

This document provides a brief overview of the *HPAI Response Plan: The Red Book*. It is intended to be an easy to use reference for responders at all levels. Please see the *HPAI Response Plan* for details on any aspect of this guide.

Goals of an HPAI Response

There are three goals of an HPAI response: to (1) detect, control, and contain HPAI in poultry as quickly as possible; (2) eradicate HPAI using strategies that seek to protect public health and the environment, and to stabilize animal agriculture, the food supply, and the economy; and (3) provide science- and risk-based approaches and systems to facilitate continuity of business for non-infected animals and non-contaminated animal products.

Achieving these goals will allow individual poultry facilities, States, Tribes, regions, and industries to resume normal production as quickly as possible. They will also allow the United States to regain HPAI-free status without the response effort causing more disruption and damage than the disease outbreak itself.

Response Strategies

The United States' primary control and eradication strategy for HPAI in poultry is stamping-out. If the spread of HPAI outpaces the resources for stamping-out, or if other factors direct the response away from a stamping-out strategy alone, emergency vaccination strategies may be considered.

Currently it is not possible to delineate *a priori* the specific factors that might signal the need to deviate from an exclusive stamping-out strategy. A decision to use emergency vaccination will be based on the prevailing epidemiological circumstances during the outbreak. If emergency vaccination is used in an outbreak, an emergency vaccination to kill or emergency vaccination to live strategy could be implemented.



Factors Influencing HPAI Response Strategies

Many factors will be considered when determining whether a particular response strategy would be appropriate and advantageous in responding to an HPAI outbreak. No factor will independently dictate a response strategy, or a decision to employ emergency vaccination; there are many factors that will influence the decision of whether and how to vaccinate. Such factors will include

- ◆ resources available to implement response strategies,
- ◆ population density of susceptible animals,
- ◆ origin and location of outbreak,
- ◆ distribution and spread of outbreak,
- ◆ disruptions to interstate commerce,
- ◆ disruptions to international trade,
- ◆ public acceptance of response strategy or strategies,
- ◆ assessments of control strategies, and
- ◆ HPAI vaccine availability.



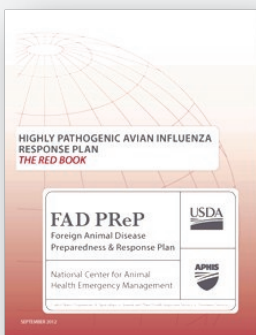
Three Epidemiological Principles of Response

There are three key epidemiological principles that will form the foundation of any HPAI response effort.

1. Prevent contact between HPAI virus and susceptible animals.
2. Stop the production of HPAI virus in infected or exposed animals.
3. Increase the disease resistance of susceptible animals to HPAI.

HPAI Emergency Vaccination: Will We Use Vaccine?

As described in the *HPAI Response Plan*, the use of emergency vaccination strategies may be considered in an HPAI outbreak. An emergency vaccination strategy or strategies can help to achieve the goals of an HPAI response effort, based on the three epidemiological principles of response listed above. In order to be effective, an HPAI vaccine must be matched to a specific strain. An HPAI response may use one or more strategies to control, contain, and ultimately eradicate HPAI in domestic poultry. In an effort to safeguard international trade, use of vaccines with differentiation of infected and vaccinated animals (DIVA) capability will be considered. The use of emergency vaccination will be determined by the Unified Command Incident Commander, the State Animal Health Official(s), and the Veterinary Services Deputy Administrator (U.S. Chief Veterinary Officer).



The response strategies mentioned on the previous page don't always mean the same thing to all stakeholders. To avoid miscommunication, here are the definitions and descriptions of the response strategies that are used in the *HPAI Response Plan*.

Overview

Stamping-out is the preferred and primary strategy for controlling and eradicating HPAI in the event of an outbreak. However, emergency vaccination may be considered in specific circumstances. For more information on vaccination for HPAI, please see the *NAHEMS Guidelines: Vaccination for Contagious Diseases--Appendix C: HPAI*.

Stamping-Out

Depopulation of clinically affected and in-contact susceptible animals.

This has been a commonly used approach in past HPAI outbreaks occurring in countries that were previously free of HPAI. This strategy is most appropriate if the outbreak is contained to a jurisdictional area or a region in which HPAI can be readily contained and further dissemination of the virus is unlikely.

Stamping-Out Modified with Emergency Vaccination to Kill

Depopulation of clinically affected and in-contact susceptible animals and vaccination of at-risk animals, with subsequent depopulation and disposal of vaccinated animals. Depopulation and disposal of vaccinated animals may be delayed until logistically feasible, as determined by Incident command and the VS Deputy Administrator (U.S. CVO).

This is a suppressive emergency vaccination strategy, where the goal is to suppress virus replication in high-risk susceptible poultry by using emergency vaccination and then depopulating vaccinates at a later date. This is the targeted vaccination of high-risk susceptible poultry.

Stamping-Out Modified with Emergency Vaccination to Live

Depopulation of clinically affected and in-contact susceptible animals and vaccination of at-risk animals, without subsequent depopulation of vaccinated animals. Vaccinated animals intended for breeding, slaughter, or other purposes live out their useful lives.

This is a protective emergency vaccination strategy, where the goal is to protect susceptible poultry from infection using emergency vaccination with the deliberate intent to maintain vaccinates for the duration of their usefulness. This is a targeted vaccination of non-infected poultry, and may include the vaccination of layers, valuable genetic stock, or endangered birds.


Wild Birds

The World Organization for Animal Health (OIE) defines notifiable avian influenza (NAI) as an infection of poultry (Article 10.4.1, *Terrestrial Animal Health Code 2012*). Additionally, "a Member should not impose immediate bans on the trade in poultry commodities in response to a notification...of infection with HPAI or LPAI virus in birds other than poultry, including wild birds" (see Article 10.4.1 for further clarification). However, where wild birds

represent a reservoir and a transmission risk to domestic poultry, surveillance, biosecurity, and other measures would be necessary components in proving disease-freedom. The onus is on the Member country to provide scientific data, explaining the epidemiology of NAI in the area and demonstrate that the risk of infection from wild birds is managed (see Articles 10.4.27 and following for more information.)



What Else Will Occur During an HPAI Response?

 Critical activities and tools must be implemented to execute and support any response strategy. These activities and tools must support a science- and risk-based approach that protects public health, animal health, and stabilizes animal agriculture and the economy. Some of the critical activities that will be employed include:

- ◆ Swift imposition of effective quarantine and movement controls
- ◆ Rapid diagnostics and reporting
- ◆ Epidemiological investigation and tracing
- ◆ Increased surveillance
- ◆ Continuity of business measures for non-infected premises and non-contaminated animal products
- ◆ Biosecurity measures
- ◆ Cleaning and disinfection measures
- ◆ Effective and appropriate disposal procedures

- ◆ Mass depopulation and euthanasia (as the response strategy indicates)
- ◆ Emergency vaccination (as the response strategy indicates).



Coordinated Public Awareness Campaign

Regardless of the response strategy or strategies selected, a public awareness campaign will be coordinated. This will support the response strategy by widely disseminating key communication messages and

- ◆ engaging and leveraging Federal, State, Tribal, local, and stakeholder relationships to provide unified public messages for all audiences;
- ◆ addressing the issues and concerns relating to food safety, public health, and animal welfare; and
- ◆ addressing issues and concerns related to interstate commerce, continuity of business, and international trade.