

Preventive journalism and coverage of risk situations

A media professional's guide to avian influenza

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PREVENTIVE JOURNALISM AND COVERIAGE OF RISK SITUATIONS A media professional's guide to avian influenza

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Introduction

his publication is intended to serve as a guide to journalists in different media segments on preventive, risk, and crisis communication. Although the focus is on a potential future influenza pandemic in Latin America arising from avian flu, the pages that follow set forth concepts and tools to assist journalists in other crisis situations, including natural disasters, armed conflicts, environmental catastrophes, and phytosanitary disease outbreaks.

In addition to providing general information on avian flu and its impact on populations – particularly children and adolescents – the guide offers analyses and considerations on the media's relevant role in the public debate. Far from presenting prepackaged solutions, the text below sets out to identify avenues and approaches capable of contri buting toward more comprehensive and contextualized coverage.

In the event of the threat of a human influenza pandemic, preventive journalism can point us toward a responsible agenda by delineating the actual dimensions of the risk and helping to avert public panic. Accurate news coverage is an essential element in preparing Latin American and Caribbean countries to confront a future pandemic.

This entails not only educating people on the proper hygienic practices for preventing infection, but also encouraging the public to take active part in efforts to combat the spread of the virus and disease by demanding effective action from government officials.

Perilous impact

A human influenza pandemic in Latin America and the Caribbean could have devastating consequences. Studies of potential pandemic scenarios – based on epidemiometric models – project as many as 2.5 million deaths throughout the region in the initial eight weeks of a pandemic outbreak, half of them minors under age 15.¹

The good news is that a pandemic has not yet occurred, nor has the American continent been affected by the avian flu outbreaks evidenced in Asia, the Middle East, Europe, and portions of Africa. In other words, there is still time to prepare for the threat.

According to data from the United Nations Food and Agriculture Organization (FAO), from the onset of the avian flu crisis in 2003 through 2006 approximately 200 million birds were sacrificed. The damage was not simply confined to culled birds. Fears of contamination drove many people to substitute poultry with other meat sources, leading to a decline in poultry consumption and a consequent fall in the incomes of poultry farmers. FAO figures indicate that global poultry consumption in 2006 was 3 million tons less than initially forecast² (see Chapter 3 for more information).

There is no need for the first case of avian flu, or of any other disease, to occur before devoting local coverage to the issue – above and beyond the occasional stories appearing in the international pages of newspapers. Comprehensive coverage of the subject capable of helping to avert a crisis and prevent a more serious emergency is possible (and desirable) today.

Providing reliable and qualified information on the disease is important for offering guidance on the public response to the epidemic. The text below, a joint effort of UNICEF (Regional Office for Latin America and the Caribbean) and the ANDI Latin America Network, strives to assist Latin American journalists in achieving this objective. It is a work in progress. As such, any suggestions on improving its content can and should be forwarded to the executive coordinating committee of the ANDI Latin America Network (*www.redandi.org*).

Enjoy!

¹ The projection assumes an influenza virus as virulent as the 1918 Spanish strain.

² WHO/PAHO recommends the consumption of cooked chicken meat, while underscoring that there is no evidence of infection from the ingestion of poultry.

Contextualizing, oversight and agenda-setting: axes of quality coverage

1

he 20th century was marked by three influenza pandemics with varying mortality. The 1918-1919 pandemic, referred to as the "Spanish Flu" - now known to have been caused by the A/H1N1 influenza virus -, produced the most severe impact, somewhere in the vicinity of 40 to 50 million deaths³. In addition, the number of fatalities from the Spanish flu among infants and children worldwide appears to have been much higher than originally believed.4

The 1957 influenza pandemic ("Asian Flu"), triggered by the A/H2N2 virus, had a moderate impact in relation to the prior outbreak (1918). The third pandemic in 1968, an outgrowth of the A/H3N2 virus ("Hong Kong"), produced the smallest impact of the three events.

The risk of a new pandemic has become more appreciable and persistent since late 2003, after avian influenza A/H5N1 outbreaks became endemic in bird populations in East Asia – and precipitated a number of serious cases in humans.

The A/H5N1 virus presents three of the four properties necessary for a major pandemic, namely the susceptibility of nearly all people to infection, immunological naiveté, and the high lethality of the virus.⁵ The fourth and final property – human-to-human transmission – has yet to be clearly established and remains the lone missing prerequisite for a possible pandemic outbreak.

³ Nicholson KG, Wood JM, Zambon M. "Influenza." Lancet 362 (2003): pp.1733-45.

⁴ Reid A. "The effects of the 1918-1919 influenza pandemic on infant and child health in Derbyshire," Med History 49 (2005): pp. 29-54.

⁵ Bartlett, JG. "Planning for avian influenza". Ann Intern Med 145 (2006): pp.:141-144.

Existing epidemiological studies do not enable precise determination of when a new microorganism such as the A/H5N1 virus will trigger a global catastrophe, but they do accurately predict the socioeconomic, climatic, demographic, and cultural conditions leading to such an event.

The ability to predict and prevent catastrophes is not limited to the field of medicine. A number of scientific disciplines are often able to anticipate natural disasters. An example is the growing body of information regarding the impact of human activity on climate change and its implications for the future of life on the planet. Therefore, even if providing adequate warning of a catastrophic event, such as a hurricane or a new lethal virus, is impossible, appropriate preventive policies can still mitigate the ensuing loss of life and economic impact.

Nonetheless, enhanced understanding of the processes that lead to catastrophes cannot by itself prevent or minimize their effects. In the absence of the necessary public policies to mitigate the risks identified in technical and scientific studies, added knowledge will serve only to expose the negligence of decision-makers, while the media is left to count the dead and add up the economic costs.

Adopting preventive and risk control measures is necessarily a task for the public sphere. The media plays a pivotal role in this effort and in laying the groundwork for the response to catastrophic events, specifically due to its capacity to:

- Provide citizens with quality and contextualized information capable of ensuring effective participation in the decision-making process.
- Serve as an oversight (or social control) agent over public and private institutions.
- Give publicity to important issues, thereby assuring effective the engagement of different actors and, most important, decision-makers.

CONTEXTUALIZED INFORMATION

News reports should include information that enables citizens to participate in the public debate. A well-informed public has a greater capacity to exercise and press for its rights. Contextualized information strengthens the accuracy and even the educational value of the news story. Below we offer a selection of tools to develop news content with these elements.

Statistics contribute to delineating the real dimensions of a phenomenon

Media coverage of avian flu that demonstrates the difficulty of human infection - and the necessity of direct contact with infected birds for infection to occur - can help prevent widespread panic. The number of fatalities from the virus remains small, when considered in relation to the twelve countries affected since 2003. Through August 31, 2007, a total of 327 cases and 199 deaths were reported. The Chinese case is particularly illustrative. Since 2003, the country has recorded 25 cases of H5N1

(avian influenza virus) infection and 16 fatalities out of a total population of 1.3 billion inhabitants. The World Health Organization maintains updated records on the evolution of the disease across the globe (*www.who.int*).

• Another useful tool to contextualize news content involves identifying the data on existing infrastructure to deal with the phenomenon. An important question on this point: of the total number of hospitals in the country, how many are prepared to receive infected patients in the event of a pandemic?

Legislation spells out the rights of citizens and defines responsibilities

 Countries have made a commitment to the World Health Organization (WHO/PAHO) to prepare a national containment plan laying forth the measures to control disease outbreaks and hot spots. This commitment confers specific responsibilities on each country's agencies. Providing readers with all the information contained in the plan is a valuable editorial strategy.

Diversifying the range of sources and giving voice to all actors

• When reporting on avian flu, journalists should consult, not only to government sources but also poultry farmers, independent epidemiologists, domestic poultry breeders in poor communities, poultry exporters and importers, feed producers, supermarkets, consumer protection associations, border control authorities, and others.

SOCIAL "WATCHDOG"

Media outlets serve as a pivotal check and balance in democratic societies. In performing this watchdog function, they can contribute to ensuring citizens are kept informed on the progress of government projects, as well as the responsibilities mandated for the various spheres of government.



By reporting on public opinion and public service customer satisfaction surveys, the media can make an important contribution to improving upon how government and society frame issues. In São Paulo, for example, the government was pressed into allocating additional resources for street lighting after the press reported on a series of studies concluding that poorly lit streets were more of a contributing factor to crime than the lack of police patrols.

Source: Facing The Challenge – Children's rights and human development in Latin American news media, ANDI (2006)

Verify government plans and actions to control the disease

• The coverage of avian flu requires, as a first step, verification of the true capacity of each country to respond to the risks of an epidemic: How does the health inspection system operate? Is there ongoing surveillance of borders, ports, and airports? Can the country's health system support potential cases of human influenza? Have sufficient budgetary resources been allocated to

An absence of voices in the news

While the plurality of voices in a story is a major indicator of the quality of the coverage, it is not by itself sufficient to guarantee the quality of the information. Two other elements must be considered as well: the number of media sources consulted for the story and the inclusion – or not – of differing points of view regarding the event, scenario, or opinion addressed in the news piece.

On the issue of the Latin American print media's coverage of children and adolescents, a comparative study coordinated by ANDI and the ANDI Latin America Network of news content published in 2005 found an average of one cited source per story. This deficiency in the coverage extended to every country in the survey and confirmed the lack of diversity of sources and viewpoints in the reporting. The Brazilian print media's performance on this question – which ANDI has tracked since 1996 – is illustrative of the overall difficulties newspapers have to include different viewpoints on a given issue. The data on Brazil reveals that only 1.28% of published news pieces on children and adolescents meet this criterion.

Source: Direitos, Infância e Agenda Pública – Uma análise comparativa da cobertura jornalística latino-americana, ANDI and ANDI Latin America Network (2006).

meet national contingency plans? Have the plans been completed and are they being implemented?

• The inefficiency of the state in certain areas, the absence of integrated and systematized data, and the lack of transparency undermine strategic planning by governments, leaving the media and the public in the dark.

PUBLIC AGENDA-SETTING

Issues not covered by the press are unlikely to receive adequate attention from public decision-makers or from the general public. The media can contribute toward defining the priorities of decision-makers. To this end, one of its functions is to introduce issues into the public agenda in a pluralist manner.

Because they are still viewed as distant threats, avian flu and pandemic influenza are not on the public agenda in Latin America and the Caribbean. In general, authorities and journalists alike have shown little interest in the issue.

Missing from the agenda

In 2007, ANDI partnered with John Hopkins University to sponsor a series of workshops in Lima, Managua, Barbados, and Asuncion on "Strategic Communication for Avian Influenza and Human Pandemic Influenza" for journalists and information sources in Latin America and the Caribbean. During the event, participants were asked to complete a brief survey questionnaire.

When asked about the relevance or centrality of avian flu at present, a majority of respondents considered the issue to have minimal, null, secondary, or marginal importance. Few identified a possible avian flu pandemic as a priority of governments in the region. Indeed, even those responding affirmatively to the question included caveats indicating that to the extent priority is attached to the issue it is either limited to specific sectors of government or not echoed in the media and/or society.



Two studies conducted by ANDI in 2001 on media coverage of issues related to child and adolescent health reveal that Brazilian journalists largely fail to underpin their reporting with relevant indicators, a clear measure of the inadequate quality of some news pieces. The data reflects a tendency identified in studies performed by agencies of the ANDI Latin America Network on press coverage in other countries of the region. In the Brazilian case, of the 993 news pieces on children's health (47 media outlets). 39.4% included statistical data and 5.1% cited legislation. The survey of news content on adolescent health found that 34.5% of the 670 stories provided statistical indicators, while 3% cited legislation.

Source: "A Cobertura sobre Saúde relativa à infância e a adolescência: uma análise comparativa do material veiculado por 50 jornais brasileiros", Guilherme Canela (ANDI)



Article XIX: "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers."

Source: Universal Declaration of Human Rights drafted by the United Nations (UN) and signed in 1948.

APPROACHES TO COMMUNICATION: preventive, crisis, and scientific

Many people believe effective reporting on epidemics, based on quality journalism, requires a scientific approach containing data and figures, explanations concerning the

the truth

Access Map – Abraji Study on the Right of Access to Public Information in Brazil (Mapa do Acesso – um estudo da Abraji sobre o direito de acesso a informações públicas no Brasil), a survey conducted by the Brazilian Association of Investigative Journalism (Associação Brasileira de Jornalismo Investigativo – Abraji), reveals the aversion of government agencies to full disclosure, a tendency identified in a large portion of Latin American and Caribbean countries.

Journalists participating in the study organized a group of 42 volunteers in 24 Brazilian states and the Federal District. The objective was to establish contact with institutions to request specific data: for example, per diems paid out by the executive branch or monthly per diems for magistrates.

The survey, which was released in May 2007, indicated an utter lack of transparency on the part of government agencies. A mere 3.6% of the 125 state agencies surveyed – representing the executive, legislative, and judicial branches – supplied the requested data, even when confronted with legislation requiring disclosure of the information. characteristics of the virus and how vaccines work, among other matters.

In fact, scientific journalism in cases such as avian flu should be incorporated as a transversal issue in the context of the relevant news coverage defined by each country. Certain situations require that preventive journalism be practiced before a crisis arises. Other cases call for risk/crisis communication, as when, for instance, an initial case is confirmed (in animals or humans) and the threat of an epidemic becomes imminent.

Therefore, while preventive journalism is designed to warn of and anticipate threats by reporting on the measures taken to avert future crises or mitigate their

Information helps to save lives in Africa

When providing basic information on health matters, the media could contribute significantly toward improving the quality of life of disadvantaged persons. According to CARE, a non-governmental organization, 21 children a minute die every day from malnutrition or easily preventable diseases.

In a 2005 address, "Global Forum on Media Development," Warren Feed, executive director of Communication Initiative, an NGO, offered examples on how increased and more qualified information can produce positive results in a number of areas.

In regard to health, he cites a comprehensive study establishing a strong and recurrent correlation between the content broadcast by the mass media and more responsible reproductive behavior in Africa, resulting, for example, in greater awareness and expanded use of contraception.

Source: Facing The Challenge – Children's rights anda human development in Latin American news media, ANDI (2006)



"In Latin America as well as other regions of the planet, there is a strong tendency for the readers of science news to be defined as 'scientifically illiterate,' even though [as discussed above] the scientific knowledge of a large portion of media professionals is not much different than that of the general public."

Source: Elementos Fundamentais para a Prática do Jornalismo Científico, Cláudio Bertolli Filho (2006) impact, risk/crisis journalism performs the important mission of providing balanced information to the public, thereby avoiding sensationalist coverage that could spark widespread panic.

In both cases, it is essential to make proper use of scientific information and perform investigative reporting that ensures in-depth information and the most comprehensive coverage possible.

CHALLENGES OF SCIENTIFIC JOURNALISM

Scientific journalism is not meant for scientists, but for ordinary readers. More than other specialized areas of news reporting, it must be didactic, particularly in the case of critical issues such as a high-risk disease. Some important rules for avoiding errors and confusion and preparing clear and objective pieces are set forth below.

Understand, then "translate" to the reader

Make technical information accessible to the public in a manner that is readily understandable to readers, viewers, and listeners. To this end, reporters must ensure they understand the information they have collected. The disproportionate use of quotation marks in explaining essential concepts is a clear sign journalists do not fully grasp the information they have been given. In addition, particular care must be taken when using data and figures. A misplaced decimal point or a missing zero can completely transform the meaning of the information reported. In these cases, thoroughly reviewing all content prior to publication is a valuable exercise.

Probability versus fact

Science does not work with absolute certainties, but with processes and probabilities, which can be difficult to translate into news stories. Journalists are interested in knowing if a pandemic will arise. For their part, scientists operate on the basis of probabilities greater than zero for such an occurrence. Clearly articulating this scientific method in an article is a challenging task.

Check the technical information

Although they report on technical issues, journalists are not trained to ascertain whether the information supplied by sources is based on solid science. How do journalists avoid publishing false information disguised as scientific fact? In this instance, it is worth reiterating the following rule: diversify sources to ensure different viewpoints. It is always important to seek out divergent opinions and consult sources recognized by the academe.

Independence from sources

Journalists depend on sources for information and even scoops. This dependence should not prevent them from casting a critical eye and pursuing divergent opinions.

PREVENTIVE JOURNALISM: BEFORE THE FACT

The purpose of preventive journalism is to offer useful information to the public on the origin, development, and outcome of risk or crisis situations, from armed conflicts to environmental disasters. One of its functions is to indicate the conflict resolution efforts undertaken, and to report on those elements that can prevent similar crises in the future.⁶

With regard to avian flu or pandemic influenza, preventive journalism must go beyond simply disseminating the hygienic measures for preventing infection. Prevention has a broad and strategic nature. Some examples follow:

Is the medical infrastructure capable of meeting a future pandemic?

Preventive coverage must address whether the country will be unprepared for a future pandemic due to the absence of an adequate emergency plan. This requires verifying several factors: number of hospital beds, drug stockpiles, number of medical ventilators, available supply of doctors, nurses, nursing assistants, etc.



"By diversifying sources, journalists avoid the risk of tying themselves to a single voice, to a single version. Experience teaches that all sources have interests, whether economic, political, ideological, or even personal. When confronted with a researcher, a scientist, or a technical expert, journalists tend to presume that words and intentions are impartial within this very specialized environment... As the poet might say, "a happy deception."

Source: "O Jornalismo Científico e o compromisso das fontes", Wilson Costa Bueno (2005)

⁶ El periodismo preventivo y los observatorios de medios, Javier Bernabé Fraguas, journalist and professor at the University Complutense of Madrid.

What factors can hinder or facilitate efforts to combat a possible pandemic situation?

Another important element of preventive coverage involves analyzing the cultural, political, or geographic aspects that could hinder or facilitate efforts to combat a future pandemic. Some suggestions are laid out below:

- Verify whether a special plan is in place to assist persons in areas with limited access, such as the Amazon rainforest.
- An important feature of local festivals is the consumption of food and

beverages, which generally conflicts with preventive efforts. This occurred in the 1991 Peruvian cholera epidemic. In the department of Cajamarca, the epidemic spun out of control following the traditional Carnival festivities in February of that year (*see chart on page 19*).

• In rural and Andean communities, domestic poultry breeding is commonly left to children; in the event of contamination, what risks would those boys and girls face? Would their parents be prepared to instruct them on the necessary protections?

Parrot Chicks

"Contrary to what was reported in a September 24 article appearing on page 2-10, Pneumonic plague is transmitted by saliva." The correction carried in the September 28, 1994 edition of the Brazilian daily *Folha de S. Paulo* does not specifically state the newspaper's error. Readers interested in understanding the facts in question were forced to consult the September 24, 1994 edition. In fact, the article had reported that the disease was transmitted by parrot chicks!

All because the article's editor sought a synonym for the Portuguese word "perdigoto," which can mean either saliva droplet or parrot chick. The difficulty, poor judgment, or apprehension of admitting ignorance of particular issues can lead to serious errors in the reported information. In these cases, consulting various sources and asking questions of those familiar with the subject is a necessary exercise. Does the government budget allocate resources to emergency contingencies? On the political and economic front, journalists need to investigate whether sufficient budget appropriations have been earmarked to cover emergency contingencies in the event of a pandemic.

In the first half of 2006, the Inter-American Development Bank commissioned a study from the Pan American Health Organization to assess the capacity of Latin America's health network to confront a potential influenza pandemic. The results of the study are available at www.iadb.org/sds/AvianFlu/ images/hospitales.pdf.

JOURNALISM IN RISK OR CRISIS SITUATIONS

Risk and crisis situations are an integral part of journalism, which aims to keep abreast of the most relevant developments. However, the inherent rush to press tends to generate errors. In the case of a pandemic, this could exacerbate public panic. The primary challenge when faced with a risk or crisis scenario is to balance the need for speed with the quality of the news reported. Maintaining the public's confidence in the news reported by the press is critical under these circumstances.

It bears noting that there could be a short window between the initial stages and the peak of a human influenza pandemic arising from avian flu – estimates place the most probable duration of a pandemic at eight weeks. The media and journalists must be prepared to address a future pandemic prior to its emergence – otherwise there will simply not be enough time to develop effective news coverage.

Accuracy of technical and scientific information

Readers must be informed of the true dimensions of the risk in order to prevent panic or behaviors that could cause greater harm. In the initial stages of a crisis, accurate information is rare. In cases of isolated disease outbreaks, there are only suspicions, which must be confirmed by accredited laboratories. Journalists need to know how to address these periods of uncertainty, when very often the work of sources and the investigative efforts of journalists themselves may be hampered.

Disseminate possible solutions to the challenge

Reinforcing a narrative of fear generates a sense of helplessness among the population and exacerbates public panic. News coverage should not simply provide an inventory of the crisis (number of sick and dead, economic impact, and the difficulties of combating the disease). It should also offer positive information capable of mobilizing the population to confront the epidemic. For example: How can the public prevent contamination? How can individuals ensure the safety of the food they eat? How can people participate in volunteer groups?

Take into account the concerns of different sectors

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The press should develop news reports that are of interest to different sectors of society. As an example: an outbreak of avian flu would invariably cause serious damage to small poultry producers. In the midst of a crisis, the issue may seem superfluous to the ministry of health, yet poultry farmers have a legitimate concern in knowing how they would be compensated in the event it becomes necessary to sacrifice birds. Without the cooperation of poultry farmers, the true number of infected birds could be concealed from health authorities, and serious safety questions could arise regarding the disposal of culled birds.

Mutual trust helps avoid rumors

It is important in a crisis to establish a relationship of mutual trust between sources and reporters, as well as the media and its audience. The absence of trust increases the risk of fueling hearsay and conjecture, which could aggravate the crisis. Media professionals should never withhold data to avert public panic, nor should they publish questionable information.

Communication versus crisis situations: the importance of coordinated action

In emergency health situations, such as epidemics and pandemics, a coordinated communication strategy among the various social actors – government, business, civil society organizations, and media outlets – is critically important insofar as conflicting positions and attitudes can interfere with or even distort the actions undertaken to deal with the crisis.

The case of the 1991 Peruvian epidemic serves to illustrate the importance of coordinated action. In the midst of the cholera outbreak that claimed more than 2,000 lives in just five months, the Ministry of Health and health experts urged the population to refrain from eating raw food, particularly fish and shellfish. Despite the warning, then President Alberto Fujimori undermined his own ministry when he appeared on television savoring a raw seafood dish. Fujimori's primary concern lay in protecting the domestic and export seafood industry, which had begun to slump soon after the outbreak. Therefore, although the president's actions further endangered public health, he had clearly bowed to the pressure of the seafood industry and fishermen. The result was an increase in cholera cases just as officials had begun to bring the epidemic under control.

In addition to potential conflicts of interest with different sectors of the economy, other factors can also hamper prevention efforts. The actions of the media in crisis situations are a decisive factor in this process. In the initial stages of Peru's cholera epidemic, for example, a number of outlets resorted to sensationalist reporting, triggering public panic and hindering the efforts of the agencies tasked with responding to the emergency.

By the same token, once the initial impact of the epidemic had passed, the press devoted diminishing attention to the issue, instead reserving its headlines for other matters – even as the national emergency peaked – including cabinet shuffles and stories on terrorism.

Strategies for emergency cases

The larger the scope of the emergency, the more comprehensive the

communication tools and techniques employed must be. To ensure the relevant messages are transmitted to at-risk populations, it is essential to outline the objectives that political actors, the media, and the public (in this case, understood as public opinion) will have to carry out. Some of the central questions related to communication in largescale health emergencies are provided below:

Political actors:

- The consistency of the narrative and messages articulated by the principal political figures is a key component in emergency situations.
- Clearly underscoring the legitimacy of the government authorities, experts, and/or actors responsible for enacting measures to deal with the crisis is essential.
- It is important to be prepared to address other issues that could encroach on the public agenda.

Media:

 Media outlets play an essential role in providing the public with information and guidance on emergencies, although it can also generate distortions and even panic.

- The media's agenda and the issues it prioritizes in its coverage vary considerably and continuously shift.
- Not infrequently, a widespread epidemic is treated as a routine matter or loses its news value.

Public:

- People should not wait for magical solutions to confront the crisis.
- Successful experiences such as participation in social networks and preventive practices – can contribute to combating the situation.
- In emergencies, direct and interpersonal communication should be emphasized.

Source: Carlos Reyna – sociologist (Workshop on a Future Human Influenza Pandemic arising from Avian Flu – UNICEF, Lima, Peru, April 2007)

Understanding avian flu and the influenza pandemic*

*Sources: World Health Organization/Pan American Health Organization.

2

iven the substantial information – mostly available on the Internet – on avian flu and a possible pandemic influenza, journalists should be highly selective and critical in their research to ensure the public contextualized and reliable information.

In covering a pandemic, journalists would ideally have access to a large number of sources and, to the extent possible. conduct face-to-face interviews with a view to cross-checking and comparing the available data. To assist media professionals with this task, we have prepared a summary of the primary aspects related to avian flu based on studies carried out by WHO and other scientific institutions -, including characteristics, forms of transmission, symptoms, risks, and impacts.

Because access to qualified information sources is a central

strategy of responsible coverage of the issue, a list of experts and institutions that could be used as an initial reference base on the issue in the Latin American and Caribbean context is provided at the end of this guide, as well as a selection of links containing relevant documents and information for journalists.

1. What is avian flu?

Avian flu was originally diagnosed over 100 years ago. Today there are approximately 15 known strains (*see Glossary definition*) of the virus. The animal epidemic currently affecting 56 countries in Asia, Africa, and Europe is caused by the H5N1 type A influenza virus. The virus has the potential characteristic for transmission to human beings. There have been 300 cases of birdto-human transmission of the H5N1 subtype.



It is important to underscore that epidemics do not stem solely from the virus. News coverage should address the other causes behind the spread and growing intensity of diseases such as influenza: lack of basic sanitation. poor water quality, precarious housing and working conditions, malnutrition, the inefficiency of public health agencies, the absence of preventive policies, etc. To this end, the factors required to ensure minimum healthy living conditions need to be included on the agendas of news organizations.

2. How are human beings infected by avian flu?

Of all the viruses that affect birds, H5N1 is of greatest concern to humans. It has caused the largest number of serious illnesses and deaths. H5N1 has jumped the barrier between species and infected humans on several occasions. The phenomenon was first observed in Hong Kong in 1997 when eighteen persons were infected, six of whom subsequently died. From 2003 through early August 2007, WHO reported 320 cases of human infection and 194 fatalities, for a mortality rate of 67%.

The evidence indicates that the primary source of human infection is direct contact with dead or sick birds. Poverty exacerbates the problem. Inhabitants in poor areas where food and income are scarce consume dead birds, even when their cause of death is unknown. Human infection likely results from the inhalation of secretions (while cleaning or maintaining aviaries) or slaughtering or handling contaminated animals. There is no evidence of transmission from the consumption of eggs, or frozen or cooked poultry.

3. How does the virus spread in birds?

Highly contagious, avian flu spreads through contact with infected animals, their secretions and feces. The virus can also spread through equipment, clothing, feed, water, and other contaminated objects. Poultry farmers are urged to thoroughly wash their hands before and after coming into contact with birds. They should also frequently disinfect all shoes and boots, clothing, cages, boxes, egg crates, and other aviary equipment. Furthermore, wild birds contribute to infecting domestic birds and spreading the virus.

4. Is it possible to contain the spread of the virus?

Immediately upon identification of a suspected case in an aviary, WHO recommends a timely and rigorous epidemiological investigation of the animals and breeders in question. If an infection is confirmed, the contaminated or exposed animals must be sacrificed. Among the actions that should be adopted are decontamination of the affected farms and the implementation of vigorous sanitary and biosecurity measures. In addition, contaminated persons should receive immediate medical assistance.

5. Do migratory birds contribute to the spread of avian flu worldwide?

The role of migratory birds in the pathogenic spread of avian flu is not yet fully understood. Based on more recent outbreaks, it is believed some wild birds may carry the H5N1 virus on their migratory routes and in this way contaminate domestic birds.

6. What are the primary symptoms of avian flu in humans?

The incubation period for H5NI virus is longer than that of common influenza, whose incubation is approximately 2 to 3 days. Current data indicates that the incubation for H5N1 varies from eight to seventeen days. Initial symptoms are similar to common influenza, including high fever (above 38° C or 100° F) and muscle aches. Other symptoms reported among patients are diarrhea, vomiting, abdominal pain, chest pains, and bleeding (nose and gums).

7. Are there vaccines against the virus?

Not yet. Several studies are underway to produce a vaccine against the most contagious form of H5N1. However, it will be very difficult to develop an effective vaccine before the virus mutates and its new characteristics are understood. In addition, only a few countries in the world have the capacity to produce vaccine at scale. Another problem is that after the new vaccine is developed and produced it will have to be distributed and applied. The pandemic will likely spread before a vaccine is made available. Moreover, several strains of the virus could emerge. It is not known what specific mutation will arise and infect humans. Therefore, governments must monitor the types of viruses in circulation to ensure the most adequate vaccine is produced quickly and in sufficient quantity for each pandemic event.⁷

8. What drug treatments are available for infected humans?

There are two drugs – oseltamivir (Tamiflu) and zanamivir (Relenza) – capable of mitigating the severity and duration of the seasonal influenza virus. To be effective, however, these treatments must be administered immediately (48 hours following the onset of symptoms). In cases of human infection by H5N1, drug treatments can improve survival prospects, provided they are administered early.

9. Will there be a sufficient stockpile of drugs?

Antiviral stockpiles will be insufficient in every country at the outset of a pandemic, primarily in developing countries.

10. What is the difference between pandemic influenza and avian flu?

Avian flu encompasses a broad set of influenza viruses that primarily affect birds. In rare cases, these viruses can infect other species, including pigs and humans. The vast majority of avian influenza viruses do not infect human beings, nor do contaminated individuals transmit the flu to other individuals.

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Pandemic influenza occurs with the emergence of a flu virus subtype that has not previously circulated in humans. The H5N1 virus has pandemic potential because of its ability to mutate and adapt into a contagious strain for humans. If the virus mutates, it will no longer be an avian virus, becoming instead a human influenza virus.

11. Are influenza pandemics common?

History demonstrates they are rare but recurring events. In the 20th century, there were three pandemics: the 1918 Spanish flu, the Asian flu of 1957, and the Hong Kong flu of 1968. The 1918 pandemic claimed between 40 and 50 million lives worldwide. The other two were less severe. The 1957 flu resulted in 2 million fatalities, while the 1968 event produced approximately 1 million deaths. A pandemic occurs when a new influenza virus emerges and begins to spread in humans as easily as the common

Putting an end to the confusion

Endemic Disease: Continued presence of a disease, or of an infectious agent, in a specific geographic zone.

Epidemic (or outbreak): The occurrence in a community or region of a large number of cases of an illness in excess of normal expectancy. The number of cases indicating the existence of an epidemic varies according to the infectious agent, the size and characteristics of the exposed population, its previous experience with or lack of exposure to the disease, and the location and time of year in which the outbreak occurs.

Epizootic Disease: Contagious disease affecting a large number of animals. The term has become obsolete and replaced with epidemic.

Pandemic: epidemic affecting human populations across several countries and continents.

Keeping an eye on the farm*

How can avian flu affect a flock?

- Purchase or gift of one or more domestic birds, even if not sick.
- Humans, particularly veterinaries and livestock experts or people who deliver animal feed. Contamination can occur through contact with an infected farm, a live bird market, a slaughterhouse, a laboratory, etc. Individuals may carry the virus on their clothes, shoes, boots, vehicles (wheels, for example), and egg crates.
- Purchase of other animals (pigs, for example) from farms with infected poultry.
- Dogs coming into contact with dead birds on infected farms.
- Wild birds during migration from an infected area to a diseasefree area. Migratory birds may contaminate farms through contact with domestic birds or through their infected feces on the ground or in water ponds.
- Ducks moving from rice fields to lagoons or water ponds.
- Domestic birds that must find their own food outside the farm.
- Contact with water ponds.

- Poorly prepared vaccines.
- Contact with infected manure or birds.

Do the feces of nursery birds pose a danger?

Yes, they pose a risk to animals and humans. Infected birds excrete the H5N1 virus (and other potentially dangerous pathogens) in their feces. It is impossible to prevent birds in the same cage from coming into contact with chicken feces, although it is possible to protect different species by housing them in separate locations.

Wild ducks frequently introduce low pathogenic avian flu in free-range domestic flocks or open-air cages through fecal contamination. Birds can be protected from wild birds and their feces with mesh or netting.

In the event nursery birds come into contact with wild birds, they should be monitored for highly pathogenic avian flu symptoms, including: respiratory problems, watery diarrhea, swelling of the head, neck, and eyes, or reduced decreased or poor egg production.

There are two ways in which humans can come into contact with the feces of nursery birds: directly, through the skin, or indirectly, through clothing or individuals who have been in infected locations.

- Gloves, boots, and other protective clothing should always be worn in establishments where birds are bred (or have been bred recently). For examples, stables, chicken coops, lean-tos, and other structures.
- When leaving a location, gloves, boots, and clothing should be removed and disinfected.
- Hands should be thoroughly washed with soap (or vigorously scrubbed with ash, if soap is not available).
- It is particularly important that individuals without gloves or other types of protective gear wash and disinfect themselves

How can farms be protected in disease-free regions or countries?

In the case of avian flu, at virtually no time is the risk of disease zero. While no known cases may have been reported in your region or country, the risk of disease exists. This scenario is defined as one of low or medium risk.

Reports of avian flu cases in an adjacent area does not mean that

neighboring farms, or, for that matter, your farm, are free of infection.

Birds or humans may have moved from the infected area before the disease was observed or the initial case reported.

A farm will remain disease-free if the following principles are followed:

- Maintain birds in good condition.
- House birds in protected areas.
- Control access to the farm.

*These guidelines are laid out in Guide for the Prevention and Control of Avian Flu in Small-Scale Poultry in Latin America and the Caribbean published by the United Nations Food and Agriculture Organization (FAO). The full text is available at www. fao.org/avianflu/es/animalhealthdocs_es.html (spanish language version)

flu virus – through coughing and sneezing – leading to a high number of infections.

12. What is the risk of a pandemic?

Experts have monitored the H5N1 strain for several years. The virus first infected human beings in 1997 and has caused serious outbreaks in domestic birds since 2003. In December 2003, infections were diagnosed in individuals exposed to sick birds. The majority of cases occurred in previously healthy children and young adults. Fortunately, the virus is not easily transmitted from birds to humans.

13. Could the virus have global effects?

A highly contagious virus could spread throughout the world. While some countries could perhaps delay the virus's arrival through travel restrictions and reinforced health surveillance, preventing its penetration will be difficult. Preparing for an epidemic requires developing a preventive policy that includes investments in animal and public health infrastructure, building drug stockpiles, training health workers, purchasing hospital equipment, in addition to mobilizing and providing guidance to the population on facing the crisis.

The influenza pandemics of the 20th century circled the globe in nine months, at a time when most international travel was by ship. Given the speed of air travel today, the virus could spread in less than three months.

14. Will the virus's spread be far-reaching?

Because the majority of humans lack immunity to the virus, infection and disease rates will tend to be higher than in seasonal epidemics of the common flu. In the event of a pandemic, a large portion of the population will require medical treatment. Only a few countries have sufficient personnel, equipment, and hospital beds to handle a large number of suddenly ill people.

15. Will the number of fatalities be high? Historically, the number of fatalities during a pandemic has varied significantly. Mortality rates are basically determined by four factors: the number of infected individuals, the virulence of the virus, the underlying characteristics and vulnerabilities of the affected populations, and the effectiveness of preventive measures. Accurate mortality predictions cannot be established before the pandemic virus emerges and begins to spread. All mortality projections are purely speculative.

STRATEGIC MEASURES TO PREVENT AND CONFRONT THE CRISIS

The World Health Organization published a series of recommendations and strategic actions to respond to the threat of an influenza pandemic. The actions set forth different stages of defense. WHO works with health ministries and organizations to support surveillance of influenza strains circulating in various countries. A sensible surveillance system capable of



The population should be mobilized to face a pandemic actively. Public participation can contribute to thwarting the spread of the virus, thereby reducing the number of victims and the social and economic costs.

In crisis situations, information is a critical tool for preventing panic. The media plays a central role in this effort, not only by providing guidance on hygiene and public health, but also by encouraging different social actors to engage in public actions designed to control the epidemic. detecting the emergence of the virus is essential for the timely detection of a pandemic risk.

The recommendations are aimed at avoiding the element of surprise by perfecting an early warning system in the event of a pandemic. The objective is to delay the spread of the virus and accelerate the development of vaccines.

Planning and participation

Developing a plan can help contain the transmission of the virus, reduce the number of human infections, limit hospitalizations and deaths, ensure essential services remain in operation (transportation, waste collection, electric power, water, etc.), and mitigate the socioeconomic impact in the event of a pandemic.

It is essential that all of society participate in the plan. The plan should be based on a multisectoral approach and involve all areas and levels of government. In addition, the collaboration of scientists and experts from different areas, including public policy, legislative, animal health, public health, laboratory analysis, and communication, is vital.

Assuring cooperation in the event of an emergency requires a commitment by individuals to prepare and execute a preventive policy and fight the epidemic. Through its associations and organizations, the larger community can contribute important knowledge on the critical factors underlying the development of an efficient plan, including the geographic characteristics of the region, local resources, and even cultural and ethical matters that could hamper the actions of health services.

WHO summarizes the main points that should be included in the planning process:

- Strengthened epidemiological surveillance for human and animal influenza.
- Procurement of antivirals and production of vaccines.
- Protocols on the proper use of antivirals and vaccines; organization of health assistance networks.
- Individual and collective biosecurity guidelines and measures for health services.
- Protocols on laboratory diagnosis.

• Communication, inspection, and surveillance actions at ports, airports, and border crossings.

ALL STAGES OF THE PANDEMIC

The World Health Organization has defined six phases of a pandemic outbreak. The purpose of the classification is to alert countries of viruses with pandemic potential.

Another objective is to prepare contingency plans and mitigate the social costs of a pandemic. According to WHO's classification, the global community is presently at stage 3 of an avian flu scenario. Increasing or decreasing the pandemic alert level involves consultations by WHO with a committee of outside experts to examine all the available data. The committee will submit its recommendations to the Director-General of WHO, who will then render a decision on whether the pandemic alert level should be reset.

Interpandemic period

- PHASE 1 No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human influenza infection may be present in animals. The risk of human infection is considered low.
- PHASE 2 No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.

Pandemic alert period

- PHASE 3 Human infection(s) with a new subtype reported. But no human-to-human spread or at most rare instances of spread to a close contact with a human case.
- PHASE 4 Small cluster(s) with limited human-to-human transmission (fewer than 25 infections) lasting less than two weeks. Spread is highly localized, suggesting that the virus is not well adapted to humans.
- PHASE 5 Increased spread among humans, with large



In a pandemic, WHO will provide regular updates, when necessary, through *www.who.int.* Journalists can register to receive automatic alerts on new updates. The updates will provide the most recent information collected by WHO, including number of cases, proposed actions, and continuous risk assessments. cluster(s) of human cases (25 to 50 human cases), lasting two to four weeks. While human-to-human spread is still localized, the virus is becoming better adapted to humans. Although not yet fully transmissible, there is substantial pandemic risk

Pandemic period

• PHASE 6 – Increased and sustained transmission in the general population.

WHO TECHNICAL RECOMMENDATIONS

WHO's pandemic alert is now at Phase 3 (a new influenza virus is causing human disease, but is not yet easily spread in humans). In this phase:

- WHO recommends restricting travel to affected countries.
- WHO recommends barring or separating travelers from countries affected by H5N1.
- WHO alerts travelers to countries affected by avian flu that vaccinations are not required because an effective vaccine against H5N1 strain has not been developed.
- WHO underscores, however, that persons wishing to protect against human influenza should receive the vaccine.

Travelers to contaminated regions

- Avoid live bird and animal markets, farms, and bird sanctuaries in contaminated areas.
- Consume poultry only if cooked at 70° C (160° F), at a minimum. To date, there is no evidence of infection

caused by properly cooked poultry meat or poultry products.

- Avoid contact with surfaces and objects contaminated by the secretions or feces of animals.
- Avoid consuming raw or undercooked poultry-based foods or eggs.
- Avoid purchasing, maintaining, or transporting live animals in contaminated countries, especially ornamental or domestic birds.
- Wash hands frequently with soap and water or a disinfectant.

Recommendations for populations in affected countries

- Exercise caution, particularly when slaughtering contaminated animals;
- Avoid direct contact with infected birds or with surfaces or objects contaminated by their feces or secretions. The risk of exposure is highest during slaughter, finishing, cutting, and preparation.
- Avoid contact with dead migratory birds or wild birds manifesting disease symptoms.
- Countries located along migratory routes should be alert to the initial disease symptoms in wild and domestic birds. Recent cases have suggested the possibility that migratory birds are spreading highly pathogenic H5N1 virus.
- Be alert to symptoms such as fever and respiratory disease in persons who may have been exposed to the virus. Initial symptoms of H5N1 virus infection are similar to those of many other common respiratory ailments.

Epidemics in flocks

- Quarantine all contaminated animals.
- Destroy all infected animals or those potentially exposed to contamination.
- Vigorously monitor traffic among farms.
- Vaccinate all persons coming into contact with the birds against human influenza (avoid gene transfer).
- All persons involved in the slaughter of birds should use protective equipment and antiviral prophylaxis.
- Perform timely and vigorous epidemiological investigations with the medical and veterinary services immediately upon identification of a suspicious case.



Questions regarding the measures taken by member countries should be directed to national authorities, not WHO. Questions concerning animal health should be directed to the International Organization for Animal Health (*www.oie.int/eng/en_index.htm*) or the United Nations Food and Agriculture Organization (*www.fao.org*).

Suggestions for framing the issue **Priority to children and adolescents**

3

mid so much doubt and conjecture on the extent and impact of a future influenza pandemic in Latin America and the Caribbean, one thing is certain: children and adolescents would be among the most vulnerable to the virus – likely accounting for the highest number of victims.

In the avian flu outbreaks of Africa, Asia, and Europe, children and adolescents were the most affected segment. Half of the 205 H5N1 infections between January 2003 and April 2006 were under age 20, according to the Epidemiological Bulletin of WHO/PAHO.⁸ The mortality rate was high among 10 to 19 year-olds.

Several factors contribute to acute respiratory infection in children: nutritional state, low birth weight, household size, family educational level, the absence of or inadequate breastfeeding, pollution, and secondhand smoke inhalation.⁹

The flu virus spreads quickly in enclosed spaces. Boys and girls under age 2, the elderly, and persons with chronic or immunosuppressive diseases are at highest risk.

In certain cases, such as the avian flu outbreak of December 2005 to January 2006, only children have been infected. The ten infected founded children in Turkey, four of whom subsequently died, ranged from 3 to 15 years of age.¹⁰

Because children and adolescents are more vulnerable to the flu and cannot effectively defend themselves, they must be a priority of preventive policies and assistance efforts in the event of an epidemic or any other crisis situation.

⁸ WHO/PAHO, Epidemiological Bulletin. 26;30 (June 2006)
⁹ Eitan N. Berezin, Brazilian Pediatric Society
¹⁰ Weekly Epidemiological Record (October 2006)

This is one of the principles set forth in the Convention on the Rights of the Child adopted by the United Nations General Assembly on November 20, 1989, and ratified by the vast majority of nations. The Convention became international law in 1990, and its provisions were incorporated in the national constitutions of various states, among them Latin American and Caribbean countries

Convention on the rights of the child

ARTICLE 3

- In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.
- 2. States Parties undertake to ensure the child such protection and care as is necessary for his or her well-being, taking into account the rights and duties of his or her parents, legal guardians, or other individuals legally responsible for him or her, and, to this end, shall take all appropriate legislative and administrative measures.
- 3. States Parties shall ensure that the institutions, services and facilities responsible for the care or protection of children shall conform to the standards established by competent authorities, particularly in the areas of safety, health, in the number and suitability of their staff, as well as competent supervision

View full text at: www.onu-brasil.org.br/doc_crianca.php



- Preventive coverage of an influenza pandemic should stress the threat to the child and adolescent population with a view to mobilizing society and government to develop protective measures
- It is important to consult physicians and experts to clearly spell out the primary actions to prevent the virus in children and adolescents.

Food for Thought

Protecting the rights of children and adolescents is an efficient means to stop the perpetuation of poverty - an essential element of any development strategy. In its report "Poverty Reduction Begins with Children," UNICEF argues that children should be the principal target of poverty reduction efforts. Why? A revealing fact: because low income families tend to have more children than higher income families, boys and girls are disproportionately represented among the poor. No other age group registers an equivalent level of representation.

Source: www.unicef.org/publications/ files/pub_poverty_reduction_en.pdf

Preventing contagion

A few simple steps can help prevent avian flu infection in children and adolescents. Some of these are provided below:

- Keep children away from farms and nurseries with birds suspected of infection.
- Children in rural areas who often maintain, feed, and collect the eggs of domestic birds – need to be educated to identify flu symptoms in birds and notify the responsible adult of suspicious cases.
- In the event of contact with suspected animals, wash hands with soap and water.
- Eggs and poultry should always be prepared at a high temperature.
- Proceed to a hospital or health clinic in cases of suspected infection.

Contamination:

- Avoid sharing utensils such as silverware or glasses.
- Another indispensable practice is to cover the mouth when coughing or sneezing to avoid airborne transmission of the virus through saliva.

EPIDEMIC SCENARIOS AND THE COLLAPSE OF HEALTH SERVICES

In a hypothetical pandemic influenza, intensive care units (ICU) and medical ventilators throughout Latin America would collapse within one week, according to an assessment by WHO/PAHO.

The conclusions are based on the infection rates of the 1957 and 1968 flu epidemics, in which 3 million people died. It bears noting that the two epidemics were considered "moderate" by experts in the field.

The WHO/PAHO scenario presumes 25% of Latin America's population would contract the virus and a death toll of 300,000. In the first eight weeks of the contagion, almost 1.5 million people would be hospitalized, representing a hospital bed occupancy rate of 80% throughout the region.¹¹

In the event of such a scenario and given the difficulty of increasing hospital capacity, experts such as Carissa Etienne, assistant director of WHO/PAHO, argue that one alternative is to maintain infected patients in their homes. A preventive effort would be necessary in this case to prepare families to deal with the epidemic by providing them guidance on care for the sick.

ECONOMIC AND SOCIAL IMPACT

The poultry sector is a US\$ 18.5 billion industry, representing almost 15% of agricultural production in Latin America and the Caribbean and nearly 1% of GDP. Its multiplier effect on the economy is also significant, primarily on grain (corn and soy) production, the basic components of birdfeed.¹²

The poultry production chain employs 4 million workers, while poultry meat consumption contributes to food security in Latin American and Caribbean countries, accounting today for close to 40% of total meat consumption. Rich in protein, chicken



- Preventive news coverage should include consultations with physicians and scientists on home treatment options: What kind of guidance should be offered to families? What are the principal precautions that should be taken, particularly with children and adolescents? How can relatives and neighbors be protected from infection? What are the appropriate medications? What are the recommended hygienic and dietary measures?
- Another valuable approach is to identify the strategies coordinated by the local health ministry or secretariat: Are the population and medical personnel receiving guidance on preventing and responding to the disease? Are the primary hospitals in the city and/ or country prepared to take in infected patients? Are drug stockpiles sufficient to treat the population?

¹¹Oscar Mujica, "Assessing the Impact of a Pandemic," WHO/PAHO (03/20/2006) www.col.ops-oms.org/servicios/influenza/reunion/docs/trad/15_impacto_pandemico.ppt#15 ¹² Inter-American Development Bank



Raising poultry on small farms, whether as a source of additional income or for household consumption, is a part of life in many Latin American and Caribbean countries. It is important to contact the Ministry of Agriculture, poultry farmer associations, and Agriculture Secretariats to ascertain the number of poultry farmers, production volumes, etc. meat is an excellent low-cost option for low-income populations.

Annual chicken production in the region is approximately 16.1 million tons, 25% of global production. Brazil, the single largest exporter of chicken meat, brings in US\$ 3.2 billion from its international sales.

The figures provide some idea of the economic damage an avian flu outbreak would inflict on the incomes of small poultry producers, rural and agribusiness workers, farmers, merchants, and other agents of the region's poultry production chain.

Food security

An Inter-American Development Bank (IDB) assessment estimated the cost of an avian flu outbreak in Latin America at US\$ 1.6 billion. By contrast, only US\$ 247 million in investments would be required for capacity-building and preparedness efforts for the region's public animal health services. The projections refer only to an outbreak scenario; the consequences of a pandemic would be far more severe (*see chart on page 37*).

It is important that countries ensure assistance for producers who could face significant income erosion. In addition, poultry production plays a strategic role in food security insofar as it provides a low-cost source of animal protein.¹³

The majority of Latin America's rural population – estimated at approximately 200 million – is engaged in raising chickens and other fowl.¹⁴

An avian flu outbreak or an influenza epidemic could generate a number of economic impacts: workforce reductions, falling poultry consumption, decreased sales and business, reduced investments, interruptions in basic services, among others.

Estimates of economic losses to Latin American and Caribbean countries from an influenza pandemic are mere speculation inasmuch as they are conditioned by various

At some point in the future?

The Ministry of Health of a member-state of WHO receives information on a possible outbreak of acute respiratory illness in a remote provincial village. A response team is dispatched to the province, whereupon it discovers the outbreak had begun almost one month earlier, identifying 50 cases over that period. All age groups are affected. Currently, there are 20 patients in a local hospital. Pneumonia and acute respiratory failure have claimed 5 lives.

Surveillance in the affected zones is stepped up, and 9 new cases of infection are detected. The samples collected from several patients and analyzed in a national laboratory indicate type A influenza virus, although the subtype cannot be ascertained. The viral samples are forwarded to the WHO Influenza Reference Center for more thorough analysis, which for the first time identifies the type A flu virus and H5N1 subtype in humans. Subsequent gene studies indicate that most of the viral genes stem from avian flu, while the remainder derive from humans. The information is immediately passed on to the Ministry of Health where the cases were initially detected, and notification is made through the WHO Global Influenza Surveillance Network.

Additional cases are diagnosed in adjacent areas. The new flu virus begins to make headlines, becoming the principal issue of the day. WHO calls on countries to intensify their influenza surveillance and control efforts. The upper echelons of government throughout the region receive daily briefs as surveillance measures increase. In the following months, outbreaks occur in neighboring countries. Although cases are diagnosed in all age groups, minors appear to be disproportionately affected. One in five patients dies.

The virus spreads quickly, and countries begin imposing travel restrictions and quarantine measures.

Schools close. Generalized panic ensues as the public discovers that antiviral drug stockpiles are insufficient and no effective vaccine exists. A week later, there is information of a virus outbreak in passengers on an airline arriving from some of the affected countries, after they are found to manifest respiratory symptoms.

Several weeks later reports surface of the first virus outbreaks on other continents. School and work absences mount. The telephones at health agencies ring off the hook. The spread of the new virus is headline news in the print and electronic media. Citizens seek vaccines, but are unable to obtain them or antiviral medications. Police departments, public service providers, and public transportation authorities face a shortage of workers, leading to service interruptions.

There is an immediate drop in hospital and health clinic personnel when doctors, nurses, and other staff fall ill or refrain from going to work out of fear. Hospital ICU units are filled to capacity, and there is a shortage of medical ventilators for patients suffering from pneumonia. Parents are distressed as they watch their healthy children succumb to the virus in a matter of days. Several airports are closed due to a lack of air traffic controllers. In the following six to eight weeks, health and other basic services are affected as the pandemic spreads throughout the globe.

Are you prepared to prevent or reduce the number of deaths, social upheaval, and economic repercussions of a flu pandemic?

Source: Epidemic Alert and Response, WHO Verification List for the Influenza Pandemic Preparedness Plan (2005) http://www.who.int/csr/ resources/publications/influenza/WHO_CDS_ CSR_GIP_2005_4SP.pdf



factors (extent of the epidemic, number of infected humans, mortality, economic losses).

The scenarios developed by the Inter-American Development Bank (IDB) project an economic cost of US\$ 12 billion to \$US 85 billion, and 2 million deaths. These projections, however, cannot account for the full extent and effect of a potential pandemic from a socioeconomic standpoint.

IMPACTS ON MINORS

In addition to facing greater exposure to the action of viruses, children and adolescents are the primary victims of the social and economic impacts arising from epidemics. The most tragic is orphanhood.

In some of the poorest regions of Asia, Africa, and Europe affected by avian flu outbreaks, children had the highest infection rates – particularly girls, who in many areas are responsible for maintaining, feeding, and collecting the eggs of domestic birds.

The impact of avian flu on children's lives goes far beyond the immediate risk of the disease to their health. For many families, the contamination of domestic birds resulted in the loss of an important source of food and income. This can adversely affect the health of children and adolescents and directly threaten their access to education. When incomes fall drastically, families can no longer ensure their children's attendance in school nor provide them with basic healthcare.¹⁵

Effects of the crisis

Emergency situations place a severe burden on basic and child protection services. In addition to the deaths they cause, natural disasters, epidemics, and armed conflicts leave children exposed to disease, malnutrition, abuse/violence, and abandonment. In many countries, children are in a state of permanent crisis due to extreme poverty and a lack of health and education.



What's on

Adenda?

Investigate whether

- Ask experts how families can protect themselves against avian flu. Have them clearly set out the necessary precautions to avoid infection in birds and people.
- Provide small poultry farmers with simple, low-cost measures to prevent and control the disease.
- Poultry farmers must have knowledge of the characteristics of the disease so as to ensure they recognize it and notify the proper authorities.

child



"Despite the shortcomings and deficiencies of the public health network, the world is better prepared today to respond to an epidemic. Thanks to a century of advances in scientific development, we now have the capacity to diagnose and develop new treatments. During the Spanish flu, many people died due to complications from the virus, including bacterial infections. There were no treatments available for these complications. It was the pre-antibiotic era."

Francisco Ivanildo de Oliveira Júnior, Master in Infectious Disease at the School of Medicine of the University of Sao Paulo (USP) Let us consider, as an example, the case of Peru, recently affected by an earthquake that claimed approximately 500 lives and injured at least 1,000 people. One of UNICEF's primary concerns two weeks following the disaster was to get schools throughout the country reopened. The earthquake destroyed more than 1,000 school buildings, forcing the Ministry of Education to set up prefabricated units.

Aids and orphanhood

The AIDS example can help illustrate the extent of the potential impact on the lives of boys and girls arising from a pandemic. Data from UNICEF reveals that more than 15 million children worldwide have lost one or both parents to AIDS. Less than 10% of children either orphaned or vulnerable to the virus receive support from government agencies or institutions. Less than 10% of pregnant women have access to services designed to prevent vertical transmission of HIV.

According to UNICEF, less than 5% of children with HIV receive adequate treatment. In addition, a large proportion of children orphaned by the epidemic still receive no support. They have no access to public health and education services, primarily because of discrimination.

The resumption of classes has symbolic value. It communicates a return to normalcy following a disaster. UNICEF recommends that teachers pay special attention to their children during this transition stage. Many are not emotionally or physically equipped to refocus on their studies.

Another important consideration involved replacing school supplies lost in the earthquake.

Additionally, families required psychological support. Many people lost their homes and were separated from their families. This is especially traumatic to children.

Focus on prevention

An influenza epidemic could require social distancing measures, such as school and workplace closures to reduce exposure to the virus. All of these actions would severely affect the daily routines of children and adolescents.

In the view of WHO/PAHO experts, such measures would have only limited effect in preventing infection after the onset of a pandemic. They could, however, prove useful in slowing the spread of the virus.

Social distancing and potential quarantine or isolation policies are issues that would spark considerable discussion during a pandemic. In addition to restricting the circulation of people, these measures would separate families and cause significant distress in boys and girls.

If economists, doctors, and epidemiologists have thus far failed to share the same crystal ball to determine the extent and consequences of an influenza virus, on one issue they are of the same opinion: prevention is the best means to preclude or reduce the suffering caused by a tragedy of this magnitude.

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Glossary

Α

ADJUVANT: A substance added to a vaccine to improve the immune response so that less vaccine is needed to provide protection.

ANTIBIOTIC: A substance produced by bacteria or fungi that destroys or prevents the growth of other bacteria or fungi.

ANTIBODY: A protein produced by the body's immune system in response to a foreign substance (antigen). Our bodies fight off an infection by producing antibodies.

ANTIGEN: Any foreign substance, usually a protein, that stimulate the body's immune system to produce antibodies. The name antigen reflects its role in stimulating an immune response – antibody generating.

ANTIVIRAL: A drug that is used to prevent or cure a disease caused by a virus, by interfering with the ability of the virus to multiply in number or spread from cell to cell.

Asymptomatic: Presenting no symptoms of disease.

AVIAN INFLUENZA: A highly contagious viral disease with up to 100% mortality in domestic fowl caused by influenza virus subtypes H5 and H7. All types of birds are susceptible to the virus but outbreaks occur most often in chickens and turkeys. The infection may be carried by migratory wild birds, which can carry the virus but show no signs of disease. Humans are only rarely affected.

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B

BACILLI: Bacteria of the genus Bacillus that is saprophytic or pathogenic in humans and mammals.

as opposed to clinical practice, which studies the same process, but at the individual level.

ETIOLOGY: The branch of medicine that studies the causes of disease

С

CARRIER: A bearer and transmitter of an agent capable of causing infectious disease. An asymptomatic carrier shows no symptoms of carrying an infectious agent.

CONTAGION: A contagious disease is easily spread from one person to another by contact with the infectious agent that causes the disease. The agent may be in droplets of liquid particles made by coughing or sneezing, contaminated food utensils, water, or food.

E

ENZYME: A substance that speeds up chemical reactions. Every chemical reaction in living organisms is facilitated by an enzme.

EPIDEMIOLOGY: The branch of science that deals with the relationship between the various factors affecting the incidence and distribution of disease in a community.

It is a cornerstone of the public health field designed to ensure understanding of the health-disease process in populations,

Η

H5N1: One of dozens of avian influenza virus subtypes. Although relatively rare, several hundred cases of bird-tohuman transmission have occurred. Very few cases of person-to-person transmission have been reported.

Host: An organism on or in which a parasite lives.

HPAI: Highly Pathogenic form of Avian Influenza. Avian flu viruses are classfied based on the severity of the illness. HPAI is extremely infectious among humans. The rapid spread of HPAI, with outbreaks occurring at the same time, is of growing concern for human as well as animal health. See LPAI.

ľ

IMMUNE SYSTEM: Includes all of the mechanisms by which a multicellular organism protects itself against internal invasion by bacteria, viruses, or parasites.

IMMUNIZATION: The process by which an organism acquires, by natural or artificial means, the capacity to protect itself from a specific bacterial aggression, whether viral or parasitic. Vaccination against various diseases is the most common example of immunization.

INCUBATION: The period extending from the time an infectious agent enters an organism until symptoms of the disease first appear.

INFECTION: Invasion by and multiplication of a pathogenic agent in a host.

INFECTIOUS AGENT: Any organism, such as a pathogenic virus, parasite, or bacterium, that is capable of invading body tissues, multiplying, and causing disease.

L

LETHALITY: The ratio of deaths to number of cases of a given disease.

LPAI: Low Pathogenic form of Avian Influenza. Most avian influenza strains are classified as LPAI and typically cause little or no clinical signs in infected birds.

M

MICROORGANISM: Any microscopic or ultramicroscopic organism, such as

bacteria, cyanophyceae, fungi, yeasts, protozoa, and viruses.

MORTALITY: The number of persons or individuals that die within a specific time period or particular region, country etc., or from a disease or epidemic.

MUTATION: Any alteration in a gene from its natural state. This change may be disease causing or a benign, normal variant. Specific mutations and evolution in influenza viruses cannot be predicted, making it difficult if not impossible to know if or when a virus might acquire the properties needed to spread easily among humans.

Ρ

PANDEMIC INFLUENZA: A global influenza outbreak. Avian flu outbreaks throughout the world continue to be geographically limited, for the most part, and primarily restricted to animals. However, if avian influenza becomes a pandemic virus that is fully transmissible from person to person, it is highly likely to spread throughout the world due to low human immunity to the disease.

PARASITE: An organism living in, with, or on another organism.

PATHOGENIC: Causing disease or capable of doing so.

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PRE-PANDEMIC VACCINE: A vaccine created to protect against currently circulating H5N1 avian influenza virus strains with the expectation that it would provide at least some protection against new virus strains that might evolve.

PREVENTION: The set of measures or early preparedness for (something) aimed at preventing (an undesirable event). Preparedness developed to prevent diseases.

PROPHYLACTIC: A medical procedure or practice that prevents or protects against a disease or condition (e.g., vaccines, antibiotics, drugs). the body, stimulates the production of specific antibodies or altered cells. This produces an immunity to the diseasecausing organism.

VECTOR: An organism that transmits or is capable of transmitting a parasite among hosts.

VIRUS: A basic protein particle capable of infecting living organisms. Viruses are obligatory parasites of the interior of cells, which means they only replicate by invading and taking control of the cell's replication machinery.

VIRULENT: extremely lethal, causing serious illness or death.

W

WATERFOWL: Birds that swim and live near water, including ducks, geese, and swans.

Ζ

ZOONOSIS : A disease passed from animals to humans.

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S

SEASONAL FLU (OR COMMON FLU): A respiratory illness that can be transmitted person to person. Most people have some immunity, and a vaccine is available. This is also known as the common flu or winter flu.

STRAIN: A group of organisms within a species or variety.

SYMPTOM: A sign of an organic or functional change.

V

VACCINE: A preparation consisting of antigens of a disease-causing organism which, when introduced into



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