



Food and Agriculture
Organization of the
United Nations

Addressing avian influenza A(H7N9)

Guidelines for risk communication messaging

Issue no. 3



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1. INTRODUCTION

Responding to the occurrence of influenza A (H7N9) virus requires a wide array of disciplines. Unlike H5N1 highly pathogenic avian influenza (HPAI), H7N9 is a low pathogenic virus that does not cause any disease signs in infected birds. Consequently there is no signal from poultry of the zoonotic risk at the animal-human interface. This makes it difficult to persuade animal workers of the potential danger from healthy-appearing poultry. Therefore, capacities in risk communication are crucial for animal and public health specialists, epidemiologists, virologists, veterinarians and many others working to reduce the risk this emerging virus poses.

1.1 What is risk communication?

Three main features distinguish risk communication from traditional one-way information-transfer. Risk communication:

1. is conceptualized as two-way communication among all relevant stakeholders (often including the general public);

2. involves explicitly taking into account stakeholder values and perceptions as well as factual information; and
3. "is most effective when it is integrated with risk analysis and risk management" (WHO, 2007) – not just used after the experts have made all their decisions.

A 1998 joint Expert Consultation of the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) summarizes the Codex Alimentarius Commission's (CAC) 1997 definition of risk communication:

In 1997, the CAC adopted the following definition of risk communication: "an interactive exchange of information and opinions concerning risk among risk assessors, risk managers, consumers and other interested parties". Risk communication has also been described as all integrated processes and procedures: a) that involve and inform all interested parties within the risk analysis process; b) that assist the development of transparent and credible decision-making processes; and c) that can instill confidence in risk management decisions (FAO, 1998).

1.2 Why engage in risk communication for influenza A (H7N9)?

Current assessments indicate authorities may be able to reduce the risk of influenza A (H7N9) entering uninfected countries through strategic, targeted and timely interventions in surveillance and risk management (FAO, 1998; FAO, 2013a, b). However, governments cannot achieve this goal without the help of their citizens.

Risk communication is the key to public involvement in, collaboration with and contribution to government action. For preparedness and risk reduction to have a chance at success, the public must support those activities. FAO recommends governments engage heavily and urgently in risk communication to

increase public understanding and to empower citizens, including poultry consumers, producers and intermediaries to play a role in overall H7N9 preparedness and response. Risk communication is also essential to facilitate the sharing of ideas among risk assessors, risk managers and decision makers throughout the risk analysis process.

2. OBJECTIVES

Risk communication attempts to replicate in the target audience the same level of concern government authorities are experiencing (Sandman, 2013). Risk communication also aims to learn from and take into consideration the audience's perspective. The overall purpose is to help reduce risk by: i) diminishing over-reaction or under-reaction; ii) motivating appropriate precaution-taking; and iii) generating support for imposed risk-reduction measures.

In the case of H7N9, national and international animal and human health experts currently experience greater concern than the public (including poultry farmers). Therefore, the overarching goal of H7N9 risk communication is to raise public concern about the H7N9 risk in order to promote risk-reducing, pro-health behaviours.

With this document, FAO endeavours to provide guidance to national authorities in communicating the risks associated with the avian influenza H7N9 virus from the animal health perspective. The specific objectives of this document are to help authorities engage in risk communication activities that:

1. increase concern over the risks posed by H7N9;
2. facilitate public support for government efforts to prevent H7N9 incursion/spread;
3. reduce unnecessary product avoidance; and
4. promote longer-term improvements to poultry market chains to reduce the risks posed by H7N9 and other pathogens, both in terms of public health and poultry-related livelihoods.

3. GENERAL CONSIDERATIONS

3.1 Messages require context

This document represents an overarching guide to H7N9 risk communication planning. It is intended as a starting point for integrating risk communication into national avian influenza contingency plans, with specific regard to surveillance, risk assessment and risk management activities. Specific risk communication messages and the channels used to disseminate them must be determined by national and local authorities after taking into consideration individual contexts. Any potential benefits should be translated into messages appropriate to and realistic for the specific situation. Regardless of situational or cultural differences, risk communication messages should – to the extent possible – express a respectful understanding of stakeholder knowledge, attitudes and practices (KAPs), including fears, complacency or even denial.

3.2 Part of overall risk analysis

The guidance provided in this document should not be considered in isolation but as part of a comprehensive approach to risk analysis, which includes risk assessment, risk characterization, risk communication and risk management. Moreover, risk analysis on H7N9 must take into account the nature of the poultry market chain and its dynamics. It is important that these options are regularly evaluated and adjusted as the situation evolves to include updated and context-specific information on scientific evidence, poultry market trends, cultural sensitivities, socio-economic concerns, government investments and policies as well as international regulations.

FAO strongly advocates for robust public and animal health services and high investment of governments to promote best

practices along the entire value chain to mitigate avian influenza and other threats. All communication guidance contained within this document is to be interpreted within the context of FAO's overall guidance to countries on best practices in animal health management.

3.3 Incentives and emotion are essential

The most effective behaviour-change communication efforts will be those promoting pro-health behaviours that also carry with them actual socio-economic benefits for target audiences. Herein the burden lies with policy makers and scientific bodies to devise health protection activities that, if implemented/accepted by the target audience, would lead to tangible benefits for said audience.

The history of efforts to manage avian influenza through culling and movement restrictions suggests that many stakeholders, especially farmers, feel that the cost to them has been much greater than any tangible benefits. To the extent that this is true, best practices in risk communication demand: i) acknowledging that reality; ii) sharing or at least validating the anguish; and iii) acknowledging and sharing the dilemmas inherent in doing real-time harm to some stakeholders in order to avoid hypothetical harm to others. In essence, effective risk communication takes into account the emotional aspects as well as the scientific.

This crucial, emotional aspect of risk communication is often difficult for officials and experts, who are often and understandably more comfortable with communicating the technical aspects of risk than the more emotional aspects of risk. Nevertheless, sharing one's own humanity, employing empathy and engaging in emotional sensitivity are necessary aspects of effective risk communication.

3.4 Target audiences

This document is intended for use by animal and public health specialists as an aide in their efforts to engage in risk communication. To this end, the document focuses on four main segments of the public as target audiences for national risk communication messaging:

1. poultry consumers;
2. poultry producers;
3. live bird market (LBM) workers; and
4. poultry intermediaries (including traders and transporters).

Unless otherwise indicated, the messaging guidance in this document is intended to be applicable to all of the above-mentioned audiences. It is important to note that actual dissection of the general public into practical and appropriate target audiences should be based on the specific political, cultural and socio-economic considerations of the national scenario in question. Risk perception analyses – including KAP studies and qualitative studies on opinions and attitudes – should be conducted as needed and taken into account whenever possible.

3.5 Best practices

Skilled risk communicators employ all of the below-mentioned best practices to the extent possible in hopes of building, maintaining or restoring trust.

The purpose of these practices is to foster an atmosphere of trust with the target audience. This provides officials with the best chance of: i) promoting precautionary behaviours; ii) reducing scepticism, complacency/apathy and over-reaction; iii) reducing the likelihood of recrimination and distrust should recommendations reveal themselves to be incorrect or ineffective; iv) engaging with and benefiting from non-government, non-scientific viewpoints; and v) creating an environment of involvement rather than exclusion.

- Inform early, often and transparently as the situation develops



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- Warn that messages designed early in an unfolding event may change as knowledge evolves.
- Be open about your level of uncertainty.
- Share your wish that you could be more certain.
- When you modify your recommendations, highlight the fact that you are making a change and explain why the change needs to be made.
- Avoid both overly optimistic and overly alarming speculation.
- Share the worst-case and most-likely scenarios that you are considering.
- Show empathy (rather than contempt) for the excessive fears or undue complacency of your audience.
- Do not over-reassure
 - Avoid the temptation to say “The situation is under control!”
 - Instead of saying “the government is taking all possible/necessary measures,” convey the honest extent of your activities and explain them in detail.
- Say what you can realistically achieve
 - Build real expectations; tell people what they can expect.
 - Don’t make unrealistic promises; avoid the temptation to tell your audience what you think they want to hear.
- Share uncertainty and be open to suggestions
 - Convey your own level of uncertainty to your target audiences by sharing the factual and emotional context of your situation.
 - Employ honesty and empathy.
 - Engage with your audience and listen to viewpoints.
- Suggest specific actions
 - Give people practical things they can do to reduce risk. Telling people what not to do can be necessary, but whenever possible communicators should stress actual activities audiences can implement to lessen the risk.
 - Offer a range of actions, with your “most recommended” action in the middle to ensure that people who are both over and under concerned still see themselves as part of your plan instead of feeling excluded or in opposition.
- Communicate tangible benefits and negative effects
 - Wherever possible tie communication to expected, realistic benefits of adopting recommended behaviours.
 - Acknowledge with humanity and respect when no tangible or near-term benefits exist, explaining in clear terms the rationale behind your actions.¹
 - Empathetically recognize any negative effects likely to be caused by government actions.
- Be empathetic to people’s situations and sensitive to their needs
 - People need time to: i) adjust to frightening, new situations; ii) decide whether officials seem trustworthy and competent; and iii) learn whether recommended precautions are achievable.
 - People are likely to “recover” from their initial fear more quickly if their fear is treated with respect and empathy, rather than with disdain and contempt.
 - When people suddenly become terrified (e.g. of eating poultry), officials should work harder to demonstrate their concern for public health (rather than appearing to care mostly about political or economic issues (e.g. poultry industry stability).
 - Employ *empathetic* risk communication messages to convey *technical* risks (especially in terms of food safety risks and when dealing with suddenly-frightened populations whose natural, normal, human instinct is to avoid poultry).
- Involve stakeholders; avoid over-ascribing responsibility to those without delegation of authority
 - Recognize that the main burden of risk-reduction behaviour change generally falls on a small portion of the human population (i.e. poultry farmers, traders, marketers are on the “front line”).
 - Acknowledge that most of those actors on the front line of H7N9 risk reduction are poor, have a limited political voice and often a constrained potential for motivating social change.

¹ Do not pretend that a particular measure is “obviously” in the best interest of the target audience. This is a particularly difficult issue when culling or restricting the sale or movement of healthy or healthy-appearing animals.



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- Make every effort to convey that risk reduction is the responsibility of the entire human society;
- Target populations with the power to make social and political changes in order to support farmers and others on the front lines.
- Associate messages whenever possible with potential motives for public compliance
Examples:
 - Motive: Safeguard global health; Ramification: avoid illegal live poultry trade since it increases the risks of spreading the virus and exposing humans.
 - Motive: reduce impact of subsequent response/control measures, including culling, on farmer livelihoods; Ramification: boost biosecurity to avoid outbreaks in the first place.
 - Motive: improve long-term business profits; Ramification: charge a premium for certified, “influenza-free” poultry; customer base can be expanded through marketing of higher quality, safer production, transport and selling practices.

3.6 Channels

Audiences usually receive messages through multiple communication channels. No one channel or set of channels can fit every context – in fact, each geographic, anthropological and socio-economic scenario dictates the channels people use for information and communication. FAO recommends a channel analysis to determine which channels are most applicable to target audiences in question. Examples of channels include:

- International, national and local mass media (TV, radio, newspapers)
- Tannoy systems
- Web pages
- Discussion forums
- Email lists
- Printed magazines, journals, publications
- Live meetings/events
- Community theatre
- Role playing scenarios
- Group/performance art
- Facilitated discussions
- One-on-one F2F conversations

4. RISK COMMUNICATION CHALLENGES

4.1 Influenza viruses in general

Less-informed societies

Communicating the risks posed by influenza viruses is a significant challenge. As microscopic threats, influenza viruses kill people without being seen, and in many less-informed contexts influenza viruses kill without being understood. Some audiences have little to no understanding of the existence/function of microscopic agents and make little distinction between science and other beliefs.

More-informed societies

A majority of the poultry-rearing world is accustomed to influenza in poultry as a normal part of animal husbandry. In terms of public health, due to seasonal regularity a majority of people overall considers influenza in humans as a normal, “chronic rather than catastrophic (Sandman and Lanard, 2005)” occurrence. Influenza affects tens of millions of people every year. Each year “flu-like illness” kills tens of thousands of people. However, the regularity of these mortalities and the common association of the word “flu” with normal poultry illness or minor human illness belies much greater, potential danger posed, since many influenza viruses, and in particular avian influenza viruses, have the potential to devastate human health by becoming pandemic or panzootic.

4.2 Desensitization to influenza risks

A pandemic influenza virus rapidly and easily causes illness in a large portion of the human population over a wide geographic area. Panzootic influenza rapidly and easily spreads among animal species over a large geographical area.

Historical and recent influenza pandemics

The last pandemic influenza to cause mass human mortality was the Spanish Influenza Pandemic of 1918–19. Occurring nearly 100 years ago, the devastation of that pandemic has fallen out of public consciousness. The most recent pandemic (i.e. H1N1) did not result in high levels of sustained human mortality, and yet it was accompanied by (justifiably) intense communication and initially

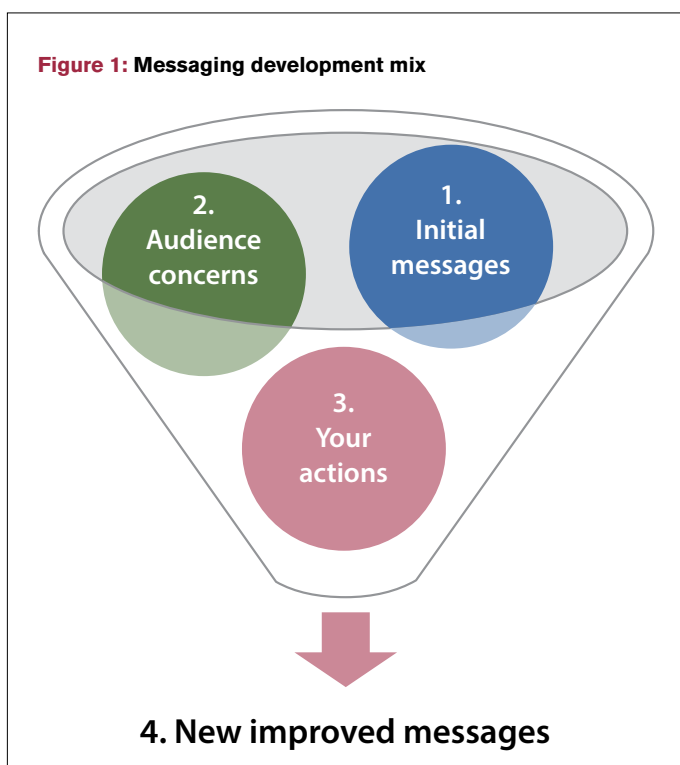
heightened public alarm. Some international organizations chose to be alarmist early on (and risk receiving later criticism) rather than fail to warn people of the scientifically real potential danger of a severe pandemic. The death toll from the H1N1 pandemic ended up being much lower than expected, and it is fortunate that more people did not lose their lives (ECDC, 2014). However, the marked disparity between the high level of initial alarm, the reluctance to stand down the alarm until late in the pandemic, and the lack of widespread devastation further desensitized the public to the future potentialities of pandemic and panzootic threats.

H5N1 highly pathogenic avian influenza (HPAI)

Since its discovery in 1996, H5N1 HPAI has shown the potential to become a panzootic or pandemic threat. During the occurrence and initial spread (particularly in 2005 and 2006 upon incursion into Europe), national and international communication efforts sounded a global alarm with regard to public health and successfully – but temporarily – raised awareness among the international community to the genuine risks posed to humans by H5N1 HPAI. However, no pandemic has come to pass, and the number of infected countries has been dramatically reduced. The global human population has not as yet suffered the widespread, catastrophic mortality that H5N1 HPAI still has the potential to cause. This has translated into complacency and desensitization to the devastation that H5N1 HPAI and similar viruses can still cause, even in the face of a recent increased international spread of the virus (late 2014 / early 2015).

Non-influenza threats

In the specific context of animal production, influenza viruses are just one of many threats that small, medium and large holders alike must manage as part of day-to-day business. Diseases, pests, microbes and other factors constantly threaten to reduce livestock numbers, cripple production of milk, eggs and other livestock products and reduce effectiveness of draught animals and related agricultural uses of livestock. Millions of animal-related livelihoods depend on effective management of animal health threats, of which influenza viruses are only one. Moreover, preventing and controlling influenza viruses is often a low priority for animal owners, since other threats cause more regular, economic losses.



4.3 Novel avian influenza H7N9 virus

H7N9 poses an even greater challenge for risk communication than H5N1 HPAI. Like H5N1 HPAI, H7N9 infects both poultry and people and both viruses have pandemic potential. Both H5N1 and H7N9 cause alarmingly high mortality in infected humans (i.e. around 59 and 35 percent, respectively) (WHO, 2014). However, H7N9 – at this point in its emergence – is genetically better adapted to infect people (Uyeki and Cox, 2013). H5N1 HPAI can devastate poultry flocks if introduced and spread, but H7N9 causes no mortality in poultry and little to no signs of illness in birds (Swayne *et al.*, 2013).

For the purposes of this document, it is important to emphasize in simplistic terms that H5N1 HPAI primarily affects birds, while H7N9 primarily affects people. Both originate in poultry. Virus reassortment could lead to different forms of the viruses and therefore a different situation in future.

Current international consensus is that H7N9 circulates in poultry and infects humans via contact with live infected poultry or contaminated environments (e.g. in LBMs or during poultry transport and slaughter activities) (FAO, 2014).

5. DEVELOPING AND TIMING YOUR MESSAGES

All of the messages in Section 5 are based on FAO insights and experience. However, they do not represent prefabricated and one-size-fits-all solutions. They represent a hypothetical mix of technical objectives, target audience context and risk management actions.

In a real world scenario, message development takes three ideas into consideration: i) your initial messages; ii) your audience's concerns; and iii) your actions (planned, being implemented or completed). This "messaging development mix" is a cyclical process used to develop messages via knowledge, two-way communication, empathy and planning. It must be repeated frequently as situations evolve and based on the results of regular monitoring and evaluation of message effectiveness (i.e. if your first round of messages are not having the desired effect, it is time to reformulate and improve your messages).

5.1 Initial messages

Risk managers have specific knowledge they need to pass onto individuals, communities, corporations and other entities. These technical ideas are rooted in best practices and ideal standards. Forming these ideas into simple messages is the first step to message development. Essentially, your initial messages are the answer to the question: "What do I need them to know and feel?"

5.2 Audience concerns

Audiences come to the table with their own experiences, knowledge and objectives. Most importantly, they have their own impressions of truth, trust and value, both with regard to your messages and the messenger. You must compare, contrast and eventually combine your initial messages with their concerns in order for your risk communication efforts to have a chance at succeeding. Ask yourself: "What do they want to know?" "How do they feel about it?" and "Who do they trust?", and then reach out directly to your audiences. Learn through active listening and participatory discussion just what are the main questions on the minds of your audiences. These form your audience's concerns.

Examples of audience concerns specific to H7N9:

- What are these laboratory personnel doing on my farm / at my market?
- Does this situation pose a threat to my family, friends or me?
- Is my business in danger?

- What will happen to my birds if they test positive for H7N9?
- Is it really necessary to close the market?
- When will the market be re-opened?

5.3 Your actions

In theory you will have engaged in preparedness communication before taking action on surveillance or risk management. However, this may not always be possible. Therefore, risk managers may already be taking actions to safeguard against H7N9 before communication efforts begin. It is important to take stock of what actions you have already implemented, which activities you are currently implementing and what tactics you plan to implement in future. These actions and the meaning behind them must be integrated into the final messages you disseminate.

5.4 New, improved messages

Taking into consideration your initial messages, your audience's concerns and your completed, ongoing or planned actions can be an effective way to develop effective message that communicate risk in context.

5.5 Timing your messages

In general, messages should be delivered before, during and after surveillance and risk management actions have been taken.

- Delivering your messages before will prepare audience expectations to the upcoming interventions, the role your audiences might play in these actions and the potential repercussions on their businesses and livelihoods.
- Reconfirming your messages during your activities is essential to maintain communication with target audiences and build trust and understanding to facilitate implementation.
- Following your actions with face-to-face visits, phone calls, statements and mass media after have been completed is key to promoting continued buy-in. Listening to audience feedback is crucial throughout, which falls into "audience concerns" and must be continually recycled back into your messaging development mix to design continually improved messages.

6. CONCLUSION

Responding to the current H7N9 situation requires a wide array of disciplines and a whole host of actors along the public and private spectrum. While scientific and policy experts provide the backbone for this response, risk communicators too play a vital role in reducing the risks posed by H7N9 for human health and poultry-related livelihoods. Risk communication includes providing technical information in empathic and human ways, not merely improving one's capacity at explaining technical data. Risk communication should be employed to help raise justified and appropriate levels of public concern over the virus, obtain public support for government actions, reduce the magnitude and duration of product avoidance and subsequent market shocks and promote longer-term market infrastructure improvements and a more pro-health approach to poultry market chains.

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ANNEX

Messaging starter kit

The below-mentioned statements are provided as a starting point for risk managers to use in developing their own, context-specific messages using the messaging development mix process (described in Section 5).

IMPORTANT: the below-mentioned statements are not considered messages and are not intended for dissemination in their current form. Full review, analysis, evaluation and adaptation of these statements based on contextual awareness is a necessary first step before any statements can be developed into messages and later disseminated. Moreover, many statements contain recommendations that can only be applied in specific circumstances, including well-resourced areas with high levels of trust in the authorities. Each idea must be reviewed in context and either adapted and disseminated or discarded.

A. General concerns

- H7N9 is a virus that represents a threat to human health and shows the potential to cause a global influenza pandemic.
- Pandemics cannot be predicted – they represent global health threats that can potentially occur. Moreover, steps can be taken to reduce the likelihood of pandemics occurring.
- H7N9 causes flu-like symptoms in infected people and frequently death, especially when left untreated. The mortality rate in our country ranges from approximately X to Y.
- H7N9 is transmitted to humans via direct contact with the secretions of infected poultry. It has not been shown to transmit from humans to humans. However, H7N9 is highly adapted to infecting mammals, which means the virus has the potential to obtain the capacity for sustained human-to-human transmission.
- Sustained human-to-human transmission would greatly increase the likelihood of: i) rapid spread throughout the human population; and ii) high rates of human mortality worldwide.
- People are most likely infected with H7N9 via contact with infected live poultry or contaminated environments (e.g. in LBMs or during poultry transport and slaughter activities).
- H7N9 does not cause obvious signs of illness in poultry; therefore, the virus is hard to detect in poultry populations. Active risk-based surveillance needs to be applied.
- H7N9 is circulating in poultry populations in affected areas; however, it is difficult to estimate how widespread.
- Preventing avoidable human deaths from H7N9 requires sustained, coordinated, public and private effort at the individual, community, local, national and regional level.
- Protecting public health from H7N9 is the common responsibility of all stakeholders.
- H7N9 has not been shown to affect wild birds, and current evidence does not point to wild birds playing a role in H7N9 spread. Wild birds should be left undisturbed.

B. Food safety

- Poultry products are safe to eat if good food preparation, hygiene and cooking procedures² are followed (Annex 1.A).
- Good cooking procedures completely deactivate the H7N9 virus, rendering it harmless to humans who consume properly cooked meat.

- Since the H7N9 virus affects the respiratory tract of live poultry, poultry products such as meat, bones and skin do not represent a risk to the consumer. However, it is rational (not hysterical) for people to initially and temporarily become afraid to eat poultry when a new poultry-related disease becomes real to them.

C. What the public can do

C.1 All audiences

- Poultry consumers, producers, traders and intermediaries play a key role in reducing the risk of additional human mortalities and a global H7N9 pandemic.
- Cover your mouth when you sneeze, discard tissue appropriately when you blow your nose and wash your hands frequently, especially when you or someone with whom you are in contact is experiencing flu-like symptoms (WHO, 2014).

C.2 Poultry consumers

- Prefer buying processed poultry products. If not possible, shift to purchasing processed products for X period of time until the authorities and poultry workers have been able to render LBMs safer through cleaning and restructuring.
- Prefer sellers that demonstrate good biosecurity practices, including:
 - Clean cages separating species
 - Protective barriers between consumers and live birds
 - Hygienic slaughtering facilities
- As a minimum precaution, avoid direct contact with live poultry in LBMs (especially during slaughtering) when some or all of the above-mentioned recommendations are not possible.
- Follow good food preparation, hygiene and cooking procedures.

C.3 Poultry producers and intermediaries

- Poultry producers, transporters, sellers and all other intermediaries in the poultry value chain should use good biosecurity measures to minimize the risk of incursion of the virus into individual production units and the risk of outward and onward transmission through the market chain.
- Good biosecurity measures include:
 - Fencing or nets to keep out wild birds, rodents or other pests;
 - Concrete flooring that is easy to clean and disinfect
 - Restricted access for farm visitors; and
 - Footbaths and disposable clothing for those that have access.
- Good biosecurity and hygiene measures will help protect animals and people from H7N9 and other pathogens in general.
- Hygiene and biosecurity measures should be strengthened at family farms, commercial operations and LBMs. This will assist in reducing the risk of virus introduction, spread and ultimately human exposure.
- Even with the best-possible measures, the risk of a pandemic cannot be reduced to zero. However, many poultry outbreaks have been successfully stopped thanks to some or all of these good practices being implemented.
- The more effective the biosecurity measures you put in place, the more you reduce the risk of an outbreak of this or other harmful viruses.
- In the event of an outbreak, the sooner we implement contingency measures, the sooner we can stop the outbreak.

² Since improper poultry handling is common throughout the world, officials should be prepared to engage heavily in communicating and training in best practices in targeted areas.

- Contingency measures may include:
 - Quarantining the affected farm/locality and movement restrictions for poultry in a wider area around the affected farm/locality;
 - Culling and disposal of affected poultry and birds;
 - Cleaning and disinfection of affected premises; and
 - Surveillance of poultry holdings in a 10 km zone around affected premises.

C.4 Live bird market (LBM) managers/workers

- Instituting proper hygiene at live bird markets can save lives.
- Instituting proper hygiene at live bird markets can save money in the long term.
- Implementing hygiene measures requires the consultation and involvement of all stakeholders (e.g. market operators, stall holders, local authorities, veterinary services, public health services and sellers).
- Proper hygiene measures include:
 - Concrete flooring that is easy to clean and disinfect;
 - Market closure over night with no live poultry remaining on the premises;
 - Daily cleaning and disinfection after market closure; and
 - Separation of poultry loading and selling areas.
- Not all poultry-sellers in all places can achieve all recommended improvements³. Therefore, it is important to separate the less-expensive, more-achievable recommendations above from the more-expensive ones. At minimum, sellers should:
 - separate different bird species and prevent access of wild birds to domestic poultry holding areas;
 - separate slaughtering as well as loading areas from vending areas and prevent public access to them
 - where possible: keep no poultry at the market overnight (poultry remaining at the end of the market day should be slaughtered, culled or moved to a collection point from where they should not be allowed back to the market); and
 - refrain from selling dead or sick poultry.

D. What the government is doing

The below-mentioned messages can be used as starting points for customized messages based on country-specific target audiences and associated with the actual government actions being implemented at the local level⁴.

D.1 Surveillance

- Authorities are implementing a national surveillance programme for H7N9 in poultry as part of overall efforts to reduce the risks to human health posed by H7N9 and other zoonotic avian influenza viruses and limit the potential impact on poultry-related livelihoods.
- The main activities of this surveillance programme are:
 - regular sampling of live poultry and their surrounding environments (in high, moderate and low risk areas);
 - regular testing of those samples for H7N9 and other avian influenza viruses; and
 - routine gathering of information about the origin and destination of any H7N9-positive poultry.

- High priority surveillance areas include:
 - Uninfected areas sharing a border with an H7N9-infected area; and
 - Uninfected areas with ties to legal or illegal trade in live birds or bird products with an infected area.
- Moderate priority surveillance areas include:
 - uninfected areas that trade with areas which import from an H7N9 infected area/country.
- Low priority areas include:
 - Uninfected areas with no geographical or trade connections to an infected area.
- Goals of surveillance:
 - The main goal of surveillance in high and moderate priority areas is the early detection of incursion of the H7N9 virus or detection of presence of other avian influenza viruses.
 - The main goal of surveillance in low priority areas is monitoring of avian influenza virus occurrence and promotion of national preparedness.
 - An overarching goal of surveillance is to develop and maintain a regular understanding of how and where avian influenza viruses are introduced, spreading and evolving in order to increase preparedness and reduce risks posed to human and animal health.
- Importance of early detection and early action
 - The earlier the detection, the higher the likelihood that government actions can reduce the chance of the virus spreading, infecting more poultry and putting people at risk.
 - Reducing the likelihood of H7N9 spreading in poultry populations can help limit its introduction and establishment in poultry production systems and reduce opportunities for H7N9 to infect human beings who come into contact with poultry.

D.2 Market closure

Rationale

- It has been necessary to temporarily close this market due to the detection of H7N9. H7N9 is an avian influenza virus that:
 - kills some 40% of the people it infects
 - causes little to no signs of disease in poultry.
- To make this market safe, it needs renovation and restructuring, which at this point in time is not feasible. It has therefore been necessary to temporarily close this market because it is not safe for the public.
- Imposing market closure can help reduce the risk of H7N9 spreading in poultry, thereby preventing human illness and death.
- Authorities are working in collaboration with market managers and workers to close the market to protect public health.
- Authorities are working in collaboration with market managers and workers to re-open the market as soon as possible or provide alternative trading venues to protect revenues.

Regularly add statements showing your own awareness that your measures are causing great difficulties for those affected. Ideally, tell specific brief stories of specific individuals who have been affected, to show you partly understand what they are experiencing.

Details

- The market requires the emergency measure of humane depopulation in hopes of preventing further virus spread.
- The market requires improved cleaning and disinfection facilities, equipment and practices to reduce the likelihood of H7N9 infection of birds and people.

³ Refer to FAO's H7N9 Biosecurity Guidelines for details on the suggested measures for LBM managers and workers

⁴ See FAO guidelines on i) Surveillance <http://www.fao.org/docrep/019/i3601e/i3601e.pdf> and ii) risk management <http://www.fao.org/docrep/018/i3609e/i3609e.pdf>.

- The market requires significant restructuring for trading that is safer for public health (see later bullets on restructuring).
- Authorities are working with market managers and workers to make the necessary improvements to the market in order to re-open as soon as possible.
- The market is scheduled to open in X days.
- Alternative, biosecure trading venues have been provided in X, Y, Z locations.
- The government is providing financial support to traders affected by this closure/depopulation/restructuring.
- [If the support is much lower than the traders' usual income:] We acknowledge with sorrow that the financial support will not completely make up for the traders' losses.

Incentives to comply

- Market improvements can protect health. Even though very few humans catch H7N9, it is highly lethal when they do.⁵ Taking specific actions to improve poultry market chain practices can reduce health risks, not just those posed by H7N9 but also from other health threats.
- Market improvements can increase profits by rendering the market more efficient, improving poultry turnover capacity, reducing waste and poultry mortality due to pathogens other than H7N9 (which does not cause illness in poultry), and enabling premium pricing for influenza-free-certified poultry products.
- Authorities are providing a funding package for affected poultry traders and intermediaries.
- Authorities are providing training in improved practices associated with market restructuring.
- To protect human health, poultry is now being slaughtered centrally in controlled slaughterhouses. This poultry is now sold in X, Y, Z locations (see D.1.1).

D.3 Rest days and overnight bans

Rationale

- Rest days and/or overnight bans with no poultry or poultry products in the market protect public and occupational health.
- Rest days and/or overnight bans can temporarily interrupt the transmission of avian influenza viruses and other pathogens when combined with cleaning and disinfection, thereby protecting birds and reducing losses.
- The term "rest day" means closing the whole market for 24-hours with no live poultry remaining on the premises; this period should be used for proper cleaning and disinfection.

Details

- Authorities are working with traders to identify appropriate and feasible rest days.
- Sale and restocking arrangements are being made.
- Authorities urge traders and sellers to plan ahead with regard to quantities of birds expected to be sold each day to reduce the number of remaining poultry at the end of each day.
- Overnight bans require the slaughter of unsold birds at the end of the day.

Incentives to comply

- The government has authorized financial incentives for sellers supporting industrialized freezing of unsold birds at the end of a sales day. This new protocol will support an improved work-life balance at the market.

- This new protocol will reduce animal health risks, thereby reducing animal losses and protecting poultry trader/seller investment in live animals.
- This new protocol will reduce the risk of humans becoming infected with potentially deadly viruses like H7N9.

D.4 Species separation or bans

Rationale

- Authorities are working with market managers to improve barriers and cages to protect uninfected poultry.
- Authorities are working with market managers to improve barriers and cages to reduce opportunities for H7N9 to infect poultry.

Details

- Barriers between people and live birds or slaughtering activities reduce the likelihood of human infection with a virus circulating "invisibly" in poultry. The virus can be deadly to people, but does not cause illness in poultry.
- Cages separating species of poultry from one another in the market or during transport help reduce the likelihood of uninfected poultry being infected with the virus, especially since H7N9 does not make birds sick.
- This specific bird species has been shown to harbour the virus more frequently [e.g. yellow chicken, silkie chicken]; a temporary ban will help reduce the risk of H7N9 exposure to people and other birds.

Incentives to comply

- The government is implementing a cost-sharing initiative with market managers to make the necessary infrastructure changes (i.e. cages, holding areas, transport method upgrades).
- Separation of species can improve sales by allowing customers easier viewing of the species of interest.

D.5 Separating people, live poultry and slaughter areas

In many places, people care deeply about examining poultry closely before buying it. Asking them to give this up is asking a lot, but the goal is to protect them, as well as reduce the spread of virus between birds.

Rationale

- Separating people, live poultry and slaughter areas from one another helps reduce the possibility for the H7N9 virus to infect people and other birds.
- Infected live birds, which do not show any signs of disease, can infect people or other birds.
- Sick people may be able to infect live birds, and contaminated slaughter area fluids or debris can infect both.

Details

- Physical barriers separate customers from poultry cages, and both from slaughtering and defeathering areas as well as carcasses.
- Cages separate one species of bird or one batch of birds from another.

Incentives to comply

- The government is working with local leaders to develop culturally acceptable alternatives to the popular practices of touching and examining live birds at market.
- The government is subsidizing the installation of transparent barriers at slaughtering areas.

⁵ Since the number of people in any given population with personal experience in H7N9 infection is low, this message will seem esoteric at best to the majority of audiences along the poultry chain. Therefore, it is important to validate people's likely impression that H7N9 is not a real problem while still trying to make an impression about the risk.

- Authorities and market managers have agreed to implement these changes uniformly across all major markets in the area.
- The government has begun a mass media campaign to raise public awareness of the need for separation.

D.6 Market cleaning, disinfection, by-product disposal

Rationale

- The cleaner the market, the safer it is for people and poultry.
- Regular cleaning of surfaces, cages, equipment and slaughter facilities can reduce the likelihood of human exposure to live birds and bird matter.
- Live birds and bird matter can carry the H7N9 virus, and since birds do not show illness, prevention through cleaning, safe disposal of waste and carcasses and other precautions is the best way to safeguard human health.

Details

- The market is being restructured to improve both its infrastructure and its cleaning/hygiene protocols.
- Market workers are being trained in improved practices for cleaner surfaces, proper disposal of waste material, appropriate disinfection and wearing of personal protective equipment (PPE).

Incentives to comply

- The government is providing training free of charge.
- Authorities are working with market managers on cost-sharing arrangements for new cleaning equipment, disinfection compounds and PPE stocks.
- PPE will better protect cleaners from the H7N9 virus and many other pathogens that can impact human health.
- The government is partially subsidizing the overhaul of cleaning and disinfection plans.
- Better cleanliness will reduce the chance for the virus spreading or establishing itself in the market; in virus-free markets control efforts, such as humane depopulation of poultry flocks, will no longer be necessary.

D.7 Drainage

Rationale

- Proper drainage can help make the market cleaner and therefore safer.
- Drainage of wastewater will avoid accumulation of faeces, bodily fluids and other contaminants, as long as these drains are regularly cleaned.
- Avian influenza viruses can survive for several days in stagnant water and later infect humans or poultry.

Details

- Market authorities and government officials are installing improved drainage systems.
- Market workers are receiving training on drainage system use.

Incentives to comply

- The government is supporting drainage improvements as part of overall market infrastructure rehabilitation.
- Better drainage will help prevent the need for more drastic control measures, like culling of poultry.

D.8 Cleaning of transport and cages

Rationale

- Authorities are promoting new procedures for cleaning trucks and cages in order to reduce the risk of infection of farms by the H7N9 virus circulating in live bird markets.
- Egg crates, poultry cages and even trucks/wheels can carry virus to uninfected farms and infect those farms.
- Avian influenza viruses can survive for several days given the right conditions, i.e. moist and cool environments.

Details

- Cages, trucks and crates are to be cleaned regularly and thoroughly with water and detergent to safeguard the public health and especially poultry workers.
- A certification system will be put in place to ensure cleaning takes place and is documented.

Incentives to comply

- Authorities are providing wholesale markets with disinfectant, cleaner, power washers and training.
- The certification system will help distinguish this market's products from competitors.

D.9 Hygienic slaughter, defeathering and processing

Rationale

- Preventing occupational exposure to H7N9 and other pathogens requires improved hygiene and personal protection.
- Slaughter, defeathering and processing are key risk areas where workers can be exposed to virus.

Details

- Workers are required to wear appropriate PPE and wash hands regularly.
- Defeathering stations will use hot water to reduce likelihood of virus survival.

Incentives to comply

- As part of overall market restructuring, authorities and market managers are improving hygiene during processing through new equipment and training.
- The government is providing PPE to poultry workers to help safeguard their health.

D.10 Regular market testing

Rationale

- Authorities are regularly testing LBMs for H7N9 virus to help keep markets virus-free.
- Systematic testing of LBMs for H7N9 virus will help detect the virus as early as possible should it be introduced.
- Testing is required to check the efficacy of biosecurity measures.

Details

- Testing will take place with X frequency.
- Testing does not harm your birds nor does it lower their resale value.
- Supporting testing is a way to keep your market safe. The sooner we detect something, the sooner we can act to remove the problem and keep the market running.
- As part of overall market restructuring, training, scheduling and equipment will be provided.

Incentives to comply

- The authorities are working in collaboration with LBM workers with a whole of market approach so as not to single out infected parties.
- H7N9 is a shared threat and requires a common solution.
- Regular and appropriate testing of live poultry and the environment in markets will improve the possibility for timely measures to be implemented in case the H7N9 virus is detected, thereby reducing public health risks and potential economic losses related to disease control measures.

D.11 Centralized slaughtering

- The government and poultry producers are moving to a system of centralized slaughter.
- Centralized slaughter significantly reduces the risk of consumers being exposed to the virus through contact with live birds.
- Measures, including protective equipment and training, will be put in place to safeguard the health of slaughterhouse personnel.
- The poultry products leaving the slaughterhouse will be processed so as to reduce risks to consumers.

D.12 Market restructuring

- Current practices in this market facilitate H7N9 transmission and spread.
- The government is committed to working with the private sector to develop a cost-sharing plan that both improves public health safety and food safety as well as long term future economic benefits for poultry market chain workers.
- Government is providing financial incentives for private sector investment in a new, improved way of doing business.

D.13 Control measures at farm level*Vaccination*

- Vaccination is not currently recommended, because X, Y, Z.
- *Should vaccination later become an option: The purpose of vaccination is to reduce threat to human health by increasing poultry immunity and reducing shedding of virus.*
- *Should vaccination later become an option: The government is subsidizing the vaccination of poultry⁶.*

⁶ A subsidy would be necessary, because vaccination poses no economic benefit to farmers since H7N9 is asymptomatic in poultry.

Humane culling

- Culling will be employed only when necessary to reduce human health risk.
- Culling is part of an overall control plan including traceability, movement control and compensation.
- The government needs your help to protect the health of your community.
- The authorities will compensate you for your losses.

Biosecurity

- Farms, especially those in high priority areas⁷, should observe existing precautions related to avian influenza viruses.
- The government stands ready to assist with longer-term improvements to marketing of influenza-free chicken.
- Authorities are committed to sharing the socio-economic costs of this long-term intervention.

Farm movement and transport controls

- It is necessary to regulate movement in and out of farm to protect poultry flocks from H7N9 infection.
- Cleaning and disinfection of vehicles and cages at entry and exit points, plus a verification and appropriate PPE should be implemented to reduce the risk of virus spreading in poultry and to protect human health.
- The government will provide training and tools.
- Authorities will test any non-certified consignments that may be intercepted. Should these consignments be found positive for H7N9 they will be destroyed.

D.14 Wildlife management

- Wild birds are not considered a source or reservoir of the H7N9 virus.
- As an extra precaution, wild bird trade will be regulated.
- Feeding wildlife in parks is banned to reduce the likelihood of transmission of disease both to and from humans and wildlife.

⁷ For geographical risk classifications see FAO's Guidelines for emergency risk-based surveillance <http://www.fao.org/docrep/019/i3608e/i3608e.pdf>.

NOTES



CONTACT :))

The Emergency Prevention System (EMPRES) is an FAO programme, founded in 1994, with the goal of enhancing world food security, fighting transboundary animal and plant pests and diseases and reducing the adverse impact of food safety threats. EMPRES-Animal Health is the component dealing with the prevention and control of transboundary animal diseases (TADs).

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These guidelines are based on the information available to date and will be reviewed as new information becomes available.

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