

Pandemic Postings

Current Alert Level: **WHITE** ([definition](#))
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National
 NZ Influenza Pandemic Action Plan v16 available soon MoH, 12/09/06. The Ministry of Health have advised that the new version of the NZ Influenza Pandemic Action Plan has been approved by Cabinet and will be published [online](#) soon.

International
 Indonesia: situation update [WHO, 08/09/06](#). Three further confirmed cases of human H5N1 avian influenza have been reported from Indonesia. Two of these cases, an 8-year-old female from Banten Province (fatality) and a 45-year-old male from Central Java Province (recovered), are cases dating back to 2005 and have been retrospectively defined as confirmed following revision of the WHO case definitions. The remaining case is a 14-year-old female from Makassar in South Sulawesi Province who developed symptoms on 18 June and died 24 June.

Background
 Revised WHO case definitions for avian influenza [WHO, 29/08/06](#). The WHO has released revised case definitions for H5N1 avian influenza to standardise reporting and classification, standardise terminology and to facilitate comparability of data across time and place. The case definition has four levels:

- *Person under investigation*. Person whom health authorities have decided to investigate for possible H5N1 infection.
- *Suspected H5N1 case*. Fever and cough or dyspnoea, and one of the following exposures in the 7 days prior to symptom onset: close contact with a person who is a suspect, probable or confirmed H5N1 case; direct contact with poultry, wild birds or environments contaminated by their faeces in an area where H5N1 infections in humans or animals are suspected or confirmed in the preceding month; consumption of raw/undercooked poultry from an area with suspected/confirmed H5N1 infections in poultry or humans; or close contact with a non-avian animal with confirmed H5N1 infection; or by handling samples suspected to contain H5N1.
- *Probable H5N1 case*. Either (1) meets criteria for suspected case and has either radiographic signs (infiltrates or evidence of acute pneumonia) and respiratory failure, or laboratory confirmation of influenza A infection but insufficient evidence of H5N1 infection; or (2) death with an unexplained acute respiratory illness and epidemiologically linked by time, place and exposure to a probable or confirmed H5N1 case.
- *Confirmed H5N1 case*. Meets criteria for suspect or probable case and has one of the following positive test results conducted at a laboratory whose H5N1 testing is accepted by WHO as confirmatory: isolation of H5N1 virus; positive H5 PCR results from tests using two different PCR primers; fourfold or greater rise in neutralisation antibodies between acute (collected <8 days following symptom onset) and convalescent specimens (convalescent titre must be ≥1:80); or microneutralization antibody titer for H5N1 ≥1:80 in a single serum specimen collected at day 14 or later after symptom onset, and a positive result using a different serological assay (eg, a horse red blood cell haemagglutination inhibition titer ≥1:160 or an H5-specific western blot positive result).

Current global avian influenza activity¹
 Confirmed human cases of avian influenza A/(H5N1), 24 Aug - 08 Sep 2006,¹ and outbreaks of highly-pathogenic avian influenza H5N1 in poultry, 20 Jul - 04 Sep 2006,² by country. The complete list of human cases and poultry outbreaks to date can be found on the [ARPHS website](#).

	Human ¹		Poultry ²
	cases	deaths	outbreaks
Cambodia	-	-	2
China	-	-	1
Egypt	-	-	17
Indonesia	3	2	4
Laos	-	-	1
Vietnam	-	-	2
TOTAL	3	2	27

Notes:
 1 As reported by [World Health Organization](#)
 2 As reported by [World Organisation for Animal Health \(OIE\)](#)

Background (contd)
 Fatal outcome of human influenza A (H5N1) is associated with high viral load and hypercytokinaemia [de Jong MD et al, Nat Med \[serial on the internet\] 10/09/06, \[cited 11/09/06\]](#). In a letter published online in *Nature Medicine*, researchers from the Oxford University Clinical Research Unit in Ho Chi Minh City present findings from studies on 18 individuals infected with H5N1, 13 of whom died. The following findings are described: H5N1 patients had more viral material in the throat than in the nose; H5N1 patients who died had the highest levels of viral RNA; viral RNA in blood was associated with high viral loads in throat specimens; and viral RNA was found in rectal specimens from 5 of 7 patients, 3 of whom had diarrhoea. H5N1 patients also had significantly higher levels of cytokines and chemokines than patients with seasonal influenza, and levels were particularly high in those who died. Low peripheral blood T-lymphocyte counts were also observed. The authors conclude that their observations indicate that high viral load, and the resulting intense inflammatory responses, are central to influenza H5N1 pathogenesis, and recommend that clinical management should focus on early diagnosis and effective antiviral treatment to prevent the cytokine response [edited from abstract and [CIDRAP](#) report, full text not reviewed].
 Phase 1 trial of whole-virus H5N1 vaccine [CIDRAP, 07/09/06](#). Results of a trial of a whole-virus H5N1 avian influenza vaccine have been published online in *The Lancet*. The vaccine, developed by Sinovac Biotech from an inactivated H5N1 strain, was tested in a randomised, placebo-controlled, double-blind study involving 120 adults. Vaccine recipients received either 1.25, 2.5, 5 or 10µg doses. An adequate immune response was seen in 78% of those receiving two 10µg doses. The vaccine was well tolerated. The authors conclude that the dose required to reach an adequate response was much lower than for vaccines reported previously. (article reference: Lin J et al. [Lancet \[serial on the internet\], 07/09/06 \[cited 11/09/06\]](#))
 Treatment of Spanish influenza pneumonia with convalescent blood products [Luke et al, Ann Int Med 17/10/06; 145 \[early online publication, cited 11/09/06\]](#). Results of a meta-analysis of studies reported 1918-1925 that used influenza-convalescent blood products to treat Spanish influenza pneumonia. Eight relevant studies involving 1703 patients were identified. The pooled absolute mortality difference was 21% between treated and control groups and 41% between early-treated and late-treated groups. The authors recommend that treatment of H5N1 patients using convalescent H5N1 human plasma should be studied in clinical trials.