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Success Story

Fighting Endemic Avian Influenza in Indonesia's Poultry

USAID | DELIVER PROJECT 2009

A health worker vaccinates a chicken in Piyungan subdistrict, Indonesia.

Early results from the organizational research study show significantly lower incidences of poultry death in vaccinated chickens.

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Highly pathogenic avian influenza (HPAI) is endemic in Indonesian's poultry population, which includes more than 40 million birds in both commercial and backyard flocks. Over the last five years, AI has spread to 31 of the country's 33 provinces and caused approximately 10 million known poultry deaths a year. Although the absolute risk to humans is low, the relative risk in Indonesia is high compared with the risk in other countries. As of September 2009, 141 human cases have been confirmed with 115 fatalities in Indonesia, the highest case fatality rate in the world. Indonesia is at especially high risk for avian outbreaks and human infection because 80 percent of the birds are located in highly populated geographic areas. To minimize economic loss, social and cultural disruptions, and the risk to humans, the Indonesian government is focused on controlling H5N1, or avian influenza (AI), outbreaks in chickens through vaccinations.

To assess the feasibility and impact of alternative control strategies, the Ministry of Agriculture (MOA), in close collaboration with the Food and Agriculture Organization (FAO) and the International Livestock Research Institute (ILRI), asked the USAID | DELIVER PROJECT, Task Order 2, to develop and implement a study entitled, *Operational Research in Indonesia for More Effective Control of Highly Pathogenic Avian Influenza* (OR). The goal of the study was to evaluate the feasibility and effectiveness of several HPAI control strategies, such as vaccination and depopulation. The study also identified and assessed HPAI outbreak risk factors.

In support of this research, the USAID | DELIVER PROJECT was tasked with procuring vaccines, vaccine supplies, and cold chain equipment. In addition, the project provided critical technical assistance in the design and implementation of the cold chain and supply chain operations. The project's assistance ensured that each district was prepared to receive and administer quality vaccine to the poultry population, and that the vaccine was delivered to each district on time and ready for distribution.

During the course of implementation, between July 2008 and June 2009, a total of 16 districts in West Java, Central Java, and Yogyakarta participated in the study. Altogether, OR activities covered 73 subdistricts and 722 villages, administering approximately 31 million doses of AI and Newcastle Disease vaccine. Early results from the OR study show significantly lower incidences of poultry death in vaccinated chickens, compared with the incidence of chicken deaths in the control group.

Titin Juhartini, PATH/Jakarta 2009

Workers pack avian influenza vaccines at the PT Medion warehouse in Indonesia.

In addition to reducing poultry mortality rates, the OR study raised awareness among farmers and district-level MOA staff about the importance of poultry vaccination, which was perceived as costly to the system and dangerous for chickens. The OR study reversed those beliefs and demonstrated the epidemiological value of vaccinating poultry.

The campaign was so effective that when the MOA decided to continue the study in a follow-on campaign, those districts chosen to participate were willing to cover the operational costs. The OR study convinced animal health workers and local farmers that vaccination was effective in limiting HPAI outbreaks in poultry.

In addition, the cold chain system put in place by the USAID | DELIVER PROJECT, in collaboration with the project's partners, has become a model for the MOA Animal Health Division and an example of best practices for vaccination programs. The Indonesian Animal Health Directorate has requested that the USAID | DELIVER PROJECT, Task Order 2, provide a series of comprehensive trainings in cold chain management for national-, district-, and subdistrict-level staff, including cold chain awareness training, training of trainers in cold chain management, cold chain supervision training, and training in cold chain assessments.

The USAID | DELIVER PROJECT, Task Order 2, is funded by the U.S. Agency for International Development, and manages a global distribution mechanism for commodities to contain outbreaks of the highly pathogenic H5N1 avian influenza and to limit its potential to spread globally. Task Order 2 also provides limited technical assistance to priority countries to effectively pre-position commodities in national and regional warehouses for rapid deployment in case of outbreaks.

The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the United States Government.

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