

Preliminary Report on Avian Influenza Outbreak Investigation in Aguata and Ogbaru Local
Government Areas of Anambra State, March 2015

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INTRODUCTION

A resurgence of Highly Pathogenic Avian influenza (HPAI) H5N1 epizootic has been recorded in 2 separate local Government Areas (LGAs) of Anambra State, both in mixed poultry backyard farms. The index case was reported on 12 of February, 2015 in Aguata LGA of Anambra State and confirmed on 16th of February, 2015. As of 5th of March, 2015, 2 samples from 2 poultry farms in the state had tested positive for HPAI H5N1 resulting in the destruction of 4733 birds estimated to cost N6,152,900 equivalent to USD30,7645. No human case has been documented. Infection of poultry with influenza A (subtype H5N1) virus is responsible for avian influenza outbreaks in birds (with up to 100% mortality within 48 hours in some poultry species) and human case-fatality rate of 58% (1). The most likely means of transmission among poultry is the introduction of infected birds in farms and live bird markets (LBMs). Transmission can also occur from infected birds to humans and from the environment to humans, but evidence for human-to-human transmission is limited (2). Transmission to humans can result if a person has direct contact with infected poultry or surfaces and objects contaminated by infected poultry droppings. Workers in the poultry industry, who commonly have contact with live, sick, or dying poultry, are at high risk for avian influenza (3) and can also drive transmission among poultry flocks. Global public health concern exists regarding outbreaks of AI (H5N1) in poultry due to their effect on poultry populations, their potential to cause serious disease in people, and their pandemic potential.

Previous Outbreak of Avian Influenza A (H5N1) In Anambra State

The Highly Pathogenic Avian influenza (HPAI) H5N1 epizootic that started in Hong Kong in 1997 spread across many regions including Africa. In Africa, Nigeria was the first country to be affected by the H5N1 virus, with HPAI outbreaks reported and confirmed in a commercial poultry farm in Kaduna state on 8 February 2006 (4). Subsequently, the disease spread rapidly in two waves of outbreaks to 97 Local Government Areas in 25 States and the Federal Capital Territory. On the 8th of January, 2007 the disease was reported in Aku-Ezinifite, Aguata LGA of Anambra state and confirmed on 15th January, 2007. The outbreaks affected 6 farms in 4 LGA causing 13,444 birds to be destroyed (5). No human death due to the outbreak was documented. Using a multi-sectorial and multi-component platform funded by the World Bank, poultry farmers, live bird marketers, veterinarians and paravets were sensitized and trained on appropriate biosecurity practices and other preventive measures, biosecurity

inputs were provided for farmers and LBMs. As a result, the outbreak was contained and a structured surveillance network was mounted to forestall new outbreaks.

The Current Outbreak of Avian Influenza A(H5N1) outbreak in Anambra State

The surveillance network functioned effectively whilst the World Bank fund was available and few years afterwards. Samples were routinely collected from farms and LBMs and sent for HPAI (H5N1) screening at the Influenza Reference Laboratory, National Veterinary Research Institute, Vom. However, with the cessation of the World Bank funding in 2010, logistics for the continued surveillance gradually declined such that by 2012/13, it was almost non-existent. This may have contributed to the build-up of the virus in the years that followed and by February 2015, (HPAI) H5N1 outbreak resurged in Anambra State. The index case of the current outbreak was noticed on 20th of January, 2015, and reported on 12th of February, 2015. Sample was collected and sent to NVRI on 13th of February, 2015 by 16th of February, it was confirmed positive. (6) Concurrently, a second outbreak was confirmed in another mixed backyard poultry farm in Ogbaru LGA of the State resulting in the immediate culling of 4,733 poultry(5). As of 7th of March, 2015, one other sample from another poultry farm in Aguata Local Government Areas has been sent for laboratory confirmation from a suspected farm. No human case has been documented and no LBM outbreak.

Problem statement and justification

The current outbreak has proven more devastating in magnitude and spread compared to the 2006 outbreak on the national scale. Whereas 12(32.4%) of 36 states and the FCT were affected in the first two months of the 2006 outbreaks necessitating the culling of 440,000 birds, 17(45.9%) of 36 states and the FCT have been affected in the first two months of the current outbreak with 625,845 birds culled. There is therefore an urgent need to contain the current outbreak to curtail economic losses and reduce risk of human transmission. Controlling HPAI in animals is the first step in decreasing risks to humans. Currently, several measures have been implemented to control the disease in poultry. These include: quarantining of infected LBMs and farms, depopulation and compensation, decontamination of depopulated LBMs and poultry farms and awareness creation among the general populace, amongst others. However, breaking the transmission chain of HPAI H5N1 can only be achieved when individuals adapt risk reduction and preventive actions and when the spread of HPAI H5N1 is prevented by appropriate measures at farm and LBM levels. To adapt risk reduction and preventive actions, poultry farmers and live bird marketers must possess a certain level of preventive knowledge and attitude as well as adopt practices that enforce bio-security at the farms and LBMs.

In view of the above, we conducted a study in collaboration with the Federal Ministry of Agriculture and Rural Development to assess the knowledge, attitude and practices of poultry farmers and live bird marketers regarding Avian influenza as well as conduct a trace back among infected farms and LBMs to determine the source and drivers of infections in these farms and LBMs. This study will help to measure the preparedness of poultry farmers and marketers in preventing continued transmission of AI and identify biosecurity gaps in knowledge and practices which can be addressed by the HPAI outbreak response.

OBJECTIVES

General Objective: To determine the source of Avian Influenza outbreak in Anambra State and institute control measures

Specific Objectives

1. To assess the extent of spread of avian influenza in Anambra state
2. To assess any human case of avian influenza in Anambra state
3. To assess biosecurity practices regarding management and prevention of avian influenza in infected farms in Anambra
4. To determine the source of infection in infected farms.

METHODOLOGY

Study Area

The study was conducted in Aguata and Ogbaru LGAs of the state where AI outbreak has been reported. The two LGAs are replete with backyard and commercial poultry farms. They have infected and non-infected farms thus, making them suitable for the study.

Study sites

The study sites included infected Favour farms in Ezi-Agulu Ekulobia and infected Alvic Ventures poultry farms in Aguata and Ogbaru LGAs respectively where AI has been reported during the current outbreak in the state.

Study design

A descriptive cross-sectional Study was carried out.

Sampling Technique

There are only 2 infected farms located in 2 LGAs. The two infected farms were selected.

Study tools

A structured questionnaire on knowledge, attitude and practices related to avian influenza among poultry farmers and traders in live bird markets. A trace-back questionnaire was used for tracing the source of

infection for each infected farms. Key informant interviews were conducted on stake holders in the infected farms.

Ethical Consideration

Participation was voluntary and information collected were treated with confidentiality.

RESULT

The data from the questionnaires are yet to be analyzed, however, key informant interviews and trace back conducted on the infected farm at Ogbaru LGA, revealed the birds were supplied from multiple farm sources in Ibadan and Jos. The farm owners also engage in veterinary sales and render veterinary services in local farms. The poultry feeds were also sourced from life bird market at Onitsha from feed manufacturers.

Conclusion

The spread of AI in the state is limited to the two farms in Aguata and Ogbaru LGAs, and there is no identifiable human case. The source of this outbreak is not conclusive but the source of birds into Anambra state is from Ibadan and Jos, Nigeria, where AI outbreak has been reported and in much larger scales than in Anambra state.

Challenge

- Limited time for detailed investigation of infected farms
- Farm owners were unwilling to grant interview due to fear of depopulation of farms
- Lack of confidence in the government's ability to compensate for depopulated farms made farm owners apprehensive and uncooperative
- There was no farm record books for easy trace back.

Recommendation

1. An elaborate state wide campaign to sensitize communities in the state on avian influenza.
2. Farm owners should keep records of visitors to their farms. This will make for ease of trace back in event of outbreak such as this.

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