



Australian Government

Department of Agriculture, Fisheries and Forestry

The 2007 equine influenza outbreak - a national perspective.

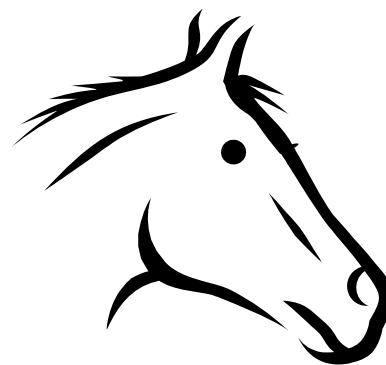


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Overview

- **Short summary of the outbreak**
- **Overview of the Epidemiology**
- **Vaccination**
- **Risk-based movements**
- **Proof-of-Freedom**



Summary of the outbreak

- **Two states affected – NSW and Qld – starting in mid-August**
- **Over 76,000 horses on 10,653 properties involved**
- **281,013 horses vaccinated during response**
- **No IPs reported since 25 December**
- **Provisional freedom declared on 14 March 2008**
- **Freedom declared on 30 June 2008**

Epidemiology - transmission

- **Initial spread associated with horse movements - direct horse contacts via 'events' e.g. Maitland, Narrabri, Warwick**
- **Local (lateral) spread: adjacent properties and properties in close geographical proximity**
high density, peri-urban areas (Sydney and Brisbane)
- **Airborne spread: new infections over distances up to 2-3 km with no apparent direct or indirect links**
- **Longer distance spread following implementation of controls – biosecurity issues?**
 - Temora, Forbes, Wellington
 - Indirect contact via fomites (including people, equipment)

Assessment

- **Despite a large number of IPs, infection remained contained**
- **Little increase in the number of clusters or the total area affected after 30 August**
- **Most subsequent cases were in-filling of already infected areas, associated with 'local spread'**
- **The number of reports of new infections peaked in late September - early October**
- **Long-distance virus travel via human movement occurred up till November 2007**
- **Last IPs infected 9 Dec (NSW) and 25 December (Qld)**

Commonwealth perspective

1. Vaccination

2. Risk-based Movement

3. Proof of Freedom

Vaccination

AusVetPlan states

Australia's policy is that vaccination will not be used if an EI outbreak is detected early and can be confidently contained by effective movement controls.

Vaccination of horses may be approved if:

- the disease is widespread when detected;
- significant numbers of horses are at immediate risk; or
- initial control methods have failed, and the disease has spread beyond the original RA and is likely to become endemic in the general equine population

Vaccination 2

On 17 September, there was national agreement to the use of vaccination to assist containment

- NSW and QLD revised their response plans to establish buffer zones based on natural barriers, horse-free areas and vaccination.
- These plans were endorsed by CCEAD and subsequently by NMG.

This decision was based on the perception that movement restrictions and biosecurity measures were not stopping spread of the epidemic.

Vaccination 3

Drivers

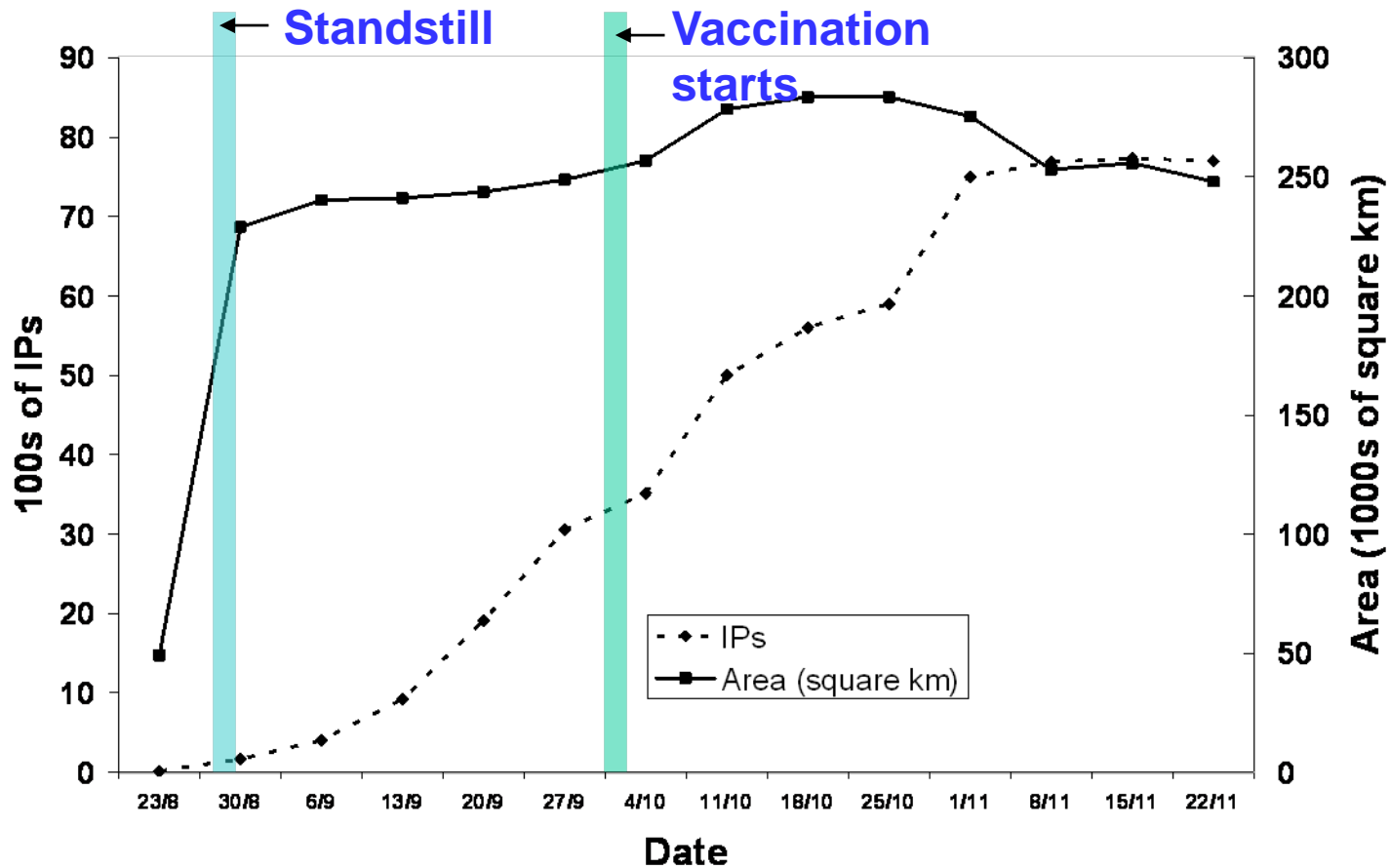
- Threat that epidemic was outstripping resources
- Protection of high-risk horses
- Later - key risk management strategy to allow horse events to recommence

Lessons learnt

- Vaccination can be used as part of an eradication campaign- even if the vaccination is imperfect
- GMO vaccine and cELISA validated DIVA approach to surveillance
- Vaccination as part of risk based movement of vaccinated horses was effective in allowing race meetings etc. to proceed

But further research is needed to determine whether the vaccine was effective in stopping spread because.....

But - did vaccination control the spread of EI?



Risk-based movements

AUSVETPLAN states

The overall policy is to control and then eradicate EI by:

- **quarantine and movement controls of equines, their products and other potentially contaminated items to prevent spread of infection;**
- **Restricted area – rigorous control on movements**
 - **No movements of horses will be permitted within the RA, except in exceptional circumstances and then only under permit.**
 - **All shows, sales and gatherings of horses within the RA will be prohibited.**
- **Control area – less stringent movement controls**



Risk-based movements 2

NMG (19 October) agreed that the containment and eradication of the disease and mitigation of socio-economic impacts need to be pursued in parallel.

- risk-based movements to accelerate “return to normal”

Significant Challenge

- Different to normal practice (no experience)
- Required in-depth epidemiological assessment

Risk-based movements 3

Purple zones

- **Highly infected but free movement facilitated breeding season for thoroughbred industry**

Green to White zone movement

- **Uninfected jurisdictions differentiated from uninfected regions of affected jurisdictions**
- **Approved by CCEAD on 17 Oct (revised 24 Oct)**
- **14 days PEQ and 14 days PAQ**
- **Due to concern re**
 - Limits of infected areas especially during early phase of epidemic
 - Integrity of amber – green boundary in NSW and QLD

Risk-based movements 4

Race meetings allowed

- initially only horses stabled on site, then
- Race meetings within green zones – risk assessment required

Proof-of-Freedom (AusVetPlan)

Proof of freedom from infection in declared areas can be established by:

- **absence of clinical disease in the RA**
- **introduction of unexposed, unvaccinated sentinel horses**
- **serological monitoring of horses in the RA and CA**
- **negative EI virus isolation from cases of acute equine respiratory disease occurring within the RA and CA.**

Proof of Freedom Working Group 1

CCEAD endorsed process

- phased process of reclassifying zones:
red→amber→green→white
- Each phase required comprehensive surveillance program (targeted and random)
- Provisional freedom
 - 3 months since last case
 - All IPs, DCPs and SPs resolved
 - All surveillance criteria met

Proof of Freedom Working Group 2

After provisional freedom declared, residual risk managed through:

- Travelling horse statements
- Event registration
- Continue bio-security measures at horse events and aggregations
- Continued opportunistic surveillance

until 30 June when green zones changed to white

Thank you



"You call it gambling, I call it losing"

- Chris Baldock