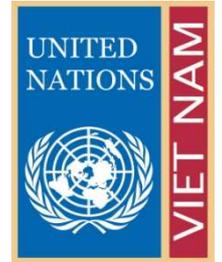


# FACT SHEET



## H5N1 in Viet Nam

October 2012

- H5N1 is a highly pathogenic avian (bird) influenza virus that has caused serious outbreaks of disease and economic losses in domestic poultry in parts of Asia and elsewhere in the world.
- Viet Nam has had an active control programme against H5N1 avian influenza since the disease was first detected in 2003. This control programme has been successful and cases of H5N1 in poultry and people have declined progressively and dramatically – however many challenges remain.
- Viet Nam's strong commitment to fight highly pathogenic avian influenza (HPAI) is the major factor behind the success for containment of the disease. Several donors and agencies, including the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) have been supporting the Ministry of Agriculture and Rural Development (MARD) and the Ministry of Health (MOH) since the first HPAI outbreak in 2003 and continue to do so.

### Animal Health

- H5N1 viruses will likely continue to persist and be a concern for Viet Nam and more widely, posing a threat to the poultry industries and the economy, and remain a potential source of pandemic human influenza.
- All influenza viruses evolve (undergo genetic changes through mutation and re-assortments) as they circulate in human and animal populations. This is a natural process and the viruses need to be monitored to detect these changes.
- Viruses are grouped into "clades" based on their genetic similarity. As mutations in the viral genetic sequence accumulate, changes in the antigenic character of the viruses may also occur. They also occasionally re-assort (swap genes) with other influenza viruses, resulting in more pronounced changes.
- Viet Nam is considered to be endemically infected with H5N1, with disease outbreaks being detected in a number of provinces across the country in 2012. In the south of Viet Nam the clade 1 virus persists since 2004 indicating that there is an endemic disease cycle with that particular clade and with no persisting introductions from other areas or countries.
- In contrast, in northern and central Viet Nam the previous clade 2.3.4 virus was replaced from 2009 by clade 2.3.2.1 suggesting that additional incursions of new viruses were still occurring. Viruses belonging to the 2.3.2.1 "clade" have been detected in many countries in Asia, Middle East and Eastern Europe.
- This pattern of incursion and establishment of new clades or variants has continued. In 2011, a new variant of H5N1 within clade 2.3.2.1 was detected and this virus caused immediate concern as the available poultry vaccines gave poor protection against it. A similar event has occurred in 2012 with another variant appearing. As of September 2012 at least three different H5N1 viruses variants were causing disease in poultry.
- The Government of Viet Nam has, through the H5N1 control programme, detected these new virus strains as a result of disease outbreaks being reported and subsequent virus monitoring in the laboratory. This detailed knowledge of the viruses present is a very important outcome of the monitoring programme.
- Department of Animal Health-led trials, supported by FAO, continually test vaccine efficacy against emerging strains of virus. In September 2012 a vaccine trial was underway to test a newly available H5N1 vaccine against the second 2.3.2.1 variant found two months previously. Information is on hand from earlier work about vaccine effectiveness against previously recognized viruses.
- The different clades of the H5N1 viruses continue to be present in Viet Nam for two main reasons –trade in poultry with neighbouring countries and virus circulation in older ducks, commonly layers, which can become infected and not show clinical disease. Also, wild birds are known to carry influenza viruses, but H5N1 viruses of the 2.3.2.1 clade have not been detected to date in wild birds in Viet Nam.
- There is no panacea to reduce the threat this new virus strain poses. Control measures must continue to focus on reducing the transmission of the virus – both to other poultry and to people. Key transmission pathways for this virus are live poultry, so bird to bird on farm, farm to farm, or market to farm spread, and also through contaminated

materials and equipment such as egg trays, cages, manure, feathers, vehicles and soiled clothing bringing the virus into contact with poultry.

- In order to reduce the threat of H5N1 infections arising due to an existing strain of the virus or an emerging one (e.g. a new variant), transmission pathways of the infection have to be broken. This is possible through certain tactical changes in the poultry production system by adopting safe production practices.
- These changes must be made on the farm, by traders and at markets and slaughterhouses. Government has been investing in new facilities, training staff and promoting behaviour change both for the poultry producers and the regulators.
- H5N1 is a disease agent that has spread across many borders and Viet Nam is no exception. Viet Nam has trade links with neighbouring countries and formal or informal trade in poultry across the borders is known to introduce new diseases or new strains in a country.
- The following actions and recommendations should be made to poultry producers and farmers:
  - Separate your poultry from that of other farmers/neighbours
  - When entering/leaving the poultry area:
    - Always change your shoes/footwear
    - Wear protective overalls/change clothing
    - Wash your hands before and after handling poultry
  - Do not allow visitors/traders/buyers to enter your poultry area
  - Feed deliveries should be made outside the poultry area
  - Only use egg trays that can be cleaned and disinfected and apply these measures to recycled egg trays
  - Only buy replacement birds from known, high quality farms and keep replacement birds separate from the main flock for two weeks to make sure they are healthy
  - Immediately report any unusual mortality or other health problems to the relevant authorities
  - Traders, markets and slaughterhouses must all improve their hygiene and biosecurity by following some basic principles:
    - Follow a daily cleaning routine
    - Remove all dirt and contamination by washing tools, cages and utensils
    - Soak tools, cages and utensils in disinfectant after washing
  - Contact local veterinary staff for detailed advice on cleaning and disinfection of markets and other premises where poultry from different sources have been gathered
  - No live birds should ever be allowed to return to a farm from a market/trader or a slaughterhouse

## Human Health

- Highly pathogenic avian influenza A(H5N1) infections in humans are generally caused by bird to human transmission of the virus and are rare and sporadic events, occurring mostly in areas where the virus is circulating endemically in poultry. The majority of human cases of H5N1 infection have been associated with direct or indirect contact with infected live or dead poultry.
- Since the beginning of 2012, Viet Nam has reported four human cases of confirmed avian influenza A (H5N1) infection, two of which were fatal.
- The last human H5N1 case in Vietnam was reported in February 2012.
- Influenza viruses in general are unpredictable, as they evolve and frequently re-assort. However, there is currently no evidence that any particular clade or strain of the H5N1 virus, including any newly evolved clade, is more transmissible or virulent in humans. There is no indication that clade 2.3.2.1 viruses pose any greater threat to human health than any of the other H5N1 variants.
- The following actions and recommendations should be made to the public:
  - Do not buy, sell, slaughter or consume poultry that has shown signs of illness or has died of illness
  - Ensure all poultry and poultry products are thoroughly cooked before consuming

- Avoid any contact with sick or dead poultry
- Wash hands with soap and water after any contact with poultry
- Immediately report sick or dead poultry to relevant veterinary and local authorities
- In case of suspected illness after contact with poultry, seek immediate medical attention.

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