



PRO-POOR MANAGEMENT OF PUBLIC HEALTH RISKS ASSOCIATED WITH LIVESTOCK: THE CASE OF HPAI IN EAST AND SOUTHEAST ASIA

Transmissible zoonotic pathogens associated with livestock pose a challenge to public health and economic security at local, national and global levels. Thus, the emergence and spread of highly pathogenic avian influenza (HPAI) virus in East and Southeast Asia has led to massive investments in disease prevention and control, most of which, ironically, were devoted to contingent pandemic planning in OECD countries.

A more cost-effective approach to the global management of emergent disease risks would be to increase investments in disease risk management in the epicentre countries. These are low-middle income economies, characterized by high poultry densities, a large backyard poultry sector and high levels of rural poverty. Not only might such measures make pandemic damage control unnecessary, they could have the added benefit of improving the livelihoods in poor rural communities.

As poultry are an integral part of the rural social fabric in the epicentre countries, HPAI control necessarily implicates the majority of the rural poor. This large socio-economic group has to be considered in risk reduction strategies, and these strategies must be designed with them in mind. Unfortunately, current approaches to the containment and eradication of HPAI predominantly focus on technical aspects, paying little attention to institutional constraints of animal health systems and the economic realities of animal production and livelihoods. This often places heavy burdens on the world's poor.

HPAI control presents an unusual opportunity for international cooperation because poor rural households can contribute to the global commons of disease prevention. However, their participation in this effort is unlikely to be voluntary, and indeed must be rewarded if success is to be achieved.

● Control Strategy Design and Implementation

Disease control strategies usually target one or more of the risk generating mechanisms. This process can affect prices, production, domestic and international trade

patterns, and ultimately employment and income. Also, the chosen control measures result in direct cost to the public sector agency addressing the problems, and to the impacted farmers, industry and consumers.

Devising evidence-based strategies to contain animal and human health risks is complex. It requires thorough analysis of epidemiological and socio-economic information, development of scenarios of disease spread, their likelihood of occurrence, the identification of critical control points and interventions, and the costs and impacts of the latter. To enhance the likelihood of compliance, strategy design needs to balance the interests of the wide variety of stakeholders, including the rural poor, and, therefore, has to build in negotiation at different levels, ranging from local, through national to international.

Given the transboundary nature of the HPAI risk, international participation and regional coordination are necessary for sustained risk reduction. However, successful implementation of the selected strategy requires cost-effective decentralization of control capacity. This may signify the need for new command and incentive relationships between district and provincial authorities, central government, and outside stakeholders.

Because of diverse initial conditions, national strategies cannot be decentralized effectively without close attention to local incentives. Microeconomic analysis within a New Institutional Economics framework and localized design and implementation are essential to ensure that regional and national policies are efficiently translated into local action.

● Disease Surveillance and Reporting

HPAI outbreaks in large and dispersed populations pose special challenges to surveillance systems. When the source cannot be independently traced, moral hazard arises because incentives to report are often low or even negative. Indeed, producers who discover sick animals may try to sell or dispose of them (alive or dead)



without reporting infection. Reporting problems often aggregate to national and international level if the responsible institutions are not monitored effectively or have their own incentive problems. Inefficiencies in disease reporting systems contribute to larger and longer-lasting outbreaks, which in turn increases pandemic disease risk.

If policy makers want to reduce HPAI risks to animal and human populations without unavoidable adverse effects on the poor, they need more effective means to identify local outbreaks and to rapidly contain them. The information needed to accomplish this exists, but it has until now been very difficult to obtain. Evidence suggests that local communities are well aware of infection patterns, but reporting processes are plagued by inefficiency and incentive problems.

Effective surveillance systems need to combine incentives for collective responsibility and self-reporting, that take into account the resource constraints of different households and communities, whilst providing disincentives for not reporting through, for example, collective penalties that induce peer discipline.

• Traceability

An important class of strategies that could be introduced to control the spread of agriculturally originated contagious diseases are mechanisms to trace the movement of agricultural products generally and livestock in particular through national and international markets.

Traceability is emerging as a major component of more integrated national and international food systems, which propagate their standards across agriculture and the food industry. It is an increasingly important component of food product differentiation, assuring quality, and maintaining heterogeneity in the agricultural and food systems. At the same time, consumer concern for food quality and food safety, and the introduction of modern supply chain management systems (even to developing countries) are increasing the value of traceability and capability to preserve identity throughout the food chain. Thus traceability has dual value to consumers and producers, increasing the effectiveness of demand targeting and raising value-added by origin.

With modern information technologies, including wireless communication and miniaturization of electronics, the cost of monitoring across agricultural supply chains is declining rapidly. This opens opportunities for the

poor who depend on livestock to benefit from well designed traceability and certification schemes.

Pro-poor risk reduction strategies should thus be integrated with extension and marketing services that transfer standards and technology upstream and product quality and diversity downstream, thereby increasing value-added for smallholders. One of the big challenges is to introduce traceability quickly, inexpensively, and effectively so the net benefits can be conferred on smallholders before adjustment costs drive them out of production.

• Conclusions

There is a global momentum for rapid and intensive measures to control poultry stocks and restructure the poultry sector. These policies need to address the economic and institutional realities of the rural poor. To reconcile such macro and micro perspectives effectively is a much greater challenge than simply allocating international resources to national governments.

By combining incentive and penalty mechanisms for disease reporting with traceability schemes, one can:

- reduce upstream disease risks, and
- improve downstream product quality.

Surveillance and traceability systems could thereby improve the terms of market access for the rural poor. Social investments to reduce health risk (locally, nationally, and globally) can have the very significant dividend of improving smallholder commercial viability, making them better rather than worse off as a result of HPAI policies.

This pro-poor benefit stands in stark contrast to most control measures currently applied to HPAI, which seriously disrupt rural markets and livelihoods and tend to drive the problem underground, thereby increasing rather than reducing global disease risk.

Policy Brief based on:

Assessing Policy Responses to the Threat of Contagious Diseases of Animal Origin, December 2005, Internal PPLPI Working Document, by Joachim Otte, Dirk Pfeiffer and David Roland-Holst

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