

Background Paper

3.2 a Assessment of efforts over the last three years to address HPAI in poultry, reducing risk to humans, and pandemic preparedness

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Background

Further to the November 2005 meeting convened by the Food and Agriculture Organization (FAO), World Organisation for Animal Health (OIE), World Bank, and World Health Organisation (WHO), and in line with the Consolidated Action Plan for Contributions of the UN System and Partners, November 2006, WHO has responded by developing and implementing strategic actions to address the five key areas of activity that concern human health:

Strategic action	Goal
1. Reduce human exposure to the H5N1 virus	Reduce opportunities for human infection and, in so doing, reduce opportunities for a pandemic virus to emerge
2. Strengthen the early warning system	Ensure that affected countries, WHO, and the international community have all data and clinical specimens needed for an accurate risk assessment
3. Intensify rapid containment operations	Prevent the H5N1 virus from further increasing its transmissibility among humans or delay its international spread
4. Build capacity to cope with a pandemic	Ensure that all countries have formulated and tested pandemic response plans and that WHO is fully able to perform its leadership role during a pandemic
5. Coordinate global scientific research and development	Ensure that pandemic vaccines and antiviral drugs are rapidly and widely available shortly after the start of a pandemic and that scientific understanding of the virus evolves quickly

From: WHO strategic action plan for pandemic influenza, 2007, http://www.who.int/csr/resources/publications/influenza/StregPlanEPR_GIP_2006_2.pdf

Current Situation

1. Reduce human exposure to the H5N1 virus

WHO's strategic approach in this area has focused on several concurrent areas of activity.

Outbreak investigation and risk assessment

Outbreak investigation assistance has been given in all 12 countries with confirmed avian influenza A(H5N1) virus infections in humans (Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Lao People's Democratic Republic, Nigeria, Thailand, Turkey, Viet Nam) and preparedness and risk assessment missions to 30 other countries across all WHO regions. In 2006, over 200 international experts were mobilized; the Global Outbreak and Alert Response Network (GOARN) has played a central role in their mobilization. To enable outbreak investigation to occur at a country level, investigation kits have been dispatched to 116 destinations. Each kit includes Personal Protective Equipment (PPE), face masks, material to collect and transport virus samples, courses of antiviral drugs, and investigation guidelines. A total of 14,000 sets of PPE and 30,000 courses of the antiviral drug Oseltamivir have been dispatched.

Training and Guidelines

Training modules have been developed for Ministries of Health, health professionals, and national laboratories in preparing for and managing investigations into human infections with avian influenza virus. During 2006, a sub-regional training course on avian influenza infections in humans was held in Harare, Zimbabwe, organized jointly by WHO headquarters and the WHO Regional Office for Africa.

Three sessions of the WHO/GOARN Outbreak Response Training have been organized in Geneva (February and October 2006, and June 2007). Overall, 70 participants from GOARN institutions and WHO headquarters, regional offices and country offices received training on international outbreak response, including that of avian influenza in humans.

Infection Control

WHO experts on infection control and case management have accompanied field outbreak and assessment missions to provide advice to the teams in the use of PPE and other procedures for operating in affected areas. Technical guidelines have been developed for healthcare workers and other hospital staff to provide training and advice on infection control when caring for patients infected with avian influenza virus and in following the appropriate biosafety procedures when handling biological specimens.

A three day course in infection control and basic hygiene principles was piloted in Azerbaijan and has now taken place in Bulgaria, Armenia, and the Russian Federation.

Managing human cases of avian influenza

At meetings in May 2005, March 2006, and March 2007, WHO assembled international panels of experts to address clinical case management and measures to be taken by health-care workers to alleviate patients' symptoms and improve their chances of survival.

In May 2006, WHO published guidelines on the pharmacological management of humans infected with avian influenza A(H5N1) virus. It also includes recommendations on the use of antivirals for prophylaxis according to the level of risk to which members of the community may have been exposed.

Averting high-risk behaviour

Well planned public awareness and social mobilization initiatives are effective in reaching a wide number of people in areas of risk. In March 2006, the WHO Mediterranean Centre for Vulnerability Reduction (WMC), FAO, and the United Nations Children's Fund (UNICEF) came together in an ad hoc meeting to address these issues; a further meeting was held in Thailand in December 2006 with WHO, UNICEF and the Thai Ministry of Health.

Training modules in social mobilization and food safety have been developed to be included in standardized WHO H5N1 virus control and preparedness training packages for Ministries of Health. The modules have been field tested in countries in the Region of Africa and in the Russian Federation.

The role of communications in reducing risk

Communications are essential in reducing the human risk of contracting H5N1 virus infection during an outbreak as well as informing the population of investigations and containment measures that may be necessary in their communities. It is also essential for developing a relationship of trust between government authorities and communities to allay people's fears.

WHO has developed training modules and guidance material for media professionals and communications staff working within national authorities. A comprehensive toolkit is being developed in collaboration with UNICEF that addresses all aspects of the development of a communications strategy in the event of widespread outbreaks of avian influenza virus infection in humans. Communications experts supported outbreak investigations teams in Azerbaijan, Egypt, Indonesia, Iraq, Romania and Turkey.

Dissemination of technical information

WHO has a central role to play in making technical information and public health guidance widely and promptly available. Information concerning the number of human cases of H5N1 around the world is updated on the WHO web site when a new case is confirmed.

2. Strengthening the early warning system

Early warning of the emergence of a pandemic influenza virus is essential if the international community is to be able to respond. This requires effective surveillance and reporting systems at the national and international level. Existing surveillance systems in many of the countries on the frontline of avian influenza risk remain inadequate.

The revised International Health Regulations (IHR, 2005) are designed to provide a standardized way for the international community to detect, report and respond to public health emergencies of international importance.

Improving influenza surveillance

The WHO Global Influenza Surveillance Network (GISN) is founded on the participation of local laboratories across the world. It has served the international community for over 50 years in the detection and analysis of seasonal influenza virus strains. The emergence of the highly pathogenic influenza H5N1 virus with pandemic potential is presenting the system with significant technical challenges which will be amplified during the demanding conditions of a large scale outbreak.

The GISN continually works to expand and improve. Regionally, specialised laboratories are being developed to ensure every region has a laboratory with an H5 diagnostic facility. National systems are being assessed and capacities increased.

3. Intensify rapid containment operations

Given the evidence from other decisive public health actions (1997 H5N1, 2003 SARS) and the theoretical support from modellers for the use of antivirals, together with the possibility of rapid spread of influenza and failure of conventional strategies, a novel complementary strategy has been developed, the "Protocol for rapid operations to contain the initial emergence of pandemic influenza." This protocol covers the decision-making process needed to launch a rapid containment operation and the management and release of supplies from the antiviral stockpiles, which would be conducted through national authorities.

4. Building capacity to cope with a pandemic

National pandemic preparedness plans

WHO is working with all countries in helping them to formulate and test their national pandemic preparedness plans and to identify gaps in their core capacities. In the likely absence of vaccines and antivirals in sufficient quantities, emphasis needs to be placed on the use of non-pharmaceutical interventions.

WHO has provided technical support in the development of national pandemic preparedness plans and has developed tools and exercises to assist in this process. Over 178 countries have now drafted or finalised their plans though there is substantial variance in the content.

Ethical concerns in pandemic planning

During a pandemic, authorities will be faced with difficult and sometimes politically uncomfortable decisions over access to health services and control measures which may conflict with the rights and freedoms of their human populations.

WHO is working with ethical experts and human rights specialists to help Member States identify those areas in pandemic planning and response in which ethical issues may arise and to begin the process of rooting their decisions within their own national ethical framework .

Developing communications strategies

Comprehensive communications strategies are an integral part of pandemic preparedness. Effective communications, prior to and during a pandemic can play a significant role in reducing human exposure and mitigating the impact of the pandemic.

WHO has developed communication guidelines and tools and has held workshops which included table top exercises for health workers, Ministries of Health and journalists, and attitude surveys on the current level of knowledge of pandemic influenza among health-care workers and the public.

Preparedness planning with non-state actors

The global nature of an influenza pandemic demands that all stakeholders are identified and brought into preparedness planning at an early stage.

WHO has also been working closely with the humanitarian community to address pandemic influenza control issues in refugee and displaced populations and has developed and pilot tested guidelines and tools for these populations. These tools are soon to be used by the UNHCR Epidemic Preparedness and Response Coordinators in all countries who harbor such populations.

5. Coordinate global scientific research and development

In May 2006 WHO convened a consultation in Geneva of 120 scientific experts from national immunization programmes, national regulatory authorities, vaccine manufacturers and the research community to identify practical solutions to reduce the anticipated gap in vaccine supply.

The Global Pandemic Influenza Action Plan to Increase Vaccine Supply was published by WHO in September 2006 based on strategies for the short, mid, and long term based on three main approaches: to increase the uptake of seasonal influenza, vaccine; to increase production capacity and; to stimulate further research and development.

The South East Asia Influenza Clinical Research Network is conducting trials to produce human H5N1 treatment regimens and regional leadership of Oseltamivir production.

The Future

The pandemic threat remains and preparedness should be seen, not as short-term and disease specific, but to be of broad, long-lasting benefit. Globally, great progress has been made in pandemic preparedness and great experience has been gained. The activities and initiatives should be continued and expanded. Gaps need to be addressed and funding streams identified. Multiple actors have emerged in the area of pandemic preparedness; greater collaboration and synergy of effort would be of benefit to all.

WHO activities and programs under its strategy will continue to be carried out in close collaboration with other international partners, in particular UNSIC, and including the Pandemic Influenza Contingency teams and the UN humanitarian agencies. Collaboration at country level through UN country teams is vital for WHO country representatives and Regional Offices.

Technical and resource needs vary from country to country and region to region. Even for resource rich environments, following the WHO strategy may take years to complete and consume significant resources and investment. Appropriate solutions should be sought for resource poor environments, including promoting local solutions and innovations. The adoption of the International Health Regulations (IHR 2005) should assist resource poor countries to meet their core capacity obligations for infrastructure, surveillance and reporting systems which are essential for the detection of influenza virus and other pathogens of national and international concern. The relationship of the IHR to pandemic preparedness issues needs to be explored and expanded.

Pandemic preparedness should be seen within the generic national emergency planning and response. Though there is an essential health component to this type of emergency, many plans

lack an integrated approach at all levels of government, lack operational completeness and have not been fully tested through exercises. In many cases the Rapid Containment Protocol and its wide planning implications have not been incorporated into, or addressed by, national authorities or plans.

Stronger focus should be given to the resilience of health systems and health care facilities. Consideration has been given to the need for surge capacity resulting from the increase in demand from a pandemic. However greater attention needs to be given to the ability of health facilities to continue to provide their normal activities and services. Pandemics have a spectrum of severity. It is likely that even a less severe pandemic would result in a dramatic increase in morbidity and mortality which may have the potential to overwhelm health care facilities and effect the normal functioning of essential services both within the health care facilities and the wider community.

Significant work has been done to develop key non-pharmaceutical interventions that could be used by the general public to help limit the spread and impact of a pandemic. However in order for these to be effective the population has to be engaged. Practical, simple tools should be developed and pre-positioned throughout society using as many networks and community leaders as possible, so that when the need arises, the capacity exists to scale up their availability and implementation rapidly.

The avian influenza epizootic has mainly impacted low resource countries thus far. It is realistic to assume that the pandemic burden of disease may effect the same countries. Ethical issues that arise from the inequitable access to therapeutic and prophylactic measures and the roles and obligations of health-care workers during a pandemic should be fully explored and widely communicated. Difficult choices will have to be made and all people in all communities will need to fully understand the underlying rationale.

Relevant Documents

WHO Avian Influenza frequently asked questions

http://www.who.int/csr/disease/avian_influenza/avian_faqs/en/index.html

WHO Strategic action plan for pandemic influenza

http://www.who.int/csr/resources/publications/influenza/WHO_CDS_EPR_GIP_2006_2/en/index.html

WHO global influenza preparedness plan

http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5/en/index.html

WHO checklist for influenza pandemic preparedness planning

http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_4/en/index.html

WHO Interim protocol: Rapid operations to contain the initial emergence of pandemic influenza

http://www.who.int/csr/disease/avian_influenza/guidelines/draftprotocol/en/index.html

Addressing Ethical Issues in pandemic Influenza Planning

http://www.who.int/ethics/influenza_project/en/index.html

WHO Outbreak Communication Guidelines

<http://www.who.int/infectious-disease-ews/IDdocs/whocds200528/whocds200528en.pdf>

Pandemic influenza preparedness and mitigation in refugee and displaced populations

http://www.who.int/diseasecontrol_emergencies/training/influenza/en/index.html

Avian and Human Influenza (AHI) Consolidated action plan For Contributions of the UN System and Partners

http://altair.undp.org/documents/9051-Consolidated_Action_Plan_for_Contributions_of_the_UN_System_upto_December_2007_24_Nov_2006.pdf