Understanding behaviour helps to inform and improve avian flu control in Bangladesh.

Reducing the risk to livestock and people. For more about ZELS: bbsrc.ukri.org/zels
A new, more effective One Health approach to controlling avian influenza ('bird flu') is now in the policy pipeline in Bangladesh. It is the end result of research exploring the daily reality of poultry farmers and its implications for disease spread.

Tackling avian influenza is a priority in Bangladesh, where poultry production is the main livestock sector and is expected to triple by 2050. The disease is responsible for major poultry production losses and sporadically affects people, sometimes fatally. What’s more, the virus which causes the disease has the potential to mutate into new, pandemic human influenza strains.

Until recently, efforts to curb avian influenza focused almost exclusively on the virus itself. However, the ZELS project Behavioural adaptations in live poultry trading and farming systems and zoonoses control in Bangladesh (BALZAC) explored the behaviour of the people producing and trading poultry. It showed how important people’s behaviour is in driving the disease and how the social, economic and cultural contexts in which people in the poultry industry live and work are key in determining the success or failure of disease control and prevention efforts.

In particular it showed how avian influenza viruses are transmitted and amplified along poultry trading networks, leading to their dangerous ubiquity in the live bird markets through which almost all poultry are marketed in Bangladesh.

BALZAC concluded that while technical interventions are important for effective avian influenza control, it is also essential to address those factors that influence the behaviours of people involved in poultry production and trade. These factors include, for example, the systems for farmers accessing financial capital and credit. The current systems often lead them to make decisions based on short-term rather than long-term goals, making them more likely to engage in risky behaviours.

This conclusion means establishing a better balance in disease control policy between a high-tech focus on specific pathogens and focusing on those features of the human-animal systems that promote their emergence and spread. That is, adopting a cross-sectoral One Health approach.

Relationships with key policy figures were established early on in BALZAC and an inter-ministerial One Health Secretariat, as advocated by BALZAC, had been approved by the time findings were available.

Once available, BALZAC research evidence, alongside other evidence, was presented at a roundtable attended by key actors from across government, industry and stakeholder organisations.

BALZAC evidence is now directly contributing to the development of Bangladesh’s National Avian and Pandemic Influenza Preparedness and Response Plan.

“BALZAC has shown how the design and implementation of more effective and sustainable policies to control zoonotic diseases need to be based on a formal engagement across all relevant sectors, and be supported by truly interdisciplinary research at the interface between biological and social sciences.”

Professor Nitish Debnath, co-investigator, BALZAC

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**Behavioural adaptations in live poultry trading and farming systems and zoonoses control in Bangladesh (BALZAC)**

Principal Investigator: Professor Dirk Pfeiffer, Royal Veterinary College, UK

Partners:
- Royal Veterinary College, UK (lead)
- Bangladesh Livestock Research Institute, Bangladesh
- Chatham House, UK
- Chittagong Veterinary and Animal Sciences University, Bangladesh
- Department of Livestock Services, Bangladesh
- Food and Agricultural Organization of the United Nations in Bangladesh
- Institute of Epidemiology, Disease Control and Research, Bangladesh
- London School of Hygiene & Tropical Medicine, UK
- University of Queensland, Australia