

Participatory disease surveillance for highly pathogenic avian influenza in West and East Africa: a report on preliminary experiences

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Highly pathogenic avian influenza type A, H5N1 (HPAI) was detected in Nigeria in February 2006. Since then it has occurred in a total of 11 African countries, including multiple outbreaks in 2008. The Early Detection, Surveillance and Reporting for Avian Influenza in Africa Project (EDRSAIA) was established to increase the capacity of national veterinary services (VS) in high risk countries in practical, community-focused active surveillance, and runs from July 2008 to September 2009.

In some project countries, surveillance capacity building focuses directly on participatory disease surveillance (PDS), while in others the focus is on PDS as one aspect of participatory epidemiology. Surveillance began in Nigeria in October 2008, in Uganda, Togo and Benin in December, in Burkina Faso and Cote d'Ivoire in January, and in Kenya, Tanzania, Rwanda, Sierra Leone and Liberia after February 2009. Trainees are public, private and academic animal health professionals chosen by their VS to represent high risk areas (defined as those areas where HPAI has been detected, adjacent areas, or areas where risk factors occur) and lower risk areas. Using a case definition for 'sudden death outbreak', practitioners search for HPAI-compatible outbreaks. Depending on national policy, practitioners in some countries make a clinical diagnosis of either HPAI or New Castle disease, and in some countries triangulate diagnoses of 'sudden death' with an influenza rapid test and/or submit samples to the national laboratory. A disease investigation form is submitted for every village searched through established VS reporting structures so that PDS-derived information enters the national animal health database. The EDRSAIA monitoring and evaluation system includes a database of these disease investigation forms maintained by focal points in each national VS.

As of 30 January 2009, no active outbreaks of HPAI have been diagnosed by the PDS teams trained by the EDRSAIA project. During field practice carried out by trainees in Ogun State, Nigeria, the trainees confirmed declared commercial sector outbreaks, and found historic HPAI-compatible outbreak events in backyard chickens. These outbreaks fit the 'sudden death outbreak' case definition – sudden death (1-12 hours), rapidly increasing mortality, and the observation of other clinical signs such as swollen black heads. Farmers clearly differentiated these outbreaks as being more severe than New Castle disease, which they identified as a seasonal disease that annually cycles through village flocks. During field practice carried out by trainees in Avepozo, Togo, trainees confirmed declared commercial sector outbreaks, and found limited spread to backyard chickens. These preliminary experiences indicate that PDS for HPAI can be a valuable tool for active surveillance in Africa.