

Avian and Human Influenza: Implications for Humanitarian Action

1. The purpose of this paper is to help the humanitarian community reflect on the implications of avian and human influenza for humanitarian action.
2. The term “avian and human influenza” refers to two distinct but related phenomena:
 - a) the *avian influenza epizootic*¹ that is currently affecting domestic and wild birds in Asia, Africa and Europe;
 - b) a *human influenza pandemic*,² which might arise if the virus responsible for the avian influenza epizootic (H5N1) develops the ability for efficient and sustained human-to-human transmission.
3. The WHO pandemic classification system distinguishes between six phases:

Inter-pandemic period	Phase 1	No new influenza virus detected in humans. If a new influenza virus presents in animals, the risk of human infection is considered to be low.
	Phase 2	No human infections, but a circulating animal influenza virus poses a risk to humans.
Pandemic alert period	Phase 3	Human infection(s) with a new virus, but no (or very infrequent) human-to-human spread.
	Phase 4	Small cluster(s) with limited human-to-human transmission but spread is highly localized.
	Phase 5	Larger cluster(s) but human-to-human spread still localized.
Pandemic period	Phase 6	Increased and sustained transmission in general population.

4. The UN System Influenza Coordination Office (UNSIC) is in the process of developing three scenarios for the purposes of pandemic planning and preparedness:³

Model One. ***Extended Phase 3 with continuing outbreaks of avian influenza.*** Outbreaks of avian influenza continue to spread, but the virus does not acquire efficient and sustained human-to-human transmissibility.

Model Two. ***Slow-onset Phase 4-5 with moderate and localised impact.*** The virus only progressively acquires human infectiousness. It spreads slowly and to a small number of regions.⁴

¹ An epizootic is an epidemic of animal disease – a disease affecting a large number of animals simultaneously.

² A pandemic is an epidemic that is worldwide in scope.

³ See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 Feb. 2006. This is a summary of the draft/outline scenarios.

⁴ According to UNSIC, “Depending on how it evolves the influenza disease itself may be relatively benign (similar to a “normal” flu) or it may be relatively deadly and result in significant social and economic impact.” See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 February 2006.

Model Three. ***Rapid-onset escalation to Phase 6 with widespread impact.***

The virus develops the ability for efficient and sustained human-to-human transmission. A human influenza pandemic rapidly spreads throughout the globe with a high infection rate.⁵

What are the likely implications of Model One – Extended Phase 3 for humanitarian action?

5. If the avian influenza epizootic continues to spread, in regions where levels of human vulnerability are very high it might lead to an **increased demand for humanitarian action**. In effect, if poultry die or are culled on a massive scale, millions of people will lose their primary source of food and of income; this could have dramatic consequences for those who already are on the brink of survival. In addition, the epizootic is bound to have an adverse impact on local economies, with knock-on effects for an even greater number of vulnerable people. With their already limited budgets further strained by the costs of controlling the epizootic, governments of low income countries may be unable to meet all emerging needs. To the best of our knowledge, the potential impact of the avian influenza epizootic on livelihoods has not been mapped out as yet. Further analysis is needed to determine the scope of humanitarian action that might be required.

What are the likely implications of Model Two – Slow-onset Phase 4-5 for humanitarian action?⁶

6. If the virus is limited to a small number of specific areas, with infection and mortality rates high within these areas, this would have the following implications for humanitarian action:

With regard to the operational capacity of humanitarian agencies,

- a) **the number of humanitarian staff in affected areas will decrease:** a significant proportion of humanitarian workers (up to 30% for a period of 6 weeks)⁷ will not report to work at any given point in time as they will die, become ill, or otherwise stay at home (as ordered by their employer⁸, out of fear of becoming infected, or to take care of out-of-school children⁹ or sick relatives¹⁰); bringing in staff from other regions will not be feasible as they will not have immunity against the disease;

⁵ According to UNSIC, “Depending on how it evolves the influenza disease itself may be relatively benign (similar to a “normal” flu) or it may be relatively deadly and result in significant social and economic impact.” See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 February 2006.

⁶ According to UNSIC, “Depending on how it evolves the influenza disease itself may be relatively benign (similar to a “normal” flu) or it may be relatively deadly and result in significant social and economic impact.” See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 February 2006. We are considering here only the latter case.

⁷ See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 February 2006.

⁸ Humanitarian agencies will most likely require that all non-essential staff stay at home so as to inhibit the spread of the disease.

⁹ Schools will most likely close, so that some parents will have to stay at home to take care of their children.

¹⁰ Health care structures will most likely be overwhelmed, so that many sick people will have to be cared for at home.

- b) **humanitarian operations will be adversely affected**, as:
- the flow of goods – including relief supplies – into affected areas will be disrupted, due to border closures, quarantines, disruption of transportation systems and businesses;
 - in affected areas movements of people and social interactions will be restricted – by both national authorities and humanitarian agencies – in order to inhibit and slow down the spread of the disease;
 - in many affected countries security forces (police, military) will take charge of running essential services, which in some cases might lead to difficulties in accessing some groups of beneficiaries.

With regard to the humanitarian caseload,

- c) **if affected areas coincide with the least developed parts of the world, individuals and communities dependent on humanitarian action for survival will be dramatically affected by the disease and its knock-on effects:** morbidity and mortality rates will probably be higher among the humanitarian caseload than in the general population due to malnutrition, lack of access to adequate health care, poor sanitation, and overcrowded living conditions; vulnerable groups will also disproportionately suffer from the economic disruption brought about by the disease;
- d) **if affected areas coincide with the least developed parts of the world, the humanitarian caseload will probably increase:** highly vulnerable people who get sick and/or lose their means of livelihood because of the disease may require humanitarian assistance, and local governments may be unable to provide it.

7. In sum, under this scenario humanitarian operations will be severely disrupted in the affected areas, but not elsewhere.

What are the likely implications of Model Three – Rapid-onset escalation to Phase 6 for humanitarian action?¹¹

8. A human influenza pandemic is likely to have four main implications for humanitarian action:

With regard to the operational capacity of humanitarian agencies,

- e) **the number of humanitarian staff will decrease:** a significant proportion of humanitarian workers (up to 30% for a period of 6 weeks)¹² will not report to work at any given point in time as they will die, become ill, or otherwise stay at home (as ordered by their employer¹³, out of fear of becoming infected, or to take care of out-of-school children¹⁴ or sick relatives¹⁵);

¹¹ According to UNSIC, “Depending on how it evolves the influenza disease itself may be relatively benign (similar to a “normal” flu) or it may be relatively deadly and result in significant social and economic impact.” See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 February 2006. We are considering here only the latter case.

¹² See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 February 2006.

¹³ Humanitarian agencies will most likely require that all non-essential staff stay at home so as to inhibit the spread of the disease.

¹⁴ As soon as a pandemic is declared schools will most likely close, so that some parents will have to stay at home to take care of their children.

¹⁵ Health care structures will most likely be overwhelmed, so that many sick people will have to be cared for at home.

- f) **humanitarian operations will be adversely affected**, as:
- o the flow of goods – including relief supplies – will be disrupted, due to border closures, quarantines, disruption of transportation systems and businesses, and contraction of global trade and of the economy;
 - o movements of people and social interactions will be restricted – by both national authorities and humanitarian agencies – in order to inhibit and slow down the spread of the disease;
 - o in many countries security forces (police, military) will take charge of running essential services, which in some cases might lead to difficulties in accessing some groups of beneficiaries.

With regard to the humanitarian caseload,

- g) **individuals and communities dependent on humanitarian action for survival will be dramatically affected by the disease and its knock-on effects:** morbidity and mortality rates will probably be higher among the humanitarian caseload than in the general population due to malnutrition, lack of access to adequate health care, poor sanitation, and overcrowded living conditions; vulnerable groups will also disproportionately suffer from the economic disruption brought about by a pandemic;
- h) **the humanitarian caseload will probably increase:** highly vulnerable people who will get sick and/or lose their means of livelihood because of the pandemic may require humanitarian assistance, and governments of low income countries may be unable to provide it.

9. Under this scenario, **humanitarian agencies will face major challenges in maintaining operations**, as they:

- (a) rely on voluntary donations (these are likely to decrease, as governments and private donors will most likely focus on domestic needs);
- (b) manage staff and supplies according to a just-in-time management system, with limited stockpiles and surge capacity (up 30% of the workforce may not report to work for a period of 6 weeks,¹⁶ and there will be no external surge capacity to tap into; supply chains will be disrupted);
- (c) are physically decentralized but have centralized management and decision-making structures that rely heavily on telecommunications and travel (telecommunications and transportation systems will be disrupted, so that decisions will have to be made locally);
- (d) have a high proportion of expatriates in management functions and invest relatively little in building local capacities (expatriates might be repatriated or stay at home, so that a management vacuum might develop);
- (e) invest relatively little in preparedness systems for both their infrastructures and their operations (being prepared will enable agencies to minimize the impact of a pandemic).

10. In sum, under this scenario humanitarian operations will be severely disrupted worldwide. **Humanitarian agencies will be faced with conflicting pressures, namely to scale down** (because of reduced operational capacity) **and to scale up** (due to an increase in needs).

OCHA/PDS, 16 February 2006.

¹⁶ See UNSIC, United Nations System Pandemic Planning and Preparedness Guidelines, draft, 10 February 2006.