet spread) or skin inoculation. The conjunctivae or the placenta are occasionally the portals of entry.
- Deliberate release.

Incubation period

- From 7–17 days. Most commonly 12–14 days to onset of prodromal illness and 2–4 days more to onset of rash.

Period of communicability

- From the time of the development of the earliest rash lesions to disappearance of all scabs; about 3 weeks. The risk of transmission appears to be highest in the first week after the appearance of the earliest lesions, through droplets from the oropharyngeal enanthem and subsequent oropharyngeal excretion of virus.

Susceptibility

- Susceptibility among the unvaccinated is universal.

Methods of control

- Control of Smallpox is based on the identification and isolation of cases, vaccination of contacts and those living in the immediate vicinity (ring vaccination), surveillance of contacts (including daily monitoring of temperature), and isolation of those contacts in whom the fever develops.

- Because of the relatively long period of incubation for smallpox, vaccination within a 3 day period after exposure prevents or attenuates clinical illness.

Security Sensitive Biological Agent

- Smallpox is a Tier 1 Security Sensitive Biological Agent (SSBA) under the *National Health Security Act* and requires storage in a Physical Containment (PC) 4 Laboratory.
- The list of SSBA defines which biological agents are of security concern. Tier 1 agents on the list of SSBA are those agents that pose the highest level of biosecurity risk.

Annex 2: Smallpox – public health priority

The following advice is a brief overview of a public health response. For more comprehensive public health advice, please refer to the [Smallpox SoNG](#).

Public health priority

URGENT – Respond to suspected, probable and confirmed cases immediately.

Smallpox has been eradicated as a naturally occurring infectious illness, with no known animal vector. The last naturally acquired case of smallpox in the world occurred in October 1977. Global eradication was certified by the WHO in 1979 and sanctioned by the World Health Assembly (WHA) in May 1980.

The re-introduction of smallpox would constitute a PHEIC under the IHRs. States party to the IHRs are required to immediately notify the WHO of any confirmed case of smallpox.

Routine smallpox vaccination of the Australian public ceased in the early 1970s. With waning immunity, susceptibility to infection is likely to be almost universal.

Any new cases of smallpox would likely be the result of either:

- a bioterrorism or bio-crime attack involving the deliberate infection of a person or the deliberate release of the virus into the environment, which will require an immediate response to control the outbreak and to protect the public from any additional release; or
- an unintentional infection in a laboratory (there are only two WHO approved virus research and repository laboratories, which are the Centre for Disease Control and Prevention (CDC) in Atlanta, Georgia, USA and the State Research Centre of Virology and Biotechnology, Novosibirsk, Russia).

Actions in the event of a suspected case

The aim of a response is to isolate the infectious case and create a barrier of immune persons around the case (ring vaccination). Post exposure vaccination may prevent or modify disease. The following actions should be undertaken as soon as possible:

- vaccinate first responders (healthcare and emergency workers who may come into contact with a smallpox case or specimens);

Note: there is no clear evidence of the time it takes for maximum antibody levels to be achieved. If vaccinated with ACAM2000 the protective immunity should begin about six to eight days after vaccination. This is only achieved however if the vaccine process “took” and protective immunity began.

- identify and isolate smallpox cases to prevent further disease spread;
- identify, vaccinate and monitor higher risk and lower risk primary contacts to prevent secondary cases; and
- identify, vaccinate and educate the household-like contacts of higher risk primary contacts to prevent tertiary cases.

This surveillance and isolation/quarantine strategy may be supplemented with large-scale vaccination, based on risk assessments. Targeted mass vaccination, in addition to the strategies listed above, is important if there are a large number of index cases or if there is a delay in commencing isolation/quarantine. Mass vaccination, of both affected and unaffected communities, may be undertaken.

Case management

Suspected, probable and confirmed cases should be immediately isolated and notified to the central state or territory Communicable Disease Branch, who will need to notify the NIR. The NIR should report to the WHO as soon as possible.

A follow-up investigation should begin on the same day as notification for all probable and confirmed cases. The level of response to suspected cases will depend on the level of suspicion after discussion with the NIR and the state Chief Human Biosecurity Officer.

Contact management

Identify primary contacts and categorise by their risk of developing infection.

- Identification of higher risk primary contacts is higher priority than identification of lower risk primary contacts.
- Prioritise identification of primary contacts exposed during the first seven to ten days of rash in the infectious case.

Potential for smallpox to be used as a biological weapon

The manner in which biological agents are used or released is classified into four categories:

- **Biowarfare** refers to the military use of biological agents;
- **Bioterrorism** is the use, or threatened use, of biological agents to intimidate or coerce a government, civilian populations or persons, to further political or social objectives;
- **Biocrime** refers to the use, or threatened use, of biological agents to further individual objectives. Examples of biocrimes include acts such as the deliberate infection or intoxication of individuals with intent to harm, incapacitate or intimidate; and
- **Bioaccident**, which is the unintentional release of a biological agent. The policing response to a release of a biological weapon may differ depending on the manner in which it is used. For example, a coordinated bioterrorist event may evoke a coordinated police response across multiple jurisdictions, whereas an isolated biocrime event may only require a localised response.

For research purposes, variola virus has been retained in two secure facilities in Russia and the USA. Unauthorised access to the virus is extremely unlikely. If it were released, variola virus is considered one of the most dangerous viruses. With a population that is largely non-immune, highly mobile, and living in densely populated urban areas, a release or intentional infection of one or more persons could conceivably lead to a national epidemic or global pandemic.

Note: [Annex 3](#) outlines some of the key aspects specific to the deliberate release of biological agents.

Modelling the effects of an outbreak of smallpox

In 2018, the Department of Health contracted the University of New South Wales to undertake modelling options that could mitigate the effects of an outbreak of smallpox on an Australian population with virtually no immunity to the virus.

The modelling considered a deliberate release of smallpox on the population of Sydney. The modelling concluded that without any intervention almost the entire population would be infected and 45% would die. An overall reproductive number of $R_0=4.6$ was estimated and vaccine coverage of 82% of the population would be required to control the epidemic.

A SEIR (a compartmental epidemic model – susceptible, exposed, infected, and recovered) model was modified for smallpox transmission which reproduced a smallpox outbreak accounting for immunosuppression and previously unvaccinated population.

The most effective strategy to contain the epidemic is ring vaccination of contacts, combined with rapid quarantine of all cases and exhaustive contact tracing. Mass vaccination is the next best option, but requires 82% of the population to be vaccinated if vaccine effectiveness is assumed to be 95%. The current quantity of vaccines in the NMS should be used as a stop gap measure to begin ring vaccination and protect health care workers however, plans will need to be in place to rapidly procure more vaccine.

Any delays in responding to a case of smallpox would severely impact the virus containment.

Facilities for isolation of the infected cases and a surge workforce to support thorough contact tracing, vaccination and quarantine of contacts is vital to containing epidemic. Rapid response time is critical and becomes even more critical when the initial infected number is higher.

The number of doses of vaccine needed will be dependent on:

- the initial number infected;
- how quickly the response starts;
- the percentage of infected cases which are isolated each day; and
- how many contacts are traced and vaccinated.

Annex 3: Infection control

These infection control procedures must be observed by all persons who are involved in the care of, or are in contact with, suspected, probable and confirmed cases of smallpox, including visitors to patients, ambulance personnel or health care staff. Wherever possible, visitors must be excluded from entering the patient's room. Exceptions to this may be considered only on a case-by-case basis for those who are essential to the patient's wellbeing e.g. in the case of patient who is a child.

All staff caring for a smallpox patient must be (recently or immediately) vaccinated against smallpox. Healthcare workers caring for the first cases of smallpox prior to the availability of smallpox vaccine are to wear full PPE when in the room with the case and it is recommended that these healthcare workers are provided with an infection control buddy to observe any breaches.

A risk assessment approach should be performed to assess the correct level of Personal Protective Equipment (PPE) for providing care to a suspected, probable or confirmed smallpox patient in accordance with the Australian guidelines for the prevention and control of infection.

During acute disease, the main hazards are:

- exposure to infectious droplets and bodily fluids;
- exposure to discarded dressings and other clinical waste; and
- exposure to clothing, sheets and towels that have been contaminated by infectious body fluids or shed scabs.

Hand hygiene

Strict hand hygiene with alcohol-based hand rub or disinfectant (liquid) soap should be carried out immediately before and after all episodes of care, including before putting on gloves and after removing gloves.

PPE

Standard, contact and airborne precautions are required for all interaction with suspected, probable and confirmed cases of smallpox. At a minimum, PPE should include a fluid-resistant gown, gloves, eye protection and a p2/N95 mask. Aerosol generating procedures should be avoided whenever possible, but if considered to be essential then all skin and hair should be fully protected.

PPE must be used by health care workers (including vaccinated personnel) caring for any patients with suspected, probable or confirmed smallpox. At a minimum, PPE should include a fluid-resistant gown and protection of the hands and mucus membranes of the eyes, mouth and nose. All skin and hair should be fully protected if aerosol-generating procedures are being performed or likely to be required urgently.

Isolation and restriction

The ultimate goal of isolation is to prevent transmission of smallpox from a patient who is infectious (from onset of symptoms until all scabs have separated) to non-immune

individuals, whilst maintaining an appropriate level of care and comfort for the patient and their carer's. All potential methods of patient isolation must be considered with these goals in mind.

Suspected, probable and confirmed cases, and any person (i.e. higher risk contact) who requires assessment to determine if they are a suspected case, should be immediately isolated and transferred to a state or territory designated isolation facility or hospital using appropriate infection control procedures. If hospital facilities are at capacity, suspected smallpox patients who do not require hospital care may be isolated in non-hospital facilities that do not have shared ventilation systems with other facilities. Cases should remain isolated until all scabs have separated or smallpox is excluded.

For further details and broader information on infection control please refer to the [Smallpox SoNG](#) and the [National Health and Medical Research Council \(NHMRC\)](#) guidelines for the Prevention and Control of Infection in Healthcare (2019).

Annex 4: Key aspects of biological agents

Table 9: **KEY ASPECTS OF BIOLOGICAL AGENTS**

Biological

Biological materials for the purposes of this plan include toxins of natural origin or pathogens that cause disease in humans. This includes dangerous bacteria, viruses, fungi and biological toxins. Several biological agents/diseases could be adapted and used as terrorist weapons, including smallpox, anthrax, tularaemia, plague, abrin, ricin and botulinum toxin.

Health impact

Management of biological organisms which cause harm to humans, and the treatment of those affected is the essence of much of our health system. The difference in an INS will be their deliberate use. Many of the systems used to detect, assess and contain the natural spread of organisms will be the same, however intelligence regarding the intent of the perpetrators may also be important to identify source, route of transmission and changes to the organism itself.

Existing surveillance systems may need to be adapted to look for specific patterns, symptoms or exposures in order to identify affected individuals, such as large groups of unexplained cases or unexpected, unusual or unseasonal incidents of disease. As smallpox has been eradicated as a naturally occurring infectious illness, capacity to recognise signs and symptoms of the disease will be low. Consideration of smallpox as a potential cause of illness will also be unlikely. If a threat is received or a case identified, communication activities will be important to raise awareness within the health sector.

There will be a delay before individuals show symptoms related to exposure to most biological agents. This may lead to considerable spread of the organism before identification and containment.

Dispersal method

Deliberate dispersal of a biological agent could involve the release of the agent, or the intentional infection of one or more persons.

Deliberate release may produce different epidemiologic patterns to natural outbreaks. Well planned aerosolised release of an agent may produce large numbers of cases with clustered onsets, even in the absence of person-to-person transmission. Establishing epidemiologic association amongst these cases could be problematic, depending on the site and extent of biological agent dispersion. Unlike other incidents there may be no defined incident site.

If introduced through infected persons, the origin of the biological agent (index case) and the extent of the outbreak could probably be tracked using standard epidemiologic and laboratory methods.

Key documents

- Health CBRN Plan.
- Smallpox Plan.

- Smallpox Laboratory Case Definitions (LCD) and the Smallpox Series of National Guidelines (SoNGs) for clinical and public health management.
- Guidelines for Epidemiological Investigation of multi-jurisdictional outbreaks that are potentially foodborne.

Annex 5: Legislation and international obligations

International Health Regulations 2005 (IHR)

As a signatory to the IHR, Australia is expected to establish systems to effectively manage public health threats and strengthen and maintain the capacity to detect, report and respond to public health events. The aim of these preparations is to help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide.

Under the IHR each country has a designated National Focal Point which can be used to share information about significant public health issues and provides the central point of coordination with WHO on all matters related to the IHR.

Under the IHR, the WHO has established case definitions for the following four critical diseases which are deemed always to be unusual or unexpected and may have a serious public health impact and must always be notified to WHO in all circumstances:

- smallpox;
- poliomyelitis due to wild type poliovirus;
- human influenza caused by a new subtype; and
- severe acute respiratory illness.

National Health Security Act 2007

Australia implements the requirements of the IHR through the *NHSA 2007* and the *National Health Security Regulations 2008*. This supports the sharing of public health information between the Australian and State and Territory Governments, establishes the SSBA Scheme and ties Australia into a global system of reporting and notification of incidents.

National Health Security Agreement

The National Health Security Agreement provides the mechanisms to enable cooperation at all levels of Australian government to achieve enhanced surveillance and information exchange to support this objective. Health is the nationally competent authority under the IHR.

Biosecurity Act 2015

The *Biosecurity Act 2015* commenced on 16 June 2016 and fully replaced the *Quarantine Act 1908* in managing human biosecurity risks at Australia's international borders. This Act provides a modern, flexible framework to manage biosecurity risks posed by international movements of people, goods and conveyances. Powers relating to human biosecurity under the Biosecurity Act are focused on Listed Human Diseases. Smallpox is one of these.

Australian Counter-terrorism laws

The key legislation relating to counter-terrorism powers includes the:

- Constitution (section 51 – Powers of the Parliament)

- *Criminal Code Act 1995* (Cth)
- *Crimes Act 1914* (Cth)
- *Australian Security Intelligence Organisation Act 1979* (Cth)
- *Defence Act 1903* (Cth)

Each state and territory has enacted its own legislation regarding counter-terrorism powers within that jurisdiction.

Information on Australia's counter-terrorism laws can be found on the [National Security website](#).

Biological and Toxin Weapons Convention

The SSBA Regulatory Scheme contributes to fulfilment of Australia's obligations under the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction and UN Security Council Resolution 1540.

The Australian Safeguards and Non-proliferation Office (ASNO)

ASNO ensures Australia meets its international obligations in relation to nuclear and chemical weapons, and supports Australian obligations in relation to biological weapons.

Annex 6: Glossary and definitions

Term	Definition
Australian (Counter) Bioterrorism Laboratory Network (ABLN)	<p>The ABLN brings together laboratory experts from public health and law enforcement sectors to strengthen national capacity and enhance coordination of detection, identification and response to biological agents of security concern.</p> <p>The ABLN has representatives from key public health laboratories in Victoria, Queensland, Western Australia and New South Wales (NSW). Also represented are the AFP Forensic Operations, NSW Police Force Forensic Counter-terrorism Laboratory, AAHL, DSTO, Weapons Technical Intelligence, AFP.</p>
Affected jurisdiction	A state or territory where an incident has occurred (or is expected to occur).
Australian Government Crisis Committee (AGCC)	The primary forum for coordinating the Australian Government response to a major incident including consolidating information and coordinating information exchange, advising ministers and coordinating implementation of ministerial decisions and coordinating with states and territories to implement additional measures if needed.
Australian Health Protection Principal Committee (AHPPC)	The peak national health emergency management committee, with the authority to plan, prepare and coordinate the national Health response to significant incidents.
Biological Agent	A microorganism which causes disease in man, plants, or animals or causes the deterioration of material.
Casualties	The human impact of a disaster or emergency presented in the form of numbers of people killed, injured, sick, missing or homeless.
CBRN	Chemical, Biological, Radiological or Nuclear
CBRNINS	Chemical, Biological, Radiological or Nuclear Incident of National Significance.

Term	Definition
Command	Refers to the direction of members and resources of an agency/organisation in the performance of the agency/organisation's roles and tasks. Authority to command is established by legislation or by agreement within the agency/organisation. Command relates to agencies/organisations only, and operates vertically within the agency/organisation.
Communicable Disease Network of Australia (CDNA)	A standing-committee of AHPPC responsible for national public health coordination of communicable disease surveillance, prevention and control. CDNA provides policy advice on the control of communicable disease and liaises with other regional communicable disease agencies and programs.
Consequence management	Measures taken to alleviate suffering, damage, loss and hardship, protect public health and safety, restore essential government services and provide emergency relief to governments, businesses and individuals affected.
Control	<p>Refers to the overall direction of the activities, agencies or individuals concerned. Control operates horizontally across all agencies/organisations, functions and individuals. Situations or incidents are controlled.</p> <p>The NatHealth Arrangements do not relate to the concept of control of the Australian health sector, nor is it intended to direct or replace incident management arrangements by individual jurisdictions or health authorities.</p>
Coordination	Coordination is the act of managing inter-dependencies between activities. In emergency management, coordination involves the bringing together of many organisations to pursue a common goal and to share resources, information, expertise and decision making.

Term	Definition
Crisis management	Deliberate and immediate management for WoG consideration of policy, decision-making and coordination for the prevention and/or resolution of situations/incidents, in order to maintain national security and confidence in government.
Emergency	An event, actual or imminent, which endangers or threatens to endanger, life, property or the environment, and which requires a significant or coordinated response.
Emergency Operations Centre	A site established to collocate agencies working together to respond to an emergency. There is usually one in overall control with response sectors, such as health, establishing subordinate operations centres to coordinate their activities.
Hazard	A condition that may cause harm to people or damage to property or the environment.
International Health Regulations (IHRs)	An international legal instrument binding on 194 countries across the globe, including all the Member States of the WHO. The aim is to help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide. The IHRs require countries to report certain disease outbreaks and public health events to the WHO.
National Crisis Committee (NCC)	The primary forum for coordinating a WoG response to an incident of national significance including consolidation of information and coordination of information exchange, advice to ministers and coordination of ministerial decisions across the Australian, state and territory governments.
National Health Emergency Response Arrangements (NatHealth Arrangements)	The principal response document of the AHPPC that outlines the strategic authorities, responsibilities, arrangements and mechanisms that enable a coordinated national health sector response to emergencies of national consequence.

Term	Definition
National Incident Room (NIR)	An operational response capability located within Health. The NIR acts a conduit for national coordination of response and recovery operations within Health and between state and territory health authorities, other Australian Government operations centres and the international Health community.
Preparedness	Arrangements to ensure that, should an emergency occur, all those resources and services which are needed to cope with the effects can be efficiently mobilised and deployed. In relation to an emergency, includes arrangements or plans to deal with an emergency or the effects of an emergency. This may include establishing the plans, training, exercises, and resources necessary to achieve readiness for all hazards.
Prevention	Measures to eliminate or reduce the incidence or severity of emergencies by preventing events from occurring or, where this is not possible, by putting in place arrangements to mitigate their effects.
Public Health Laboratory Network (PHLN)	A standing-committee of AHPPC. A collaborative group of laboratories which have expertise, and provide services, in public health microbiology, including veterinary microbiology with a human health impact. PHLN develops nationally consistent guidelines for the laboratory based detection and monitoring of notifiable infectious diseases.
Recovery	In relation to an emergency, the coordinated process of supporting affected communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical wellbeing.
Ring vaccination	The vaccination of all susceptible individuals in a prescribed area around an outbreak of an infectious disease. Ring vaccination controls an outbreak by vaccinating and monitoring a ring of people around each infected individual. The idea is to form a buffer of immune individuals to prevent the spread of the disease.

Term	Definition
Risk management	The systematic application of management policies, procedures and practices to the tasks of identifying, analysing, evaluating, treating and monitoring risk.
Security Sensitive Biological Agent (SSBA) Regulatory Scheme	The SSBA Regulatory Scheme is administered by Health. The Scheme aims to limit opportunities for acts of bioterrorism or biocrime to occur using harmful biological agents. It also provides standards for the handling and transport of samples from affected animals or persons. The Scheme builds on Australia's obligations under the Biological and Toxins Weapons Convention and UN Security Council Resolution 1540.
Terrorist act	<p>An act, or a threat to commit an act, that is done with the intention to coerce or influence the public or any government, by intimidation to advance a political, religious or ideological cause and the act:</p> <ul style="list-style-type: none"> • causes death, serious harm or endangers a person; • causes serious damage to property; • causes a serious risk to the health or safety of the public; or • seriously interferes with, disrupts or destroys critical infrastructure such as a telecommunications or electricity network.
Whole of Government (WoG)	Including state, territory and Australian government agencies.