

Preface

Avian influenza (AI) has become one of the most dangerous infections for animals and humans at present. The outbreaks of the last decade clearly demonstrated that the disease did not limit itself to birds, but that human health was also at stake. The outbreak of avian influenza in Hong Kong in 1997, when several people died following an outbreak in poultry, unfortunately proved not to be an exception to the rule. During the H7N7 AI outbreak in The Netherlands, many cases of conjunctivitis, including one fatal case, occurred, showing that AI may initiate a productive infection cycle with clinical signs also in humans. The classical epidemiological model of avian influenza-virus spread, from waterfowl to poultry to pigs to man, proved to be untrue. Furthermore, mutation of low-pathogenic strains into highly pathogenic strains in poultry appeared to be more common than previously thought. Direct transmission from poultry to man was demonstrated, and even evidence was presented on transmission between humans. These findings suddenly complicated the epidemiological pattern and consequently demanded a complete change in the control policy. However, many questions could not be answered. What was the reason for the increased occurrence? How could the change in transmission patterns be explained? Should low-pathogenic strains in wild birds be monitored? To what extent can vaccination reduce the risks for man and animal? What is the current role of waterfowl and what is the impact of migratory routes? Which strains were dangerous to man? Policymakers, EU officials, researchers, doctors, veterinarians, poultry farmers and industry members are struggling with these questions and at the same time must combat the disease at the best of their knowledge.

These developments have highlighted the need for collaboration between human and veterinary organizations such as the OIE, FAO and WHO. It has also highlighted the need for transparency of countries at risk about the occurrence and control measures of avian influenza. Evidently, avian influenza cannot be controlled blindfolded, but can only be overcome when there is openness about the risk factors and commitment between the control bodies involved.

This led us to organize an international workshop on avian influenza with experts from Europe, the US and Asia. The overall purpose of the AI workshop was to review the AI epidemiology and to identify a research agenda for more effective AI prevention and control in the future. The present volume is based on the papers that were presented during this workshop; a reflection of the discussions can be found on www.wur.nl/frontis.

The ambition was to stimulate progress in AI prevention and control by creating interaction between science, economics and legislation. We hope to have achieved this goal, and thank all the people involved for their contribution. We thank Wageningen University and Research Centre, Intervet International and Merial for their financial support, Petra van Boetzelaer and Rob Bogers (Frontis) for organizational and editorial support, and Paulien van Vredendaal (Wageningen UR Library) for technical editing of these proceedings.

Avian influenza continues to challenge us, but we are ready to face it.

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