



Highly Pathogenic Avian Influenza (HPAI) Incursion Health Sector Framework

A joint Ministry of Health | Manatū Hauora and Health New Zealand | Te Whatu Ora framework to prepare for and respond to an HPAI incursion in animals



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1. Introduction

Purpose of the HPAI Incursion Health Sector Framework

This Incursion Health Sector Framework (HSF) is a joint Ministry of Health | Manatū Hauora and Health New Zealand | Te Whatu Ora document outlining the health sector preparedness and response activities for an epizootic of Highly Pathogenic Avian Influenza (HPAI) in New Zealand. The anticipated strain of HPAI is H5N1, but the plan equally applies to any other strain of HPAI that has zoonotic capability. It also outlines the response to a human case, in the absence of sustained human-to-human transmission.

The overall responsibility for HPAI preparedness and response in animal populations lies with the Ministry for Primary Industries (MPI), however there is a significant component of government activities that sit with the health sector, particularly for the management of risk to humans and response to any human cases.

MPI is coordinating a process for the development of a Memorandum of Understanding (MoU) between MPI, Ministry of Health and HNZ - this MoU governs the intersectoral response, while the HSF outlines the health sector response. The MoU will detail arrangements between the three agencies around:

- Intelligence Sharing
- Readiness and Response
- Notification / Escalation
- Surveillance
- Roles and Responsibilities

This HSF is not a pandemic plan – it is designed to address the situation where HPAI has the potential to infect humans from wildlife and/or domesticated animals in New Zealand, but there is no or extremely limited recognised human-to-human spread. In this situation HPAI can be treated as an environmental or occupational hazardous exposure, rather than a human outbreak. If sustained human-to-human transmission begins to occur, the New Zealand Pandemic Plan becomes the operational document for government response to HPAI.

This HSF outlines the high-level strategic and operational response to a HPAI incursion and complements the technical and clinical guidance contained within the *Communicable Diseases Control (CD) Manual*¹. This is a living document and may be updated as the international and domestic epidemiological and virological picture evolves.

Aims

This plan aims to:

1. Ensure the health system is prepared to recognise and manage human exposures or possible cases associated with an incursion in the animal population.
2. Minimise the risks of transmission to humans from infected environments, animals and humans
3. Support a co-ordinated and effective response between agencies.

¹ [Communicable Disease Control Manual – Health New Zealand | Te Whatu Ora](#)



4. Provide for co-ordinated and effective public information management and advice to potentially affected industries and workers.

Te Tiriti O Waitangi

The health sector is committed to honouring the special relationship between Māori and the Crown under Te Tiriti o Waitangi. As the steward of the health system, the health sector will enable Māori to exercise authority over health and wellbeing and achieve equitable health outcomes in ways that enable Māori to live, thrive and flourish as Māori. Equity for Māori is part of our Te Tiriti obligations; but also, part of the wider focus on equity for all populations.

The Pae Ora (Healthy Futures) Act 2022 outlines principles for improving equity in health outcomes for Māori. Health entities must be guided by these principles as far as reasonably practicable, having regard to all the circumstances, including any resource constraints, and to the extent applicable to them. At a high level, these principles are that the health sector should:

- be equitable
- engage with Māori, other population groups and other people to develop and deliver services and programmes that reflect the needs and aspirations of those groups
- provide opportunities, where appropriate, for Māori to exercise decision-making authority on matters of importance to Māori
- provide choice of quality services to Māori
- protect and promote people's health and wellbeing, particularly the health and wellbeing of Māori.

Pae ora also reflects a holistic, indigenous view of health and includes three interconnected elements: mauri ora, whānau ora and wai ora. With this mind, any response to an incursion must identify and consider potential cultural impacts to traditional practices with a view of maintaining the mauri, whānau and wai ora states.

This HSF and associated plans will be developed in keeping with these commitments giving practical effect by working with Māori across agencies, entities, hapū and iwi.

Focused engagement with Māori will be developed through a bespoke plan led by MPI and the Department of Conservation (DoC), supported by the Ministry of Health and HNZ. Key messaging will be created and disseminated in partnership with and through Māori and local networks. Understanding the potential impacts on whānau, hapū, iwi and the taiao are imperative, as are locally led solutions for mitigating impacts. Further specific activities relative to mahinga kai and workplaces with high Māori employment in affected areas is outlined later in this document.

We will engage with the Iwi Māori Partnerships Boards to ensure we are working in ways that will deliver the best outcomes for Māori, as the nature of an HPAI incursion changes.

2. International situation

The H5N1 strain of HPAI is currently causing a panzootic, affecting most countries and regions of the world. For some species, the virus has a high degree of lethality (with a spectrum of severity in humans), while others are only mildly affected. Australia, New Zealand and most Pacific nations are currently believed to be HPAI H5N1-free. MPI advises that it is possible that the virus will arrive via migratory birds in

the near future, and that eradication is unlikely to be achievable. This will potentially lead to a permanent wildlife reservoir of the virus which will present a persistent risk of jumping to agricultural herds/flocks, and potentially humans who work with or interact with wild and domesticated animals.

H5N1 continues to spread globally amongst animals, with infections in new species regularly being reported, and sporadic animal-to-human transmission. There is evidence of likely mammal-to-mammal transmission occurring in both agricultural animals (e.g., dairy cattle in the US, foxes, mink, and raccoon dogs on fur farms in Europe) and wild populations (e.g., seals and sea lions in South America).

On 26 March 2024 the Texas Animal Health Commission announced the detection of H5N1 in dairy cattle in Texas and Kansas, associated with a relatively mild clinical illness in those animals. This was the first known transmission to dairy cattle globally. This outbreak subsequently infected several humans working at dairy farms – the first known instances of a non-human-mammal transmitting the virus to a human. This event has led to a significant increase in risk perception among the public, however the World Health Organization (WHO) continues to assess the general public health risk to be low.

3. New Zealand's H5N1 response system

The lead agency for H5N1 preparedness and response is MPI, with Biosecurity New Zealand (BNZ) leading much of the operational planning. MPI coordinates a One Health-based interagency response, where MPI is responsible for agricultural and companion animals, DoC is responsible for wildlife, and the Ministry of Health is responsible for human health. Health New Zealand (HNZ) works with the Ministry of Health as the operational readiness and response agency.

The Department of Prime Minister and Cabinet (DPMC) coordinates all-of-government emergency and security planning and response. DPMC hosts the Officials Committee for Domestic and External Security Coordination (ODESC) and forms Watch Groups, which will be activated in the event of an H5N1 incursion in New Zealand.

4. Relevant Legislation and Plans

Health Act 1956

The Health Act provides the main legislative basis for the surveillance and management of infectious diseases in humans. For an incursion scenario, this will largely be the legislation under which risk to humans is managed. The Health Act enables the notifiable diseases surveillance system, and it enables Medical Officers of Health and other statutory officers or delegates to undertake functions such as case investigation, contact tracing, isolation/quarantine and preventing certain activities.

Epidemic Preparedness Act 2006

The Health Act specifies a list of quarantinable diseases, an outbreak of which may trigger the declaration of an Epidemic Notice and other actions under the Epidemic Preparedness Act. H5N1 is a quarantinable disease as it is encompassed by the definition of "Avian influenza (capable of being transmitted between human beings)" – this means that an Epidemic Notice may be declared in response to an outbreak of H5N1. The declaration of an Epidemic Notice is one of the triggers for Section 70 and 71 of the Health Act to be activated, which expands the usual suite of powers available to Medical Officers of Health.



The New Zealand Pandemic Plan

The New Zealand Pandemic Plan (NZPP) outlines the all-of-government measures that will be considered in the event of a pandemic and is part of the National Health Emergency Plan. The NZPP would become the main operative document in the event of an HPAI pandemic with sustained human-to-human transmission. The NZPP is currently being reviewed in light of the experience with COVID-19 and will be substantively updated after the NZ Royal Commission COVID-19 Lessons Learned report is published. An interim NZPP update was published in July 2024.

The Biosecurity Act 1993 is also relevant to the management of an HPAI incursion, but provisions under this legislation are largely within the remit of MPI and DoC via designated Chief and Deputy Chief Technical Officers.

One Health agencies have also developed specific operational plans for response activities, which will guide their governance and operational response structures and actions.

5. Roles and responsibilities in the health sector

The Ministry of Health | Manatū Hauora (led by the Public Health Agency)

- Strategy and policy related to human health impacts of HPAI
- Setting direction and monitoring health sector preparedness and response
- Being the lead advisor to the Minister on the strategic response to HPAI
- Leading strategic interagency collaboration
- New Zealand's International Health Regulations National Focal Point and any communications with other countries or international bodies
- Authorising any release of National Reserve Supply stocks

Health New Zealand | Te Whatu Ora (HNZ)

- Operational readiness and response to HPAI
- Developing clinical and technical guidance for health services, including public health interventions such as contact tracing, isolation and post-exposure prophylaxis
- Testing and treating cases and exposed people and providing public health interventions
- Developing infection prevention and control guidance for potentially exposed occupational groups
- Advice to the public, including infection prevention and control guidance for non-occupational settings
- Operational public health surveillance, including situational reporting and gathering information on cases, exposures and risks
- Leading communications with the health sector and the public on the impact of HPAI on human health and health system preparedness
- Leading the process of distributing and delivering vaccines in the event the decision is made to use them.

The Institute of Environmental Science and Research (ESR)

- On behalf of the Ministry of Health | Manatū Hauora, ESR provide public health laboratory, surveillance and outbreak response services



- Managing national Acute Respiratory Illness (ARI) surveillance systems, including HPAI notifiable disease surveillance
- Operating the National Influenza Centre, providing reference laboratory and subtyping services
- Maintaining international surveillance of HPAI and public health risk assessments
- Supporting surveillance system adaptation, epidemiological investigations and laboratory development activities for preparedness and response
- Providing strategic and operational technical advice and epidemic intelligence to the Ministry of Health and HNZ on HPAI

WorkSafe

- Technical input to infection prevention and control guidance for occupational settings

6. Current HPAI surveillance in humans

HPAI (including the H5N1 subtype) is currently a notifiable disease under the Health Act in New Zealand. The *Communicable Disease Control Manual* contains national guidance for suspected case notification to the local Medical Officer of Health at the National Public Health Service, as well as a Direct Laboratory Notification pathway. Case notifications including epidemiological and laboratory information are recorded in EpiSurv, the national notifiable disease database. ESR coordinates surveillance for this. The notification pathway (either a direct lab notification, or a notification from a healthcare provider) is the primary mechanism by which public health services will become aware of a human case.

H5N1 is an influenza A virus, therefore it requires subtyping to distinguish it from seasonal influenza. At present, diagnostic laboratories around the country generally employ influenza RT-PCR testing that detects the presence of influenza A with a high degree of sensitivity and specificity. A few laboratories have current capability to subtype influenza A into H1 or H3, with the expectation that a non-H1/H3 result will trigger investigation for non-seasonal influenza. Specific H5 RT-PCR subtyping is currently available at the WHO National Influenza Centre national reference laboratory operated by ESR, and some diagnostic laboratories. A subset of influenza positive samples from diagnostic laboratories are routinely sent to ESR for further typing. Influenza A undergoes H1/H3 subtyping and, if negative for either, may undergo H5, H7 and H9 testing. In addition, during the winter illness season laboratories are asked to send an additional five samples per week for typing.

Samples from any patient may be subtyped for an HPAI if requested by a clinician – this would require reasonable suspicion that the patient has non-seasonal influenza. This may arise due to the time of year (in the absence of a history of travel overseas or exposure to overseas travellers), or a history of exposure to infected animals, animal products, environments or human cases, either overseas or in the event of a known domestic HPAI incursion. Turnaround time is highly variable depending on the local laboratory's capability.

ESR also coordinates acute respiratory illness surveillance programmes which may incidentally detect cases of HPAI or identify signals of unusual acute respiratory illness activity:

- Sentinel GP virological surveillance – a network of 50-100 general practice clinics around the country who take a respiratory swab from a subset of patients presenting with influenza-like illness (ILI) each week. These swabs are routinely subtyped by ESR as described above.



- Sentinel hospital surveillance – this system monitors patients admitted with severe acute respiratory infection (SARI) to respiratory wards and ICUs in Auckland City, Starship, Middlemore and KidzFirst Hospitals in the Auckland region. These sites were selected as New Zealand’s major tertiary referral hospitals, located in New Zealand’s largest international transportation hub and major population centre. Samples are referred to ESR in the same scheme as requested of all laboratories for subtyping. In addition, Middlemore hospital laboratory routinely subtype influenza A in house.
- Syndromic surveillance in community, hospital and institutional settings supports the detection of unusual acute respiratory illness outbreak activity which supports the initiation of epidemiological and laboratory investigations. This includes ILI surveillance using Healthline consultations, SARI surveillance in the Auckland region, and EpiSurv-based acute respiratory illness outbreak surveillance.

7. Activities with risk of transmission to humans

The activities listed in this section are those that are identified as *potentially* having increased risk of exposure to HPAI. Actual exposure risk will be determined by the epidemiology at the time, occupational/recreational practices, infection prevention measures, and other factors. This list informs the groups and activities that the health sector will consider in developing policy, guidance, communications and risk assessments.

Working with domesticated birds/mammals

- Poultry workers
- Dairy workers
- Veterinarians
- People involved in outbreak response (culling, decontamination, disposal etc.)
- Keeping backyard poultry
- People involved in sampling and testing animal products

Working with wild birds/mammals

- Fishery workers
- DoC and other public land staff
- Field science staff
- Veterinarians
- Wildlife rehabilitation staff

Other occupational activities:

- Working in or visiting live animal markets
- Zoo staff
- Human and animal laboratory staff
- Potentially healthcare workers caring for human cases, especially if adequate PPE is not worn

Camping, tramping and other wildlife interactions

- Specific levels of risk depend on specific activities, but direct exposure to wild birds or marine mammals may confer some risk



- Game bird hunting

Travellers to endemic countries undertaking above activities

Māori traditional gathering practices

- Bird hunting
- Gathering kaimoana around wild birds or marine mammals

8. Public Health Risk levels

The table below sets out a basic framework for assessing and staging public health risk of HPAI in New Zealand. Appendix 1 expands on this risk framework with guidance on in-depth actions to be undertaken by the health sector at each risk level.

Public Health Risk Level	Epidemiological Situation	Health Strategic Focus	Governing Plan
1	No known HPAI (H5N1) in New Zealand, Pacific Islands, Australia, Ross Sea Region, or Subantarctic islands	Preparedness and building One Health collaborative processes	BAU preparedness
2	HPAI (H5N1) present in Pacific Islands, Australia, Ross Sea Region, or Subantarctic islands, but not yet in New Zealand.	Ensuring clinical services and surveillance are prepared to detect human cases and proactive communications/guidance to at-risk groups	Health Sector Framework
3	Sporadic HPAI detection in New Zealand animals	Responding to specific exposures in humans and supporting specific groups	Health Sector Framework
4	Sustained HPAI transmission in New Zealand animals	Intensive surveillance, engagement with at-risk groups and the public, responding to exposures	Health Sector Framework
5	Sustained human-to-human transmission has been observed globally	Pandemic Preparedness and Response	New Zealand Pandemic Plan / National Health Emergency Plan

9. Incursion Response Activities

The *Communicable Disease Control Manual* outlines guidance for the response to individual human cases, contacts/people exposed to infected animals, and outbreaks of HPAI. This section outlines risk reduction and mitigation measures that will be applied to people undertaking higher risk activities, as well as measures used to respond to human cases in the context of known HPAI in New Zealand.

Notification of a case

- HPAI is a notifiable disease with national guidance for suspected case notification and direct laboratory notification pathways in place. See Appendix 2 for an outline of agency notification pathways.
- A HPAI Clinical and Technical Advisory Group (CTAG) would be stood up in the event of an animal or human case to provide expert guidance and support to the public health response.
- The Ministry of Health is responsible for notifying the World Health Organization of a human case in line with requirements under the International Health Regulations.

Public health management

The HPAI chapter of the *Communicable Disease Control Manual* provides comprehensive guidance regarding the public health management of cases and contacts.

Case Investigation and Management

- Detection of a human case should trigger immediate notification of local, regional, and national public health and biosecurity authorities / One Health partners. The National Public Health Service will immediately launch an investigation to determine the source of infection. It is particularly important to ascertain whether the case is imported, or whether acquisition has occurred within New Zealand from either animal or human sources.
- Suspected or confirmed human cases would be required to isolate during their infectious period.
- While many cases of HPAI globally have involved severe illness, a human case could initially present to primary care for assessment and depending on the severity of infection may need to be referred to a hospital setting for specialist assessment and/or management.
- In human cases, the antiviral medication Tamiflu (oseltamivir) reduces disease severity and mortality. Early treatment (ideally within 48h of symptom onset, but at any stage if the case is hospitalised) will be recommended for all suspected or confirmed cases, without awaiting lab confirmation.
- Tamiflu is available for hospitalised patients, and in the National Reserve Supply (NRS). Each district holds 560 treatment courses, with additional courses available centrally. Districts can make a request to the Director of Emergency Medicine to release these pre-positioned supplies. The NRS is currently running an RFP for antivirals supply – NRS may also include Baloxavir in the future, which is expected to be effective against H5N1. Tamiflu is also available on the private market, either on prescription or by pharmacist as long as the criteria relating to dosage, indication for use (treatment or prophylaxis) and age over 13 years of age are met.

Infection Prevention & Control Measures

- Routine infection prevention and control (IPC) measures (airborne and contact precautions) would be implemented in the event of a suspected or confirmed case in a healthcare setting.



Post-exposure measures

- In the event of an animal or human case, public health services, working in collaboration with national teams and the HPAI CTAG would undertake contact tracing and identify, assess, and manage exposed people.
- There may be a high number of exposed people in the event of an outbreak, and a risk stratified approach will be adopted, with more intensive management (e.g., Tamiflu post exposure prophylaxis) and monitoring (active, rather than passive) for those who are at highest risk (e.g. direct contact with animal case without PPE, or household contact of human case).
- If any exposed people develop symptoms, they should urgently be assessed as a possible case. They will be advised to self-isolate while arrangements are rapidly made for clinical assessment and investigation. They should start empirical treatment for HPAI using an appropriate antiviral agent, ahead of laboratory confirmation.
- Post exposure prophylaxis (PEP) may be recommended to be considered ahead of exposure to HPAI (e.g. for workers responding to an outbreak).

Enhanced Surveillance

Detection of a case of human infection will trigger intensive case management and contact follow up, including active surveillance of contacts for development of symptoms and subsequent testing. Specific guidelines will be published in the *Communicable Disease Control Manual*.

Additional or enhanced human surveillance measures will be implemented, including:

- Updating health sector comms including epidemiological risk factor information to direct testing and detection according to human case definition
- General public and targeted (to high-risk groups) communications to encourage engagement with healthcare in accordance with recommended assessment and referral pathway.
- Re-distribution of laboratory sampling, handling and referral advice.
- Implementation of enhanced occupational surveillance as agreed with Worksafe/MPI.
- Enhanced event-based surveillance – Activation of enhanced targeted community ARI outbreak reporting and investigations in communities associated with infected animals.
- Consideration of enhanced sentinel subtyping and tailored intelligence reporting through the acute respiratory illness surveillance system
- Consideration of targeted periodic surveys in humans (e.g. serology or PCR tests) to assess any undetected transmission
- Evaluation of the use of wastewater testing - the public health benefits of wastewater testing and how it relates to influenza A or H5N1 disease prevalence and burden in the community are still largely unknown and require evaluation in the New Zealand context

Quarantine of vessels

Provision is made for potential quarantine of vessels if needed as HPAI is included under Part 3, quarantinable infectious diseases in the Health Act 1956. HPAI conforms to the definition of "Non-seasonal influenza (capable of being transmitted between human beings)", given there are specific rare accounts of human-to-human transmission for the H5N1 strain.

Vaccination

Until November 2024, the National Reserve Supply (NRS) has 150,000 courses (a 2-dose schedule) of H5N1/Egypt pre-pandemic vaccine. A similar number of doses of H5N8/Astrakhan will replace this stock



once it expires. The NRS committee has determined that H5N8/Astrakhan is likely to have improved efficacy against the current strain of H5N1 compared to the Egypt vaccine, although this is based on laboratory experiments, with no human trials having taken place. The Director-General holds the sole authority to approve release of the pre-pandemic vaccine, taking into account the situation both internationally and in New Zealand, and on advice by the Director of Public Health. Medsafe approval is pending for the H5N8/Astrakhan vaccine but is expected to be complete by November 2024.

The current version (2013) of the “*H5N1 Pre-Pandemic Vaccine Usage Policy*” states that “if HPAI H5N1 is found in birds or animals in New Zealand, H5N1 vaccination will be offered to all MAF (now Ministry for Primary Industries) staff, contractors, or other people who, as part of their duties, may come into contact with birds or animals known or suspected to be infected, or which are being culled as a precautionary measure”.² This process would require a signed consent form, and bespoke vaccination delivery arrangements. HNZ will lead the process of distributing and delivering vaccines in the event the decision is made to use them.

Seasonal influenza vaccination for people undertaking high-risk activities (particularly occupationally exposed groups) is recommended in a number of jurisdictions including the US, UK, EU and Australia. The rationale behind this is to prevent co-infection with H5N1 and seasonal influenza A in order to mitigate the risk of “reassortant events” – where genetic material is passed between the two viruses creating a risk of increasing the severity or transmissibility of either virus strain. Such an event was likely the trigger of the H1N1 swine flu pandemic in 2008/9.

In New Zealand’s Immunisation Handbook, seasonal influenza vaccination is currently recommended (but not specifically funded) for:

- Veterinarians, veterinary students and veterinary nurses
- Zoo staff who work with primates
- Poultry workers and others handling poultry, including those who may be involved in culling during an outbreak of avian influenza, and swine industry workers.

In the event of an incursion, this recommendation will be further communicated with affected groups and employers, and consideration should be given to making funding available to extend eligibility to these groups during the usual vaccination season.

10. Stakeholder communications

Communications approach

The One Health approach to HPAI is reflected in our communications approach. MPI is leading and coordinating HPAI communications across its own portfolios, DoC, the Ministry of Health and HNZ. These four agencies attend a regular cross-agency HPAI comms hui and have contributed to a joint HPAI strategic communications approach. This is a four-phase approach that ramps up as the likelihood of an HPAI outbreak in New Zealand increases – these phases are aligned to the risk levels outlined in Section 7. Each phase will be supported by a detailed tactical communications plan including key messages, to be

² [National Health Emergency Plan: H5N1 Pre-Pandemic Vaccine Usage Policy | Ministry of Health NZ](#)



developed in advance. Work on the phase 1 tactical plan is underway, focusing on stakeholders who need to take action now to prepare for a possible incursion and/or protect against HPAI.

HNZ will lead communications with the health sector and the public on the impact of HPAI on human health and health system preparedness. HNZ and the Ministry of Health will collaborate, share, and seek input from one another on all HPAI communication products. Both public health entities will share, and seek input where appropriate, on HPAI communication products with MPI. MPI will likewise share and seek input on HPAI communication products where those products relate to human health.

Health & Safety Guidance

HNZ are working with the Ministry of Health, WorkSafe and MPI to develop specific HPAI guidance for the public and for those undertaking specific risk activities. These will be published as the risk profile changes. Cross agency work is underway to increase the likelihood of early detection through education of higher risk workers/sectors to be alert to symptoms.



Appendix 1 – Public Health Risk Levels and Health Sector Activities

This table is an indicative summary of health sector activities that may occur at each sequential public health risk level. The epidemiological characteristics of the virus may change from the time this guidance was developed, so the nature of activities or the specific risk level at which they occur may be adapted in response.

Risk Level 1	
Epidemiological Situation	No known HPAI in New Zealand, no known HPAI (specifically a strain expected to spread internationally e.g. H5N1) in Pacific Islands, Australia, the Ross Sea Region or Subantarctic islands
Health Strategic Focus	Preparedness and building One Health collaborative processes
Governing Plan	BAU preparedness
Surveillance Measures	Ongoing baseline surveillance: <ul style="list-style-type: none"> • ESR acute respiratory illness surveillance programme • GP sentinel surveillance programme • Routine Influenza A testing, clinically-driven subtyping in various local labs, with samples sent to ESR for confirmation
Public Communications	<ul style="list-style-type: none"> • Supporting MPI and DoC to harmonise messaging and include health messages • Responding to media requests • Communicate with clinicians to increase awareness of HPAI and need to take history of travel and high-risk activities
Prevention Activities	<ul style="list-style-type: none"> • Occupational Health and Infection Prevention & Control messaging for employers, with a preparedness focus • Consider recommending seasonal influenza vaccine for all at-risk occupational groups
Risk Level 2	
Epidemiological Situation	HPAI (specifically a strain expected to spread internationally e.g. H5N1) present in animals in Pacific Islands, Australia, Ross Sea Region, or Subantarctic islands
Health Strategic Focus	Ensuring clinical services and surveillance are prepared to detect human cases and proactive communications/guidance to at-risk groups
Governing Plan	Health Sector Framework
Surveillance Measures	As per level 1, plus: <ul style="list-style-type: none"> • Increase proportion of influenza A-positive samples that are subtyped either at local labs or at National Influenza Centre



	<ul style="list-style-type: none"> Event-based surveillance (unusual clusters or severe cases)
Public Communications	<ul style="list-style-type: none"> Outline high-risk activities and potential risks to travellers to affected areas Publish advice for the public on infection prevention
Prevention Activities	As per level 1
Risk Level 3	
Epidemiological Situation	Sporadic HPAI detection in New Zealand animals. Potential for sporadic domestic human cases
Health Strategic Focus	Responding to specific exposures in humans and supporting specific groups
Governing Plan	Health Sector Framework
Surveillance Measures	As per level 2, plus: <ul style="list-style-type: none"> Testing around specific exposures e.g. farm-level surveillance testing of workers Evaluate the use wastewater testing at limited number of sites
Public Communications	<ul style="list-style-type: none"> Significant increase in public-facing communications in concert with MPI, DoC and other agencies
Prevention Activities	As per level 2, plus: <ul style="list-style-type: none"> Recommend seasonal influenza vaccination for at-risk occupational groups and people undertaking high-risk activities Significant engagement with industry and other stakeholders (e.g. Fish and Game, MPI/DoC) around occupational health and IPC measures for staff
Risk Level 4	
Epidemiological Situation	Sustained HPAI transmission in New Zealand animals. Potential for sporadic domestic human cases
Health Strategic Focus	Intensive surveillance, engagement with at-risk groups and the public, responding to exposures
Governing Plan	Health Sector Framework
Surveillance Measures	As per level 3, plus: <ul style="list-style-type: none"> Significantly increase the proportion of influenza A-positive samples that are routinely subtyped (either H5 or H1/H3), through increased local capacity and capability or referral to other sites for subtyping If in use, consider expanding wastewater surveillance sites if animal surveillance indicates this is likely to be useful for public health or outbreak control purposes



Public Communications	Ongoing collaboration with One Health partners and engagement with the general public and at-risk groups
Prevention Activities	As per level 3, plus: <ul style="list-style-type: none"> The Director of Public Health will consider advice to the Director-General on the release of H5N1 pre-pandemic vaccine stocks as per section 17 "Animal Disease Scenario" of H5N1 Pre-Pandemic Vaccine Usage Policy
Risk Level 5	
Epidemiological Situation	Sustained human-to-human transmission has been observed anywhere globally
Health Strategic Focus	Pandemic Preparedness and Response
Governing Plan	New Zealand Pandemic Plan / National Health Emergency Plan
Surveillance Measures	<ul style="list-style-type: none"> As per pandemic plan Significant increase in surveillance coverage/depth, testing and lab capability will be required Expansion of wastewater surveillance may be implemented
Public Communications	<ul style="list-style-type: none"> As per pandemic plan
Prevention Activities	<ul style="list-style-type: none"> If clinically appropriate and proportionate to the public health risk posed, the Director-General will authorise release of H5N1 pre-pandemic vaccine as per section 3 "General Policy" of H5N1 Pre-Pandemic Vaccine Usage Policy



Appendix 2 – Human case notification

- Notification pathways between agencies for a human or animal case are in place. In the event of a suspected, probable or confirmed human case, the local public health service or ESR (whoever was notified of case) would immediately notify the NPHS Protection Clinical team, who immediately notify the Office of the Director of Public Health (ODPH) on-call and activate the communicable disease escalation pathway. The ODPH on-call would then notify appropriate people within the Ministry including the Director of Public Health, the Deputy Director General, Public Health Agency, and notification of MPI would be coordinated.
- In the event of an animal case, MPI would notify Health New Zealand via 0800 GET MOH (Option 1 – communicable disease). The on-call Clinical Protection team will immediately notify the ODPH on-call, who would immediately notify the Director of Public Health and the Deputy Director-General, Public Health Agency.
- Following notification, NPHS PHEMT would convene an initial assessment team within 1 hour to agree next actions, including standing up a national incident management team to coordinate the public health response.