

## Avian Flu

*I Stephenson et al. British Med Bull. (2006) Vol.75+76 p 63 - 80*

### **Influenza: current threat from avian influenza**

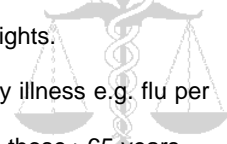
The report emphasises the vulnerability of those who live in care homes.

It also points out that animal vaccines may become ineffective if not updated (approximately) annually.

This general summary of influenza and pandemic influenza contains some useful insights.

#### **Influenza**

- about 30% of elderly people (>65) suffer from at least one acute respiratory illness e.g. flu per winter,
- about 75% of all influenza deaths and 90% of excess winter deaths occur in those >65 years,
- during the 1989–1990 epidemic in England and Wales 50% deaths and 15% hospital admissions attributed to influenza and pneumonia were in people who lived in residential homes, illustrating the vulnerability of this population.



#### **Bird flu**

- Genetically and antigenically distinct sub-lineages of H5N1 virus have become established in poultry in different regions of southeast Asia. Therefore, vaccines prepared from the earlier or currently circulating strains may be suboptimal in protecting against a future H5N1 pandemic.
- Standardization of agricultural vaccines is not rigorous and may lead to the inadvertent use of subpotent vaccines that, whilst protecting against clinical H5N1 illness, do not reduce virus shedding following infection. The persistence of undetected H5 infection in a partially immune flock may accelerate virus evolution and increase threats to human health.

#### **Human cases of H5N1**

- In a series of eight patients with H5N1 infection in Vietnam, oseltamivir at normal doses completely suppressed viral replication in six patients. However, in two fatal cases, including one who was treated promptly with oseltamivir, continued viral replication led to the emergence and recovery of H294Y oseltamivir-resistant mutant viruses.

#### **Comment**

Careful vaccination of poultry (in lab experiments) has been shown to be highly effective at preventing spread of disease and illness. Negligent vaccination in the field or reliance on vaccines that no longer match the prevalent strains could have severe consequences.