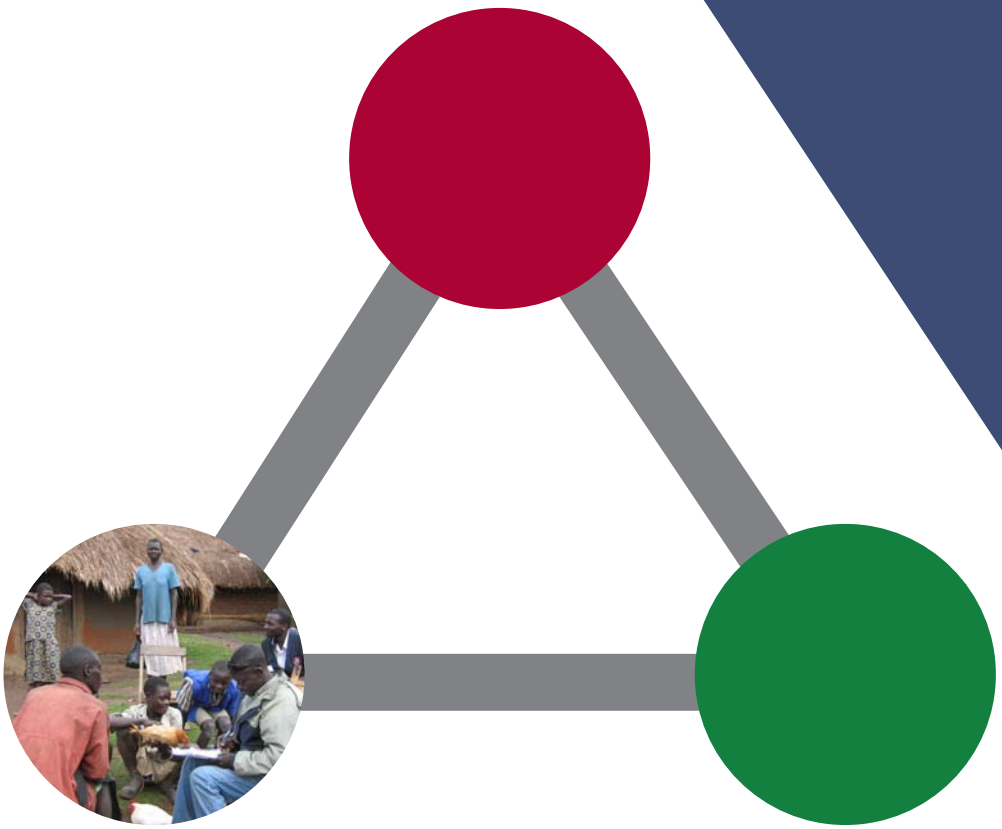
# The influence of awareness campaigns regarding prevention of Highly Pathogenic Avian Influenza in poultry in three districts of Uganda



AHBL • Promoting strategies for prevention and control of HPAI

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# Acknowledgements

The Uganda Media Development Foundation (UMDF) is grateful to several people and institutions for their various contributions to the fulfilment of this task: assessing the influence of the avian influenza (AI) awareness campaign in Uganda.

UMDF is particularly grateful to the Food and Agriculture Organization of the United Nations (FAO) for entrusting it with the task of conducting this study, which aims to inform similar campaigns and studies in the future. We appreciate the assistance from Project Officer, Dr Denis Byarugaba, who availed us of his time and advice, and acknowledge the cooperation from other FAO Country Office staff.

We appreciate the extensive comments of Dr Karin Schwabenbauer and Dr Denis Byarugaba, which helped develop the report. We are profoundly grateful to Karin and Denis for their input, and trust that the issues they raised in their comments have been substantially addressed.

Putting this study together was premised on a participatory and consultative approach, involving frank discussions with a variety of stakeholders, including government officials both in Kampala (central government) and up-country (district and lower local governments). The consultations involved in-depth interviews and focus group discussions (FGDs) in the districts of Kampala, Lira and Kanungu.

We would like to register our heartfelt appreciation to all the interviewees and participants in the FGDs for their time and patience, and also for their very instructive views and opinions on how the public awareness campaign on AI was carried and affected them. We would like to make particular mention of the pupils of Kyantuuhe (Kanungu), Ayira (Lira) and Kiwatule (Kampala) primary schools who participated in the FGDs. They submitted very useful information regarding good poultry husbandry practices, given their age and experience.

Finally, UMDF is grateful for the efforts of consultants, led by Mr Adolf E. Mbaine and assisted by Mr Mathias M. Mayombwe, who participated in the study and put together the report.

It is our hope that the lessons drawn from this knowledge, attitudes and practice (KAP) survey will help guide future efforts and similar endeavours to prevent and contain such epidemics.

# Executive Summary

The Highly Pathogenic Avian Influenza (HPAI) circulating virus affects the poultry sector The Food and Agriculture Organization of the United Nations (FAO) contracted Uganda Media Development Foundation (UMDF) in June 2009 to conduct a knowledge, attitudes and practices (KAP) study assessing the influence of awareness campaigns conducted in Uganda regarding the prevention of highly pathogenic avian influenza (HPAI) in poultry in the three districts of Kampala, Lira and Kanungu.

The study was in response to the global avian influenza (AI) epidemic that killed millions of domestic and wild birds in 2004, putting the world on high alert. In September 2006, the World Health Organization (WHO) reported that the AI strain had already affected humans, with over 250 confirmed cases and about 147 deaths, mainly in Asia and Europe.

The Government of Uganda responded to the threat of AI by establishing national and district task forces on AI and developing a National Preparedness and Response Plan, among other measures.

This study is drawn from that plan, which included six strategic areas of intervention: planning and coordination, surveillance and situation analysis, prevention and containment, case management, communication, and monitoring and evaluation. The fifth strategic area, communication, aimed to create and foster positive behaviour change regarding AI. This included identifying target audiences and producing and disseminating public health messages using appropriate media and other channels in a systematic public awareness campaign. Emphasis was placed on the protection of humans and poultry.

The study also carried out a comprehensive and systematic review of the public awareness campaigns conducted as part of the Uganda National Communication Strategy. In addition, it assessed the effectiveness of a FAO project on Promoting Strategies for Prevention and Control of HPAI, which focused on smallholder livelihoods and biodiversity and the transmission of knowledge about AI through primary schools.

The target audience for the KAP study includes poultry farmers, breeders and traders, health workers, district-level local government officials, local council authorities, the mass media, the general public, teachers and schoolchildren.

The study aims to assess whether the target audience was reached, the channels used were appropriate, and the key messages were received and understood as intended. It also assessed whether the messages led to changes of opinion and behaviour regarding AI prevention and control. The study examined the contributions of various partners in implementing the campaign, and assessed their adequacy; identified the challenges encountered and their effect on message delivery; and analysed whether the issue had been adequately publicized.

The methodology adopted both qualitative and quantitative methods involving in-depth interviews, focus group discussions (FGDs), document review and media content analysis.

Findings show that in the main, the campaign achieved its objectives. Most respondents indicated that they had been exposed to messages about AI. They had an idea about the disease, and an outbreak of AI in Uganda would not have taken the population unaware.

It is important to point out that there have been no outbreaks of AI in Uganda, and this certainly affected audiences' responsiveness to some AI messages. Normally, campaigns that "catch fire" are associated with crises that are in close proximity. The situation was rather different in this case, because people were being mobilized in anticipation of an AI outbreak that never occurred. This tended to reduce the focus on AI messages among both the campaign team and the audience. The Ministry of Health turned its attention to more urgent epidemics, such as Marburg and Ebola.

*The awareness campaign had some shortcomings, which should be addressed so that similar awareness campaigns in the future can avoid them. These included the following.*

***Delay in response:*** Some respondents noted that the Ministry of Health took a long time to develop and disseminate strong messages regarding the prevention of AI. For instance, journalists and editors had been receiving information about the disease as early as 2004 from the Internet, but neither the media nor the general public heard anything from the ministry for more than a year. This created a gap that was filled by misconceptions and myths about the

outbreak, which were combated when the awareness campaigns started. Awareness should have come earlier as a matter of priority.

***Limited personnel:*** Competent personnel are required to deliver health campaign messages at the national and local levels. The training in message delivery regarding AI was inadequate at both the district and grassroots levels. Resources should have been invested in this.

***Multiplicity of stakeholders****:* The awareness campaign was a collective effort by various stakeholders, including government ministries and departments, non-governmental organizations (NGOs) and United Nations agencies, all grouped under the Ministry of Health as the line ministry directly responsible for dealing with AI outbreaks. This wide range of concerned parties is commendable, but also incurred problems. It was noted that harmonizing messages across such a multiplicity of stakeholders was a huge challenge.

***Porous borders:*** Uganda has many porous borders through which people come and go unchecked. This would have made it hard to contain the disease had it broken out, especially as Uganda was not certain that neighbouring countries were carrying out similar awareness campaigns. Border districts should have been given more emphasis during the campaign.

***Use of children:*** The use of children to deliver messages and act as change agents was a novel idea. However, although this approach has recorded significant success in the West, with parents learning better poultry rearing practices from their children, it had less impact in northern Uganda and Kampala. In northern Uganda, children are not readily seen as capable of influencing the attitudes and behaviour of their parents, while in Kampala the multiplicity of sources of information available to parents made the children's efforts less effective. In the future, such cultural traits as witnessed in northern Uganda need to be taken into consideration for similar interventions to work better.

***Access to media:*** It was noted that most people obtain information from the radio, but a significant section of the population – women, the elderly and children – do not have control of the family radio, although they are in daily contact with poultry. Men own and use radio sets more, but are rarely involved with poultry. This slowed down message transmission among a significant segment of the target audience. Posters and pictorial messages were few and small in size, and most people in rural areas had no access to newspaper information because they could not afford newspapers or were not literate enough to read them. For a campaign as important as the response to a possible AI outbreak, this was a serious shortcoming.

***Economic considerations:*** Community members revealed that some farmers, traders and hotel owners continued to sell and/or cook potentially sick birds because of economic considerations, claiming they had no alternative income sources. This continued in spite of the AI information campaign. Can government provide compensation to farmers facing such income losses, to secure their voluntary compliance with AI prevention measures?

***Lack of funds and consistency:*** The campaign did not run consistently because it lacked funds. Radio messages were relayed for only 30 days. The campaign was mainly donor- and NGO-supported, and government did not inject enough of its own resources. For example, many parts of Kanungu were never reached, owing to the mountainous terrain. In Kasese, the lack of funds meant that most messages were translated into Lukonjo and Rutooro dialects but not Lugwisi, which is widely spoken in Bundibugyo.

***Failure to involve local authorities:*** There was a failure to involve local authorities, especially local councils. In Kanungu, for instance, a local council chairperson had no idea that the awareness campaign was being carried out.

***Failure to harness the media:*** Media practitioners received some information on AI, but in general there was a failure to establish strategic partnerships with the media. For instance, it was difficult for journalists to contact officials in the Ministry of Health for information and comments. The ministry issued press releases, but the media found these insufficient. In Uganda, civil service regulations stipulate that only the permanent secretary of a ministry can speak to the media; other civil servants must obtain the permanent secretary's permission before doing so. The AI awareness campaign should have had a spokesperson released from these restrictions and free to engage with the media as required.

*However, the awareness campaign also helped in the following ways.*

***Increased awareness about AI:*** Following the public awareness campaign and the project in schools, a significant section of the population were alert to AI, its causes, symptoms,

treatment and prevention. In Lira, for example, a suspected case was reported immediately to the Ministry of Health office in Kampala, showing that people had grasped the information given to them. (Messages on radio and posters had indicated that suspected cases should be reported to the Ministry of Health Office in Kampala, and had omitted to indicate district office addresses, which was a shortcoming.)

***Increased awareness about good poultry farming practices:*** People built chicken pens and started seeking vaccination for their birds. Due to public awareness, farmers in targeted areas now quarantine new chickens for seven days before allowing them to join the rest of the flock.

***Inclusion of poultry issues in the education curriculum:*** Teachers from schools that participated in the project reported that children as young as five now know about good poultry practices, although this subject is not studied until primary 4. The teachers said that this awareness has eased their work when teaching about poultry issues, as most children already have an idea about them.

The study generated several recommendations for informing future public awareness campaigns. It noted that the campaign was worthwhile and justifiable, although it should be repackaged to be more effective in future efforts. There is need to dispel myths and misconceptions among the general population, such as the belief that the disease affects only other countries and cannot reach Uganda.

## Summary of recommendations

- There is need to combine information, education and communication (IEC) with behaviour change communication, to clarify the purpose before selecting the tools and activities for a campaign. The survey brought out points for the broad direction in which communication should proceed, but it will also be necessary to undertake a communication needs assessment in the campaign districts, to establish the best ways of reaching target audiences and the information they need.
- The Government of Uganda should aim to make the public know that everybody is responsible for helping to guard against epidemics such as AI.
- Considering the danger that AI could pose to the Ugandan bird and human population, the Ministries of Health and of Agriculture, Animal Industry and Fisheries should increase their information and communication efforts, by dispatching timely information to journalists and the media.
- There is need for consistency; a public awareness campaign should follow a logical flow of varying intensities, which must be maintained throughout the campaign. A campaign that fizzles out before reaching maturity will be less effective as a tool for attitude and behaviour change.
- There is need to establish offices for contact with the local grassroots population in areas where the campaign is being implemented. Many people reported that there was no technical person at the village level to contact during the campaign. Personnel for an AI awareness campaign could work with existing structures responsible for delivering veterinary services up-country.
- Public awareness campaigns cost money; sufficient funds should be made available. It is the government's responsibility to budget for this kind of exercise.
- In situations such as Uganda's, where there is no single national language, public awareness campaigns must cater for all the local languages and dialects, to ensure that no communities are left out and that all the population benefits from the campaign.
- There is need to venture into other information dissemination methods, such as public information vans and roadside shows, which are often effective in mobilizing communities for good causes.
- There is need to fight complacency among politicians, policy-makers and opinion leaders. The focus should be on environment building and the removal of stigma through highlighting the success of the campaign and galvanizing communities with a "we can do it" spirit, instead of leaving the efforts to only health personnel. All

Ugandans should know that fighting and preventing epidemics such as AI benefits everybody.

# Acronyms

| | |
|---|---|
| AFFORD | African Foundation for Development |
| AI | avian influenza |
| BBC | British Broadcasting Corporation |
| CBS | Central Broadcasting Services |
| CDFU | Communication Development Foundation Uganda |
| CNN | Cable News Network |
| FAO | Food and Agriculture Organization of the United Nations |
| FGD | focus group discussion |
| GDP | gross domestic product |
| HPAI | highly pathogenic avian influenza |
| ICT | information and communications technology |
| IEC | information, education and communication |
| KAP | knowledge, attitudes and practices |
| MCA | media content analysis |
| NGO | non-governmental organization |
| NTF | National Task Force on Avian Influenza |
| UBC | Uganda Broadcasting Council |
| UHMG | Uganda Health Media Group |
| UMDF | Uganda Media Development Foundation |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| UVRI | Uganda Virus Research Institute |
| WHO | World Health Organization |

# Introduction

The Food and Agriculture Organization of the United Nations (FAO) and the Uganda Media Development Foundation (UMDF) signed a Letter of Agreement on 1 June 2009 under which UMDF undertook to conduct a knowledge, attitudes and practices (KAP) study to assess the influence of awareness campaigns conducted in Uganda regarding the prevention of highly pathogenic avian influenza (HPAI) in poultry in the three districts of Kampala, Lira and Kanungu.

The purpose of the study was to:

- identify the various actors involved in communicating messages about HPAI in poultry at the national level and in the study areas, and the communication strategies they used;
- assess the impact of these activities on the knowledge, attitudes and practices of different stakeholders – poultry owners, traders and market sellers – regarding prevention of HPAI in poultry;
- identify the gaps in knowledge and practices that need to be addressed by future communication efforts;
- compare the different communication strategies used in terms of cost, coverage, effectiveness and impact.

## Background to the KAP study

Following the outbreak of the avian influenza (AI) epidemic that killed millions of domestic and wild birds in 2004, the world went on to high alert. In September 2006, the World Health Organization (WHO) reported that the AI strain had already affected humans, with more than 250 confirmed cases and about 147 deaths, mainly in Asia and Europe.

Given this global situation, the Government of Uganda put in place measures to prevent the spread of AI in the country. The livestock industry, including poultry, is an important subsector of Uganda's economy, estimated to constitute 9 percent of the country's gross domestic product (GDP). Poultry rearing is a significant mainstay for small and larger poultry farmers and for many food industries.

As well as possible decimation of birds, AI also presented another calamitous risk to the population because poultry live and breed in close proximity to humans in Uganda. There was therefore high risk of bird-to-human transmission of the virus if the country's bird population became infected.

The Government of Uganda responded to the threat of AI by:

- establishing national and district task forces on AI;
- developing a National Preparedness and Response Plan;
- setting up an inter-ministerial committee to deal with AI;
- mobilizing resources from partners and other stakeholders.

The National Preparedness and Response Plan included six strategic areas of intervention: planning and coordination, surveillance and situation analysis, prevention and containment, case management, communication, and monitoring and evaluation. This study addresses the communication aspects of the plan, whose objective was to create and foster positive behaviour change about AI. Among other factors, the study assesses the plan's identification of target audiences and its production and dissemination of public health messages using appropriate media and other channels.

A technical working group was set up, covering all relevant sectors, including the Ministries of Health, of Agriculture, Animal Industry and Fisheries, of Local Government, of Trade and Industry, and of Information and Communications Technology, and the Office of the Prime Minister. The media, government and the private sector were actively involved in disseminating information, education and communication (IEC) messages.

One of the most important outcomes of these efforts was the formulation of a communication strategy, led by the Ministries of Health and of Agriculture, Animal Industry and Fisheries, with support and participation from the United Nations Children's Fund (UNICEF), WHO, FAO, the United States Agency for Technical Development (USAID), the Uganda Virus Research Institute (UVRI), the African Foundation for Development (AFFORD)/UHMG and Communication Development Foundation Uganda (CDFU), among others.
The objectives of the communication strategy were to:

(a) increase the number of leaders and stakeholders who are aware of and advocate for AI prevention and control;
(b) create awareness of the signs and symptoms of AI in animals, and of proper response actions to them, among the public;
(c) increase the number of people who promptly report to the designated personnel and agencies any sick and dead birds that are suspected AI cases;
(d) create awareness about the need to report such cases and to seek treatment at health centres when infected with AI.

The communication strategy identified the campaign's audiences, recommended communication channels to be used, and assigned roles and responsibilities to major partners in the process. It developed messages based on the three main issues in AI prevention and control: prevention and control of bird-to-bird transmission; prevention and control of bird-to-human transmission; and prevention and control of human-to-human transmission.
The KAP study's overall aim was to ascertain whether these objectives were achieved in the three districts of Kampala, Lira and Kanungu:

- Were key audiences reached?
- Were the channels used appropriate?
- Were key messages received?
- Were they understood as intended?
- Did the messages lead to changes in opinion and behaviour regarding AI prevention and control?
- Were partners' contributions to implementing the campaign adequate?
- What challenges were encountered during implementation of the campaign, and to what extent did these affect effective message delivery?
- Did the issue receive adequate publicity?

The study also assessed the effectiveness of an innovative FAO communication project on Promoting Strategies for Prevention and Control of HPAI (GCP/INT/010/GER), which focused on smallholder livelihoods and biodiversity. This aimed to transmit knowledge about AI through primary schools, the innovation being the project's attempt to use children as change agents in their families and communities regarding a subject as demanding and complex as AI. The project was piloted in Kyantuuhe Primary School in Kanungu district, Kiwatule Primary School in Kampala district, and Ayira Primary School in Lira district.

The project consultant developed communication materials, including a booklet on *Basic and simple concepts for primary school children on good poultry husbandry* and specially designed playing cards to help children grasp key concepts more easily. The consultant also trained teachers on the booklet's content and on how to use it and the cards to enhance children's understanding of poultry and AI issues. The procedure was to train pupils on issues in the booklet for ten to 15 minutes a day over one month. Pre- and post-training tests were carried out on teachers, pupils and parents.

The KAP study also sought to ascertain whether the use of schoolchildren as change agents in their families and communities was successful. In particular, it assessed whether:

- the children understood the messages;

- the messages captured their interest;
- the children spread the messages to their parents and communities;
- the children spread the correct messages;
- the parents correctly understood the messages from the children;
- both the children and the parents changed their behaviour regarding the treatment of poultry and AI;
- the teachers were helpful in guiding the children on the issues in the booklet;
- the community acknowledged the children's contribution to the prevention and control of AI.

# METHODOLOGY

The KAP study employed four main methods: focus group discussions (FGDs), in-depth interviews, media content analysis (MCA), and document review. FGDs and in-depth interviews are effective in obtaining qualitative data to gauge the knowledge, opinions and attitudes regarding a particular issue among a given population, while MCA is a quantitative method for gauging the effectiveness of media coverage by counting stories about the issue in the mass media and analysing their frequency and significance.

Study instruments were designed and pre-tested. Guides for FGDs and in-depth interviews were designed for different categories of groups/respondents, and a coding sheet was designed for MCA (see Annex).

## Focus group discussions

The study held 15 FGDs – five in each of the districts of Kampala, Kanungu and Lira. FGD participants had to be resident in the district and either involved in poultry rearing or active in community affairs. The selection of participants sought to ensure as even a distribution of age groups and genders as possible. A local person acted as guide to lead the study team to FGD participants. Members of the general public were selected at random.

Each FGD had eight participants, as listed in the Annex. All FGDs were conducted in a conversational style, with participants contributing freely. Significant information was obtained about the message content, frequency, timeliness, packaging, sources of information, and preferred source of information.

## Respondents' profile

- ***Farmers:*** Poultry farmers and breeders in both urban and rural locations of the selected districts.
- ***Traders:*** Poultry is a thriving business in the target districts up-country, both for domestic consumption and for markets in Kampala City urban areas and export, especially to Southern Sudan.
- ***Members of the public****:* Men, women and children living in the communities.
- ***Political leaders:*** Elected representatives, such as local council members from levels V to I, including mayors, district council speakers and resident district commissioners.
- ***Health workers****:* Village health teams, veterinarians, medical doctors, extension workers and members of the district AI task force.
- ***District officials:*** District education officers played a key role; others included district medical officers and district veterinary officers.
- ***Individuals:*** People at the national level, from key ministries and organizations

- ***The mass media****:* Journalists, editors and programme producers.
- ***Teachers and schoolchildren*** from the three schools that piloted the AI campaigns in Kanungu, Kampala and Lira.

### In-depth interviews

In-depth interviews were conducted with specific individuals, most of who were involved in planning and implementing the campaign. The individuals involved are listed in the Annex.

### Media content analysis

The study looked at material published and/or broadcast from January 2007 to May 2009. This included news stories, advertisements, documentaries, letters to the editor, cartoon strips, spots and jingles. A coding sheet was designed to capture information in a coordinated manner.

The newspapers included *New Vision*, *The Monitor*, *The Weekly Observer* and *Red Pepper.* The radio stations included Radio Uganda, Sanyu FM, Capital Radio, Central Broadcasting Services (CBS) FM, Radio One, Unity FM in Lira, and Kinkiizi FM in Kanungu. The television stations included Uganda Broadcasting Council (UBC) TV and WBS TV.

### Document review

The study reviewed documents provided by FAO, including the communication strategy, brochures, fliers, posters and fact sheets for disseminating messages during the campaign. Progress reports on the campaign were also analysed.

# FINDINGS AND ANALYSIS

### Introduction

This section outlines the responses from interviewees in the districts of Kanungu, Lira and Kampala. A total of 168 respondents were interviewed, including farmers, district education officers, medical and veterinary officers, health workers, local council leaders, opinion leaders, media companies, teachers and schoolchildren.

### Respondents' media habits

#### Ownership of radio sets

The majority of respondents across the three districts owned a radio set (85 percent). A few owned television sets (10 percent). It was established that radio was the most popular and therefore effective medium of communication. However, according to Lira sub-county representative, Ms Joy Ongom, individuals' control of radio sets and the programmes they listen to varies: "It is women, elderly and children who attend to chickens, but these do not have enough time to listen to radio as much as the men." Hence the uptake of messages was limited.

#### Newspapers

A good number (55 percent) of the respondents reported reading newspapers, but not every day. The study also revealed that many people (80 percent) preferred local-language newspapers to English-language ones, although most newspapers are in English.

A significant number of poultry farmers (60 percent) had access to newspapers, but they preferred local-language ones.

## Media habits of implementers and health service providers

All respondents in this category said that they owned both a radio and a television set. Some also had easy access to the Internet, newspapers and cable television.

## Knowledge, attitudes and practices

Changing knowledge, attitudes and practices are clearly at the centre of a public awareness campaign to control and prevent AI. Knowledge refers to the information a person has obtained about a subject, area or issue; attitudes are the feelings or opinions a person has about an issue; and practices are the behaviours a community or person adopts in response to an issue or threat.

The centrality of KAP to the awareness campaign is well captured in the *Progress Report of the National Task Force on Avian Influenza* (October 2005 to March 2007), which states that public awareness and advocacy activities included:

- developing and implementing a communication strategy on AI;
- developing and disseminating guidelines on food hygiene, safety and waste management;
- identifying and recommending best practices in AI awareness and sanitation;
- providing regular technical updates to the National Task Force on Avian Influenza (NTF).

For the public awareness campaign, several materials and messages on AI were produced for both the print and electronic media. Because broadcast stations do not store most of their materials for long (the electronic media law compels broadcasters to preserve materials they have broadcast for only 30 days), the study found mainly print media materials for analysis.

Prominent among these were fact sheets, brochures, fliers, stickers and booklets (see Annex). These were designed to promote KAP; for instance, the fact sheet flier on *Avian Influenza/bird flu* issued by the Ministry of Health disseminated knowledge by answering the question "what is avian influenza?" It also sought to deepen its readers' understanding by providing answers on how AI is transmitted to domestic birds and humans, how it is recognized, and how it is treated. The practice aspect was succinctly captured in a section dealing with how to avoid, prevent and control AI. The attitude aspect would have been adequately dealt with by information about the dangers of AI, but the flier did not include this.

The brochure on *Understanding bird flu: What you need to know* covered basic issues of AI very effectively, using pictorial illustrations to maximize people's understanding of the message. It was strong on the issues of protection and transmission among birds, but weaker on the impact of the disease on individuals and the community. This brochure too was better on knowledge than on attitudes.

The flier on *Case definitions for avian influenza and animals* was written in the technical language of veterinary medicine, which is difficult for ordinary members of the public to understand. Only a highly trained scientist could fully grasp the message it contained.

The booklet *Basic and simple concepts for primary school children on good poultry husbandry* contained simple messages that could easily be grasped by teachers and schoolchildren. A particular strength were its illustrations, which complemented the text very well. Picture formats are very effective in communicating to young and/or illiterate audiences. According to the District Senior Education Officer of Lira, Mr Odongo Bosco, most teachers found it easy to use the booklet to communicate messages about AI to the students, as the information was not too technical and was suitable for the children's age and comprehension levels. The use of cards was reported as effective in enabling the children systematically to break the messages down into sub-topics. It also helped the pupils absorb the messages easily through learning by play.

In general, the printed material used for the fliers was good and durable (not easily damaged by rain or dust), but a significant number of respondents would have preferred larger posters (rather than the predominantly A4 size used) with less text and more illustrations. Posters with exclusively pictorial messages would have spread messages about AI further,

especially in villages, complementing the text messages available in other posters, fliers and the print and electronic media.

Posters and fliers dominated by text require more concentration from their audiences, which can be difficult to obtain. Most members of the public in Uganda tend to glance at such messages, so text-dominated posters and fliers may not be the most suitable for such audiences.

The study also noted that the public awareness campaign materials arrived late and were inadequate in number for their target audiences, particularly in schools. For instance, Mrs Helen Acan, the Inspector of Schools and the focal point for the FAO-AI campaign in Lira noted that information materials were distributed to five of the planned 26 schools. This meant that the local community was not well served with AI information, as the parents of pupils at the other schools missed out of the early distribution, and learned about AI only gradually.

## Knowledge

The majority of respondents (80 percent) were found to be aware of a disease called avian influenza, although many referred to it as bird flu. The subeditor of the RUPINY newspaper observed that the terminology used during the campaign was inconsistent; the AI team should have stuck to “bird flu” instead of using “avian influenza”, to avoid confusing the public. He also mentioned that at the time of the study, swine flu was gaining more attention than AI.

A number of people (20 percent) did not know what causes it and how it can be treated. According to an opinion leader in Lira, the Coordinator of POBEDAM, the key messages were not well received, especially in rural settings, as most of the information was in English and the language barrier meant that people could not relate the name of the disease to the local language. The word “influenza” was new, and had to be translated into local dialects. There were a lot of posters in towns, but local people in villages were not adequately reached.

### AI is infectious

The respondents were also well aware that AI is a highly contagious disease among birds; “It is spread by contact with infected birds and transmitted via droplets from the nose and mouth during close and frequent contacts with untreated cases,” explained one FGD respondent. The majority knew it can be transmitted from birds to humans, and could describe methods for avoiding this. According to Dr Oweta Jacob, people became cautious and started keeping their birds outside their own family dwellings. Many have since constructed special chicken pens.

### Symptoms of AI in birds

Respondents noted that AI-infected birds look sleepy and tired and that they move slowly, eat or drink very little, and have diarrhoea. The disease may cause sudden and massive deaths in birds, if not identified early. Symptoms were well described by participating schoolchildren and poultry farmers in the survey districts where many people keep chickens, but urban dwellers were less able to identify symptoms among sick birds.

### Symptoms in humans

FGD respondents noted that the initial symptoms of AI in humans are very similar to those of other types of flu, and include fever, cough, sore throat, watery diarrhoea and vomiting. Participants added that it usually takes three to seven days for the symptoms to develop. More severe infections can lead to life-threatening complications including severe breathing problems, pneumonia, multiple organ failure and death. All respondents demonstrated knowledge of these symptoms.

## Attitudes

### AI in humans can be treated

Veterinary and health officials indicated that AI in humans can be treated, but no treatment is available for poultry. However, statistics showed that it kills more than half of the people who

contracted it. Respondents observed that birds may survive the mild type, with low egg production as the significant sign, but the severe type wipes out all infected birds. A significant number (75 percent) of farmers and members of the public were aware of these facts, which informed their attitude towards AI as a deadly disease whose prevention ought not to be taken lightly. In Kampala, the Local Council Chairman of Munno Village noted that there were marked changes in attitude: "People used a fist instead of a handshake, and this was despite government assurance that it would control [the disease]. There was fear among our people about eating chicken, until the government overcame the fears."
The Kampala Central Division Disease Surveillance Focal Person observed that bird flu was the main topic of conversation at the time, and people were concerned about the implications of a pandemic. The poultry business community registered economic losses due to the AI scare; people were afraid to eat chicken, so sales plummeted. Perceptions among the urban poor varied; some saw it as a minor threat, some doubted it was a threat, and others thought that fears of a looming crisis related to AI were a waste of time.

### Prevention of AI

A good number (80 percent) of respondents believed that AI is preventable. A veterinary officer in Lira district disclosed that people in his area took their birds for vaccination against such diseases as Newcastle disease, which has similar symptoms to AI. The District Production Coordinator of Lira observed that his community has raised chickens for a long time, and is very aware of Newcastle disease. The AI campaign increased awareness; people became alert to any bird deaths and reported them to veterinary or health teams.

Respondents in Lira, Kampala and Kanungu listed several ways of preventing AI, including cleaning chicken pens, disinfecting pens with hot ash to kill germs, and taking precautions by not travelling in vehicles ferrying live birds to the city. Even children in the three primary schools of Kyantuuhe, Ayira and Kiwatule were clear about these basic issues of prevention. This shows that the message had sunk in.

***Prevention by health service providers:*** Medical officers explained that they had been trained in the protocols for AI surveillance and case management and for biosecurity surveillance and outbreak response for AI. The District Assistant Health Officer of Lira and the Senior Health Inspector noted that their structure was well prepared for the task; there had been training in the district, including of the District Health Officer, sub-county health centre workers and veterinary personnel. The training focused on the protocol for AI surveillance and case management and on the Uganda biosecurity surveillance and outbreak response.

***Attitudes and risk perception:*** The majority (95 percent) of district medical officers stated that they were ready to treat any cases, and criticized the campaign for publicizing the contact telephone numbers of organizations and officers only in Kampala, rather than those in local districts. For instance, the Lira Veterinary Officer noted that even when there was a suspected case within 8 km of his office; it was first reported to Kampala without his knowledge. "The newspapers and adverts were giving telephone numbers of offices in Kampala and not advising residents here to report to the nearest veterinary offices," he noted.

None of the medical personnel demonstrated fear about treating AI or about it constituting a risk to their health and patients. However, doctors reported that they were provided with protective gear to avoid any risk to their lives, although some said this gear was inadequate.

## Practices

### Treatment and its duration

The most effective way of preventing an outbreak of AI, or the further transmission of the disease, is through early diagnosis and treatment with Tamiflu at the onset of symptoms, reported Dr Winyi Kaboyo, NTF Secretary. Among humans, anti-viral drugs must be given within 48 hours of the onset of symptoms, while birds in the infected area must be killed and properly disposed of, explained the Lira Veterinary Officer. However, he pointed out that the district AI task force in Lira was unable to function, owing to lack of funds. "We waited for

funds from outside to assist the team, but only one American NGO, UPHOLD, sponsored radio talk-show programmes on AI," he said.

On average, more than 50 percent of respondents were unaware of any drugs that can be used to cure or vaccinate against AI.

**Use of indigenous treatments**

A few health service providers and FGD participants reported indigenous treatments that farmers administer to their flocks. Notable among these were the use of ash, paraffin, red pepper and marijuana to treat several poultry diseases, and some farmers believed that these would be effective in guarding against AI. One FGD participant in Lira said that she mixed water and pounded pawpaw roots for her chickens.

**Preferred centre for treatment**

People found it easy to take their birds for vaccination at village health team premises and veterinary offices in the district.

## Attitude towards suspected AI cases

The majority of interviewees (95 percent) felt that sick birds should not be killed immediately, but should instead be separated from others until they have fully recovered. Respondents also agreed that separating new birds from the rest of the flock for seven days allows farmers to assess their health status. However, there was also some resistance to dealing with sick birds in the manner prescribed by veterinary personnel to stop spread of the disease should it break out. For instance, some people were not ready to bury sick birds, preferring to ignore the health messages and eat the sick birds.

*When a chicken dies, it is not buried but instead becomes the sauce for the day*." FGD participant in Lira

This demonstrates that some people did not fully understand the campaign message. It should be made clear that eating infected birds can increase the spread of disease, especially to the people involved in slaughtering and preparing the infected chicken. Many respondents cited economic reasons for such behaviour. Community members said that it was practised mainly by youths who roast chickens for sale.

Another respondent from Kanungu felt that the district was not ready for an outbreak.

*"Our medical personnel are few and we don't have doctors,"* a participant said, explaining that awareness alone is insufficient in the event of an outbreak.

Some medical personnel (80 percent) were not scared by AI, but felt they required adequate protective gear, such as boots and gloves for handling cases during an outbreak.

Participants at an FGD in Kanungu revealed that most chickens were slaughtered out of fear; this implies that some people were not aware of the disease symptoms. In Kampala, farmers at Biyinzika Poultry Farmers' Chick Distribution Point noted that communicators made no effort to calm the fears of those involved in poultry farming. A Ministry of Agriculture official reported that the management of UGACHICK had called on its officers to make it clear to the public that AI had not yet reached Uganda. This was after people had reduced their chicken consumption,

causing reduced sales for those in the poultry business. One respondent reported that “We had to eat chicken on a certain TV programme to assure the public that it was safe.”

A few people (45 percent) washed their hands after touching birds, and isolated sick birds. Respondents also expressed concern that the disease could be spread through the free-range system, where birds can easily catch the disease by mixing with chickens from neighbouring farms and homesteads.

According to veterinary officers in Kanungu and Lira, community members built separate sheds for their birds, and had them vaccinated regularly.

One respondent noted that some farmers did not regard AI as a serious threat, as it had not struck anywhere in the country. He observed that other diseases such as swine flu had received more public attention.

It is important to note that a number of respondents believed that birds could be bewitched as a result of business rivalry. Such myths could hinder the rapid reporting of suspected cases, leading to further spread of the disease.

## Role of opinion leaders

The opinion leaders in a community or a village play a crucial role in setting a particular agenda on any social and health issue. The study sought to gauge local opinion leaders’ role and willingness to generate awareness about prevention of AI.

A considerable number of opinion leaders in the surveyed districts (75 percent) felt that their communities did not believe that AI would reach Uganda. The majority (95 percent) felt that providing information about free treatment, cures, medicines and the truth about myths was not enough to change this opinion.

### Problems in playing the role

All the opinion leaders interviewed noted that they did not perceive any problems in assuming such public awareness initiatives, but they observed that some members of the community disregarded their messages because the information being relayed had economic repercussions for people in the villages. This was especially true in Lira.

The leaders added that illiteracy often made it impossible to convince large numbers of people. Lack of time, of IEC materials and of financial support were some of the problems highlighted by the teams. According to Rev. Jimmy Ogang-Okello in Lira, rural communities had a lower uptake of campaign messages owing to language barriers and a communication model that was different from their usual way of receiving messages. Some people had limited access to radio, and there were few opportunities for follow-up explanations for people who did not fully understand certain issues. There was hardly any use of local terminology. Ranked in descending order, radio, posters and pictorial messages were preferred channels for messages, owing to language limitations.

## Best media for generating awareness

A significant number of respondents (85 percent) agreed that both electronic and print media channels were good for generating awareness within the community. Radio, television, posters, wall writings and newspapers were selected as the best media for this. Respondents added that advertisements and spots could also be used for information dissemination. Many said that radio was better than the other media because of its wide coverage and ability to reach many people in a short time.

Some respondents (60 percent) mentioned public meetings, public announcements and door-to-door campaigns by doctors and health workers as other avenues that could have been used in the campaign. Information from village health secretaries at community meetings would also have been helpful during the campaign, noted some respondents.

## Communication channels

### Print

Communication formats and channels must be designed to serve multiple objectives, such as advocacy, awareness building, conversion of awareness into self-reporting behaviour, morale raising among health service providers, and the planning of sustainable social and community mobilization.

The study revealed that the use of high-profile, national mass media – particularly the two leading daily national newspapers, *New Vision* and *The Daily Monitor* – had been effective. Some up-country journalists in Lira and Kanungu depended on information from these newspapers, and most FGD respondents had read AI-related information in them. However, some respondents felt that such national newspaper campaigns were redundant in rural areas, because much of the rural population cannot afford to buy newspapers and cannot readily understand the English language in which these two dailies are published. Vernacular papers would have had more impact in rural areas, had they given the issue more space and attention.

Other IEC material, such as booklets, posters, fact sheets and fliers, was of great importance especially with children and in communities that cannot afford other media. However, up-country journalists noted that they did not have easy access to such material, and this made their own work very difficult.

A total of 35 000 fact sheets on AI were inserted into *The Daily Monitor* throughout the campaign. As this newspaper reaches most parts of the country, this was one of the most effective methods used in the AI campaign. However, it should be noted that the only FGD participants to recall having seen or read the insert were those in the media FGDs. Future campaigns should involve at least three newspapers, to widen media coverage and reach different readers. Using one publisher may save on costs, but has many risks, such as not reaching all the target audiences.

Dissemination of AI information through print media was hindered by limited resources, language barriers and the lack of a reading culture in much of Uganda's rural population. "We didn't take enough time to move to villages to get views of the local people; it would have been better if we had had more resources," noted Rhino FM Editor, James Twine.

### Electronic

***Radio:*** According to the AI preparedness and response progress report issued by NTF in April 2007, five radio stations were used in the campaign: CBS and Capital FM in the central region; Voice of Teso in the east; Mega FM in the north; and Radio West in the west. However, the national and district task force teams did not explain their reasons for selecting these. Considerations such as audience, coverage and language should have been borne in mind. The final selection makes it evident that the choice was based on regional distribution, so regional coverage and regional languages were the selection criteria.

None of the selected radio stations are located in Kanungu or Lira. Although some of the radio stations used have wide coverage, so could be heard in these districts, it was established that the listening population tends to tune into radio stations that broadcast in local languages and dialects. This probably explains why some farmers and members of the public had not received information about AI from radio stations operating close to their areas. Larger numbers of radio stations should be used in future campaigns, as different sections of the population in a given area listen to different stations throughout the day.

District health and veterinary officers were supposed to take part in programmes on the selected radio stations, but the study found that limited resources had made this impossible. A few jingles and spot messages were aired, but their effect would have been greater if they had been supported by expert opinion and analysis.

One respondent noted that information given by radio was "scanty and not conclusive". A survey of several radio stations in Kampala (Sanyu FM, Radio One and CBS) did not yield conclusive results. The study team searched through the archives of CBS, but did not find anything related to AI, while the news editor of Sanyu FM reported that a few stories had been

aired, although there was no record of these in the archives. Only at Radio One were three news items about AI found in the archives. Journalists and news anchors at all the stations said that they obtained information from the British Broadcasting Corporation (BBC), Cable News Network (CNN) and the Internet. A journalist at CBS informed the team that she had attended a workshop organized by the Ministry of Health to sensitize journalists about the dangers, spread and symptoms of AI in 2008.

Most FGD respondents suggested that future campaigns should include music, dance and drama, to make programmes interesting to listeners and viewers. Media personnel also noted that there was selective financial assistance for some journalists, which left out practitioners from other radio stations. Incentives should be provided to encourage journalists to cover such campaigns, and could include tee-shirts, educational materials and transport refunds.

***Television:*** NTF produced spot messages for TV broadcasts on WBS and UBC stations. Findings show that the campaign made no deliberate efforts to acquire television air time through news coverage. These stations broadcast information about AI as a result of journalists' initiative in looking for stories to report. Although paid air time is important, there is also a need to identify media opportunities that provide free coverage. Among the respondents interviewed, none reported having seen anyone address AI issues on TV talk shows, although this was one of the budgeted items for engaging with the media. This shows that neither the national nor the district task forces exploited this avenue.

Respondents in Kanungu reported that PowerPoint presentations had been used at one meeting, but expressed disappointment that no-one had explained the slides to the local people. Illustrations are useful, but they need to be accompanied by verbal explanations. Respondents also asked that in future, pictures showing normal and sick birds should be presented side by side to allow easy identification and comparison.

### Interpersonal channels

*Word of mouth:* Local people expected village health teams, district health and veterinary officers, and political leaders to organize public education events such as meetings and sensitization seminars in their areas of jurisdiction. These officials were supposed to talk to people, encourage them to adopt good poultry practices, and educate them on the symptoms, prevention and treatment of AI. A number of respondents noted (95 percent) that they were invited to attend sensitization meetings at schools involved in the FAO project.

Other respondents reported that AI campaign teams did not have well scheduled meetings: "They would just find people gathered and start addressing them without prior notification," noted a respondent in Kanungu. In Lira and Kampala, sensitization meetings were carried out with the help of local leaders, especially those at local council level I. Parents, children and teachers were invited to attend training in schools that were participating in the FAO project, where participants were tested and given gifts at the end of the training.

The use of young children as change agents in creating awareness about AI and improving knowledge and attitudes towards poultry farming recorded the greatest success in Kanungu. Children at Kyantuuhe Primary School were well aware of AI, its causes and how to avoid it were it to break out in the area. These children had used the booklet on poultry farming developed by the FAO consultant, and their teachers had helped them to learn more.

In Kanungu, the children shared information on the AI campaign and good poultry husbandry with their parents, who seem to have absorbed it well. Interviews with parents revealed that the children had informed them about AI fairly frequently during the study period, and that they had taken the children's messages seriously. These parents also reported that as a result of the intervention they were now better poultry farmers, earning more income from poultry and therefore better able to support their families. In Lira, however, the use of children as change agents and information channels had less impressive effects. Children in this community and cultural setting are not encouraged to talk to adults, and their views are not usually taken seriously. The chairman LC1 C/P of Barr Trading Centre and a parent at Ayira Primary School noted that some parents did not pay much attention to what their children were saying about AI: "They did not take it as a serious matter, although I took it seriously. One time I asked one of the parents about bird flu, knowing that his child had talked to him

about it, but he said he did not know anything about it. Children faced hard times to explain about bird flu," he observed.

Among media practitioners, journalists in Kampala said that they had been trained by the Ministry of Health on issues related to AI in 2008. Such training should have come earlier, considering that the disease broke out in 2004.

Respondents in Kanungu revealed that sensitization meetings were conducted only in urban locations, targeting opinion leaders and farmers who did not bother to teach others. The training team did not go to the villages because Kanungu is a mountainous area where some places are difficult to reach. This left many poultry farmers with insufficient information about the disease, rendering the campaign less effective. Kanungu is a border area, so vulnerable to outbreaks of disease, especially as it neighbours the Democratic Republic of the Congo (DRC), where deadly viral epidemics such as Ebola have originated.

Respondents also suggested that there is need to adopt more interpersonal communication methods to reach people in the languages and forms of expression that they use and understand. For instance, in Kanungu it was noted that posters were only in English, but the district includes several non-English-speaking tribes such as Bakiga, Banyarwanda and Congolese. There is need to use avenues that reach more people at little cost, such as by relaying messages during religious services for both Christians and Muslims. Posters and brochures should be translated into local languages and be made simple to understand.

*"The message reached the grassroots; however, the practical aspects of the campaign were minimal. I still see the same management system in birds as before, although people have become sensitive to massive deaths of birds,"* Okwir Wilson, Lira Veterinary Officer

*Training workshops:* Five regional workshops targeting rural-based journalists and district mobilizers were held in Gulu, Mbale, Mbarara, Arua and Kampala. However, these seem to have had only a minimal effect on the campaign, and only one journalist in Kampala and a few in Lira recalled having attended such training on AI. It is important to offer continuous training for well-targeted audiences who can help achieve the campaign's objectives. A training needs assessment should be carried out so that knowledge gaps among target audiences can be filled.

## Media and publicity

The AI campaign generally received relatively little coverage in the Ugandan media, although the print media gave considerable space to AI issues and analysis. These news articles were clearly explained and informative, usually quoting credible sources such as Ministry of Health officials, national medical stores, WHO and international medical journals.

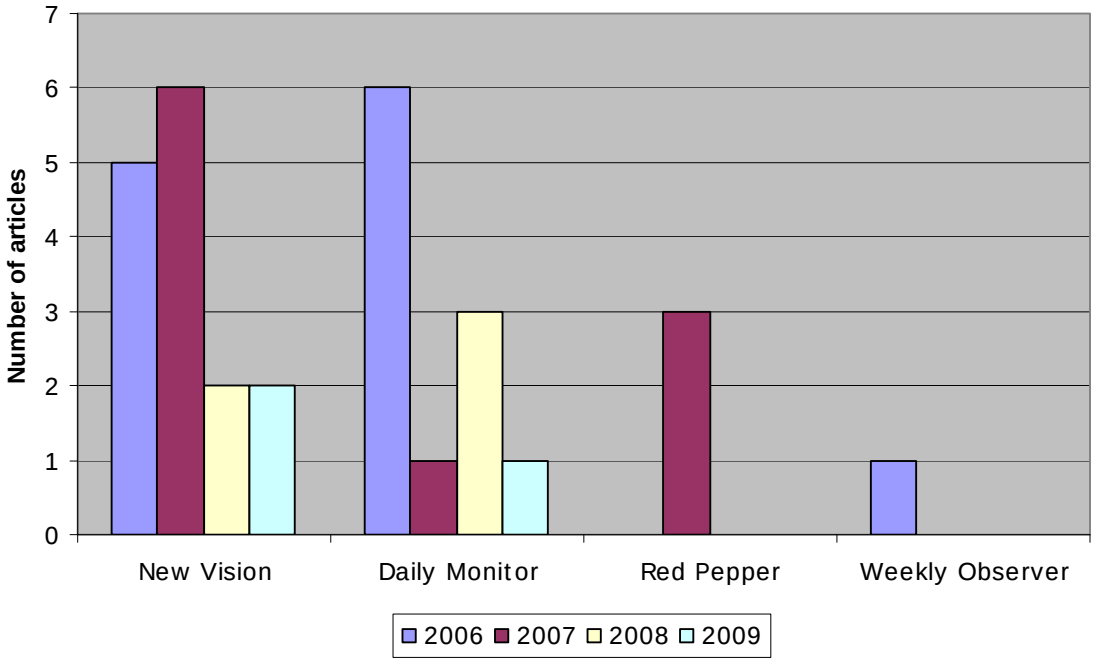
Health officials interviewed noted that journalists had not done much to increase awareness about AI. Informal media such as posters and fliers played a more influential role in providing information to the masses.

However, up-country journalists revealed that they could not easily obtain information from health and veterinary officers: "Information such as fact sheets and posters about avian influenza was scarce," they noted. "Officials kept tossing us around and hiding information on the pretext that they were not allowed to speak to the press," noted a journalist from Lira. Kampala journalists seemed to have had more success, although they obtained most AI information on their own initiative, by calling the responsible officials.

### Media content analysis

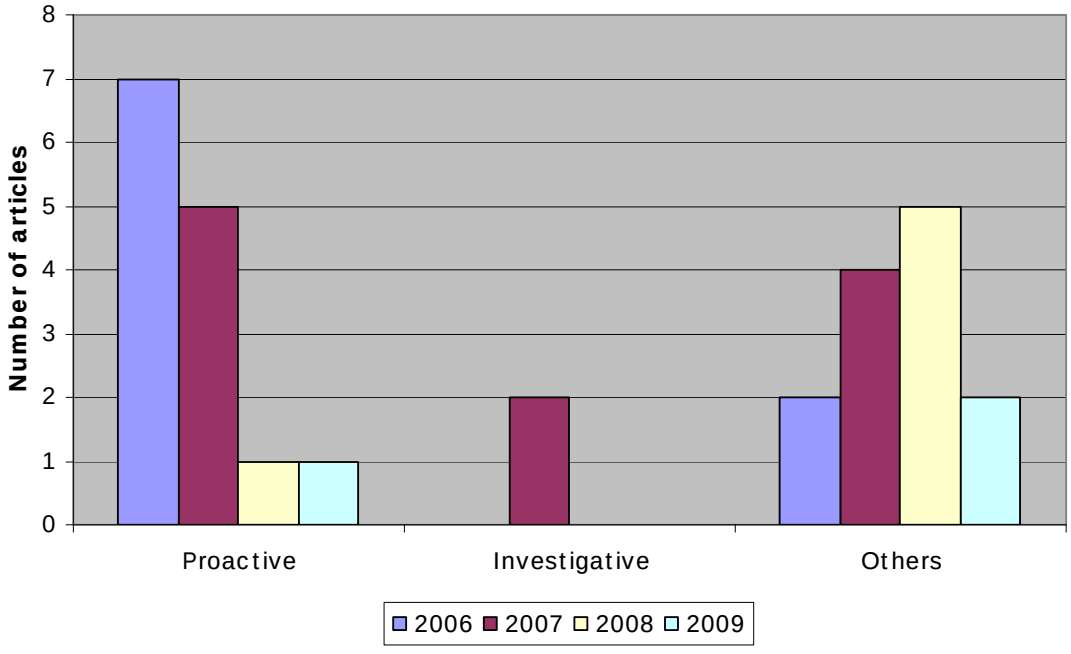
A representative sample of the local print media was taken, covering *The Daily Monitor*, *The Weekly Observer, New Vision* and *Red Pepper* between 2006 and May 2009 (Figure 1).

**Figure 1 Coverage of AI issues in selected newspapers**




It was noted that AI received more coverage in the early days when the campaign was first launched. This can be attributed to the fact that this was a new disease with the potential to reach Africa and Uganda via wild and migratory birds – Uganda receives many migratory birds in October. AI coverage dropped as the years progressed, probably because the disease did not reach Uganda, so journalists and the public stopped seeing it as a serious threat. In 2006, there were five stories on AI in *New Vision*, six in *The Daily Monitor*, one in *The Weekly Observer* and none in *Red Pepper*.

**Figure 2 Information sources for news articles**



Considering the magnitude of the disease and its potential effect on both birds and humans, it did not receive the coverage it warranted. It was noted that swine flu, which is a recent occurrence, has received far much more coverage than AI.

Figure 2 shows the combined coverage of AI in all newspapers. “Proactive” describes news and feature stories that originated from official sources such as the Ministries of Health and of Agriculture, Animal Industry and Fisheries, WHO and AI district task forces, directly quoting an authorized spokesperson. “Investigative” refers to the stories that journalists based on their own research about the disease. “Others” are stories that mentioned AI but did not focus on it.

Based on its findings about the press coverage accorded to AI, the study made the following observations:

- Of 30 articles considered, 15 were proactive, two were investigative and 13 merely mentioned AI. This implies that the ministries and other organizations responsible for informing the public about AI did not involve the media. No article mentioned a press conference or quoted a press release. In most cases journalists called officials for the information they wanted.
- Only two of the articles were brief, while the rest covered at least a quarter of a page. A considerable number of articles expressed opinions, while the rest were news. This implies that AI would have received more press coverage if the national and district task forces had provided journalists with more information. Many stories were positive in nature, highlighting the symptoms, prevention and treatment of AI should it break out. A news editor at a leading daily said, “AI could have hit page one if the disease had broken out.” He explained that news editors covered AI on inside pages because of its economic considerations.
- Most of the stories were placed in the first ten pages of the paper, or on specific health or farming pages. News and letters to the editor were more common, and mostly covered a quarter of a page, while features and expert opinion articles covered between half and a full page. Investigative stories covered more space and were more analytical than news articles.

Newspapers usually put the most popular and important news items into the main news pages. Although inside pages may not carry the hottest news, they usually contain features, analyses and special reports, which are allocated more space and more depth. While FAO would have been interested in seeing coverage of AI on the prime news pages, it is equally important to get coverage in the inner pages, where issues can be accorded deeper analysis and coverage. This can be achieved by responsible officers writing opinion pieces.

Only two investigative stories were run during the period under review, showing journalists’ reluctance to write about health issues. Investigative coverage could have been enhanced through workshops and seminars to train journalists in health reporting on the AI threat. Establishing and maintaining contacts with the journalists who cover health issues would have been useful. The media should also have been engaged in more campaign activities, such as school projects and village meetings. Press conferences should have been held to update the media, instead of waiting for calls from journalists. Establishing and maintaining working relationships with media practitioners is of great importance, and could have been achieved at mid-morning meetings with programme producers and editors to interest them in AI issues. As the gatekeepers of what the public reads and hears about, journalists need a full understanding of the subject they are meant to be covering, otherwise they are likely to neglect it.

Dr Sam Okware was the most quoted Ministry of Health official, while no comments were recorded from AI disaster teams. Rather than the current practice of allowing only directors and ministers – who are often not available – to speak to the press, other ministry officials should be encouraged to do so. Permanent spokespeople or officers should be selected to be in charge of ministries’ media activities.

### The message

For its public awareness activities, NTF sent out messages about AI issues, such as prevention, symptoms, treatment and good poultry practices. All the people interviewed reported hearing information on AI from various sources and channels. However, they noted that this information was not spread widely enough because too few personnel were involved in the campaign.

Community respondents reported that doctors, village health workers and some political leaders visited their home areas to educate them about AI. Training was conducted for farmers' groups in Kanungu district. However, it was noted that some areas were not reached because of poor terrain, and the shortage of personnel and other resources for the campaign.
A good number of respondents (75 percent) were exposed to the message and adopted good poultry practices as a result.

The school project was considered effective, with children telling their parents about the threat of AI. However, the direct involvement of parents in training at the pilot schools of Ayira, Kiwatule and Kyantuuhe seems to have been the most effective way of disseminating information through schools. It seems that only one person was involved in this training; all participants in the school project reported hearing the message from Dr Rommy Viscarra.

Although study team members did not receive copies of the messages in local languages, they were able to see from the English-language versions that messages were well designed and easy to understand for the public. Future campaigns should note that messages need to command attention, and to be clear, consistent and credible.

### Materials used for the messages

All the materials used in the campaign were developed by NTF with the help of a professional designer. Some 30 000 books of questions and answers were printed, along with 90 000 fact sheets, 6 000 prevention posters, and 10 000 posters showing a person eating chicken – 6 000 in Luganda language and 4 000 in Runyankore Rukiga and Rutoro languages. Another 5 000 posters were printed in Luo, 3 000 in Ateso, 3 000 in Lugbara, 5 000 in Kiswahili, and 3 000 in Akaramajong. According to the NTF report, all of these materials were given to the district health officers attending a national planning meeting in Munyonyo. In addition, a total of 35 000 fact sheets were distributed through *The Monitor* newspaper.
TV spot messages were also produced and aired on the two TV stations of WBS and UBC for 30 days.
Spot messages for radio were produced in six languages: Luo, Luganda, Ateso, Rugbara, Swahili and Runyankore-Rukiga-Runyoro-Rutoro. Three radio spots were broadcast daily for 30 days.
It was not clear whether surveys to establish the needs of target audiences had been conducted before the communication products were developed and distributed. Such surveys would have helped the production team ensure that graphics, language and messages were appropriate for their audiences.

### Message communicators

An FGD in Kanungu noted that an attempt to use information and communications technology (ICT) had failed because there was no one to interpret the slides. It should be noted that few people in villages are familiar with ICT, so it needs to be thoroughly explained when it is used.
A local council chairperson in Kampala also revealed that some of the people who would have been useful in educating the public especially the Village Health teams did not receive the IEC materials. In future campaigns, credible messengers who command respect from the target audiences should be used. It is also important to pre-test messages before disseminating them to the public.

# ACHIEVEMENTS

Although a high number of respondents agreed that there was need for more information on AI to dispel communities' myths and fears about it, the AI awareness campaign accomplished some remarkable successes, which are described in the following subsections.

**Increased awareness about AI**

Following the public awareness campaign and the FAO project in schools, the Ministries of Health and of Agriculture, Animal Industry and Fisheries, together with NGOs, can justly claim to have educated the Ugandan public about AI, its causes, symptoms, treatment and prevention. It was revealed that a suspected case in Lira was reported to the Kampala offices immediately, showing that people had grasped the information given to them.

**Increased public awareness about good poultry farming practices**

Since the campaign, farmers have built chicken pens and have started to seek vaccination for their birds. They have learned to separate new chicken from the rest of their flocks for seven days. In some places, people tie chickens' legs with string to stop them from wandering to areas where they could be exposed to disease. Many homesteads have adopted good poultry practices, such as sweeping droppings and unconsumed feed from chicken pens, and burning or burying feathers and other poultry waste so that scavengers do not have access to them. Farmers also maintain high levels of cleanliness on their farms, and wash the utensils used to feed chickens at least once every three days.

**Inclusion of poultry issues in the education curriculum**

Teachers from schools participating in the project reported that children as young as five now know about good poultry practices, although this subject was not studied until primary 4. This awareness eased the teachers' work. Ayira Primary School in Lira bought chickens to use in demonstrations.

## Comparison among the three districts

The strategy of using schoolchildren was most successful in Kanungu district, less satisfactory in Lira and not influential in Kampala district. This last result was due mainly to the multiple information sources available to parents in Kampala district, which is a relatively urbanized community with more television and radio stations carrying the AI messages.

Media companies showed little enthusiasm about disseminating AI material, because the subject is not particularly popular. The fact that AI did not break out also contributed to the low coverage. Media coverage was particularly poor in up-country Lira and Kanungu, where there are fewer information sources for journalists.

A number of district and lower-level local government officials had little enthusiasm for the campaign because they were not sufficiently involved in it; some expected financial incentives, which were limited or non-existent.

## Comparison of the AI communication strategy with similar strategies

The study examined the Ministry of Health's communication strategies regarding national responses to crises such as AI. These included the communication approaches for mitigating diseases that had reached epidemic levels, such as Ebola and malaria, and for increasing access to family reproductive health care. Unfortunately, owing to the hurried nature of the ministry's response to the Ebola emergency, no clear communication strategy for handling its outbreak had been developed.

### Comparison with the malaria strategy

The Ministry of Health formulated and implemented a communication strategy for malaria when it reached epidemic proportions in western Uganda and Mbale region in eastern Uganda. The objectives of this strategy were to:

1. improve the coverage and quality of malaria case management at all levels, including the household;
2. increase the coverage of intermittent presumptive treatment for pregnant women;
3. strengthen vector control through increasing the demand for and use of insecticide-treated nets; improving the quality and coverage of indoor residual spraying, particularly in epidemic-prone areas and other settings where this strategy has been effective and feasible; and environmental management;
4. strengthen the capacity to predict, detect early and contain malaria epidemics at all levels;
5. establish sound IEC/behaviour change communication interventions for malaria control.

The strategy targets for July 2010 were:

1. reduced hospital admissions of children under five years of age, from 74.5 per thousand in 2003 to 50 per thousand;
2. reduced case fatality rate among malaria in-patients under five years of age, from 3 percent in 2004 to 1 percent;
3. increased proportion of children under five years of age receiving correct treatment within 24 hours of onset of symptoms, from 25 percent in 2004 to 80 percent;
4. increased proportion of pregnant women attending antenatal clinics who have completed intermittent presumptive treatment 2, from 24 percent in 2004 to 80 percent;
5. increased proportion of households with at least one insecticide-treated net, from 15 percent in 2003 to 80 percent;
6. increased proportion of targeted structures for indoor residual spraying re-sprayed every six months, from 0 in 2004 to 80 percent.

Target groups included national-level leaders, including in the private sector and the media, district- and community-level leaders, service providers, and members of households, particularly children and pregnant women. Messages were designed for each target audience, and appropriate channels used to reach them.
The malaria communication strategy was strong on message design and on reaching different audiences, providing details to the people responsible. However, the strategy has not been assessed since its deployment, so its effectiveness cannot be measured for providing useful comparisons to inform adjustments to the AI campaign.

### Comparison with the reproductive health strategy

The Ministry of Health's communication strategy for accelerating implementation of Uganda's sexual and reproductive health programme was launched in 2005, with broad themes and targets to be met by 2010. These include:

- reducing infant mortality, from 88 to 68 per 1 000 live births;
- reducing under-five child mortality, from 147 to 103 per 1 000 births;
- reducing maternal mortality, from 505 to 354 per 100 000 live births;
- reducing the total fertility rate, from 6.9 to 5.4 per woman;
- increasing the contraceptive prevalence rate, from 23 to 50 percent (for married women, all methods);
- reducing HIV prevalence at antenatal clinic sentinel sites, from 6.2 to 4.4 percent.

The Strategy to Improve Reproductive Health Services in Uganda 2005–2010 focuses on four priority intervention areas:

- increasing access to institutional deliveries and emergency obstetric care;
- strengthening family planning service provision;
- implementing goal-oriented antenatal care;

- expanding provision of reproductive health information and services for adolescents and young people aged ten to 24 years, as a cross-cutting issue.

In addition to those already mentioned, the reproductive health strategy targets for 2010 are to:

- reduce the unmet need for emergency obstetrics care, from 95 to 40 percent, and increase the proportion of deliveries by skilled attendants, from 38 to 50 percent;
- increase the proportion of pregnant women attending antenatal clinics on four occasions, from 42 to 60 percent.

The target audiences for the reproductive health strategy were national, district and local decision-makers and opinion-leaders, and media producers, for advocacy; community leaders (political, religious, traditional and others), service providers and family members, for social mobilization; and women and men of reproductive age, together with their partners/spouses, for behaviour change.

The reproductive health communication strategy identified several challenges to increasing the demand and utilization of reproductive health services, prominent of which are negative attitudes and poor interpersonal communications among the target audiences, and a lack of knowledge and accurate information about reproductive health issues and services. The strategy provided a framework for promoting increased use of information, knowledge and skills to bring about positive changes in attitudes and behaviours regarding reproductive health. This strategy is better structured than the malaria communication strategy.

No indicative budget was provided for either the malaria or the reproductive health communication strategies.

# CHALLENGES

***Delayed communication:*** Many respondents noted that the Ministry of Health took a long time to reach the public; the disease first appeared in 2004, but the awareness campaign did not begin until 2007. They said that this would have endangered their communities and birds had the disease reached Uganda prior to the campaign.

***Limited capacity and knowledge:*** The capacity for dealing with communication issues and challenges appears to be limited, and no specialized training was provided to the people responsible for planning and implementing the campaign and for imparting IEC training to others. This situation was exacerbated by the interweaving of communication functions into clinical/technical functions.

***Porous borders:*** FGD participants in Kanungu and Lira said that Uganda's porous borders would have made it difficult to contain the disease. They expressed concern that many people cross borders without serious checks, and appealed for more emphasis on cross-border communication for future campaigns, so that people living on both sides of the border are aware of the AI threat.

***Use of children:*** The use of children as change agents and information channels was not always effective, especially in Lira. FGD participants noted that traditions in this community prevent children from talking directly to adults, and information from children is not readily accepted. It was also revealed that some children had misinformed their parents and elders about injured chickens, so they could have them to eat. In Kampala, parents had many sources from which to obtain AI information, so the messages passed on by children did not have a significant impact. Nonetheless, children in both districts made efforts to pass on information about AI.

***Lack of radio ownership for women, children and the elderly:*** There is a risk that these categories of people will not have been exposed to information because they do not own radios and seldom listen to them. "Women are always in the fields doing manual work, while the elderly consider radio to be noisy," said an interviewee in Lira. Respondents explained that children are at school most of the time, so likely to miss messages broadcast on radio. Children also spend less time with the chickens, so are less likely to detect disease symptoms.

It was explained that men own radio sets and decide which channels the household will listen to. One participant reported that men often take their radios to trading or drinking centres. This left a large part of the campaign's target audience without access to information from the radio. As women have the most daily contact with the birds, information dissemination methods that reach women should be identified for the campaign to have its full impact.

***Language barrier:*** Most of the field officers sensitizing the public about AI did not speak local languages. It was also difficult to translate some words into local dialects. Some community members suggested that health workers should have stuck to the term "bird flu" instead of avian Influenza. Posters and questionnaires were in English, which the general population, especially those in villages, do not understand well.

There was also a lack of funds to pay for translating messages for minority groups. For example, in West Nile, posters were in Lugbara, although some people – such as the Madi, Kakwa, Alur and Sudanese refugees – would have preferred Arabic.

***Design of jingles:*** The jingles used did not draw people's attention to the fact that they were about AI.

> "*They should have used quacking chicken to attract people's attention*," Joy Ogwang, sub-county representative in Lira

***Scarcity of promotional material:*** In some areas, such as Kanungu, only ten posters were given to a sub-county. Considering the enormous population in these areas, many more IEC materials were needed for the campaign to work effectively.

***Limited engagement with the media:*** Respondents said the AI task forces did not utilize the media optimally and were rarely heard on radio. Up-country journalists in particular

complained that officials were reserved about sharing information, which hindered the journalists' follow-up on stories. Journalists reported that district health officials had inadequate information and depended on the Ministry of Health and WHO. District health and veterinary officers should be empowered to speak freely to journalists about campaign issues, rather than viewing journalists' desire for information as being a nuisance.

***Inaccessible areas:*** In Kanungu, it was noted that the campaign penetrated only into areas close to the town council headquarters, as other areas were difficult to reach and there were insufficient resources for getting to them.

***Uncoordinated meetings:*** Respondents revealed that in some places, meetings held by health teams and AI awareness task forces were poorly planned. Campaign teams tended to address any gathering of people they came across, without announcing a meeting in advance. Some members suggested that door-to-door announcements of meetings would have worked well.

***Negative attitudes and stubbornness:*** Community members revealed that some farmers, traders and hotel owners continued to sell and cook sick birds because of economic considerations, claiming they had no alternative sources for their daily incomes. It should be noted that the messages greatly affected the livelihoods of people engaged in chicken production, especially women in Lango.

***Low level of understanding:*** Some farmers did not take the AI warnings seriously, and questioned whether a flu infection for chicken really existed. They would have taken the messages more seriously if they referred to a cattle disease, as cattle are more important than poultry in several Ugandan rural settings. It was also noted that despite having heard about the AI threat from roadside chicken vendors, they did not construct infrastructure such as pits for gathering feathers and other waste. Although farmers seemed to have grasped the message, some did not change their behaviour.

***Lack of interest in health issues:*** Community members in Lira noted that politicians are not very interested in including health issues in their politics. Some politicians do not like talking about issues that affect their voters' livelihoods; Lango subregion produces a lot of chickens, including for export to Juba in Southern Sudan.

***Lack of sustainability:*** A large number of respondents noted that the campaign has died down, and people are relapsing into their old practices, believing that the AI threat is over.

***Limited financial resources:*** The AI awareness campaign was supported mainly by donors and NGOs. The government did not provide enough resources at the district level, so public awareness was attained only in areas near district headquarters. Resource limitations also prevented the teams from reaching remote areas, and in some cases hampered the follow-up to sensitization activities. A veterinary officer noted that many farmers sought vaccination for their birds, but the stock of vaccines had run out and drugs were not available. As a result, the campaign raised but did not meet people's expectations about the AI threat. It is important that issues affecting human and animal health be given enough resources, so that information campaigns can continue operating until their target audiences have reached full understanding and acceptance of the information. When livelihoods are involved, public awareness efforts need to be backed up with sustained support and information for target audiences, otherwise people may be left worse off than they were before.

> Respondents noted that there were no permanent health and technical officers in the villages to help communities with surveillance and treatment had the disease broken out.

***Other health issues:*** Respondents reported that other health issues and diseases, such as swine flu, have distracted attention from AI. People expressed concern that the symptoms of AI and swine flu are confusingly similar. Dr Winyi noted that health personnel seemed now to be focusing more on cholera, plague, Marburg and Ebola, while an FGD participant in Lira reported that "AI did not then seem to require much urgency. Campaigners had also to talk about other diseases."

***Lack of facilitation:*** In Kampala district, it was noted that district preparedness committees, which were supposed to meet twice a day to assess the situation, never met at all.

# RECOMMENDATIONS

An information campaign of this importance should be designed to provide information that all its publics can understand. The AI campaign was worthwhile and useful in generating useful lessons for future campaigns. For example, district and local government political leaders should have been more closely involved; communities believe their local leaders, who in turn can do much to mobilize people for such campaigns.

Future campaigns should dispel the myths and misconceptions among the general population and should address open and latent stigmas.

There is also need for more IEC and behaviour change communication, to ensure that tools and activities achieve campaign objectives. This study has outlined the broad direction in which communication should proceed, but it is also necessary to carry out communication needs assessments in the districts concerned, to establish the best ways of reaching target audiences and identify the information that they need.

The following are some specific recommendations:

1. The Government of Uganda should seek to make the public understand that guarding against epidemics such as AI is a shared responsibility for all.
2. Given the serious risk that AI poses to Uganda's bird and human populations, the information and communication departments of the Ministries of Health and of Agriculture, Animal Industry and Fisheries should be active in dispatching information to journalists in a timely manner and in establishing and maintaining lists of media health reporters on whom they can rely for coverage. Favouritism of journalists from certain media companies (whether real or perceived) should be discouraged, as the objective is to reach as many people as possible. Non-mainstream media should be used far more, as these have many advantages over the mainstream. For example, posters and fliers have a longer shelf-life than newspapers and radio messages, and people can keep them for future reference when needed.
3. It was noted that the campaign was more active in its early years, following the initial outbreak of AI in other parts of the world, but that coverage dwindled after this. This reduced the campaign's effectiveness; people need regular reminders about disease threats, so they adopt and maintain appropriate practices.
4. There is need to establish contact offices at the local level. Many people reported that there was no technical person at the village level, to contact in case of an outbreak. When possible, existing structures for veterinary services and health care could be used for this, with extra contact points arranged at times of emergency, so that technical personnel are readily available to provide information and answer queries.
5. It is essential that new policies that are in place and being enforced be fully communicated to the public. For example, one newspaper reported that vehicles from Southern Sudan were to be sprayed with disinfectant, but it was not clear that this was communicated to the drivers and vehicle owners concerned.
6. Professionals should have adequate communication skills to explain the main issues about disease outbreaks to the public. When there is a gap in the provision of expert information dissemination, myths and misinformation develop, which can be harmful to community mobilization efforts in response to a problem. National and district task forces should keep the media and the public fully updated with disease information.
7. Every effort should be made to harness the interest of the media and influence its agenda. Campaign stakeholders should have used the booming media and communication industry to reach out to wider audiences. Currently, there is increasing interest in and coverage of health issues in Uganda's media. Considering the health and economic implications of AI, the public cannot ignore the risk. Rather than limiting communication to paid space in the media, the Ministries of Health and of Agriculture, Animal Industry and Fisheries should have explored ways of generating free coverage, particularly in news columns and

electronic news bulletins. More targeted press conferences for health reporters and editors should also have been organized.

8. Information should be translated into as many languages as possible, to reach a wider section of the public. Information kits should also be provided to the general public, for their own reference.
9. There is need to venture into other ways of disseminating information, such as through public information vans telling people about the disease in villages and streets. Community radio stations should also be involved; there are now many such radio stations in trading centres. There is also need to ensure that messages are disseminated in all areas.
10. Information campaign must consider the cultural and other perceptions that predispose people to receiving and interpreting information in a certain way. Such perceptions can be at the individual, family or community level.
11. It is important to fight complacency at the political policy- and opinion-makers' level. The focus should be on highlighting the campaign's success so far and on galvanizing community action at the district, lower government and community levels, rather than relying on only health personnel. The success of the campaign depends on every Ugandan feeling a sense of ownership and knowing that is for his/her good to fight and prevent AI.

# Annex: Study instruments and samples of campaign messages

## Interview guide

*For health managers, veterinary managers, health service providers and community development workers at the national, district and sub-county levels; plus district leaders and opinion leaders:*

1. What role did the awareness campaign play in the efforts to prevent and control AI?
2. Do you think that the key messages were well received and understood? Why?
3. Which particular audiences did you find impressive in appreciating the AI messages? Why?
4. Which particular audiences did you find unimpressive in appreciating AI messages? Why?
5. Which channels do you think were more effective in transmitting the AI messages? Why?
6. How helpful were the journalists and the mass media in this effort?
7. What challenges were encountered in running this awareness campaign?
8. What would you have liked to see done differently to meet the objectives of the campaign better?

*For editors and programme producers of media companies:*

1. Are you aware that there was an awareness campaign about AI, targeting the general public?
2. When and how did you come into contact with the campaign?
3. Did you assign specific journalists to cover the issue of AI?
4. Did you find the issues of AI a big story? Why?
5. How much coverage has your media company given to the AI awareness campaign? Why?
6. Did you find information about AI easily accessible? Why?
7. What do you think the people responsible for the awareness campaign about AI should have done differently, to make it more effective?

*For parents:*

1. When did you first hear about bird flu?
2. From which source did you first hear about it?
3. Did any of your children attending primary school tell you about bird flu?
4. If so, what did she/he tell you about it?
5. How seriously did you take the child's message?
6. Would you say your child's message about bird flu changed your outlook on the way you treat poultry? In what way(s)?
7. What challenges do you think the children faced in communicating to their families about bird flu?
8. What do you think can be done to make children communicate better about the dangers, such as bird flu, facing their families and communities?

*For teachers:*

1. How did you get involved in this initiative of transmitting knowledge about bird flu through primary schools?
2. How did the initiative help the teachers?
3. In your opinion, how did this initiative help the pupils?
4. How did the initiative help families and the community?
5. Do you think the intervention was successful? Why?
6. What would you have liked to see done differently in implementing this intervention? Why?

## FGD Guide

*For farmers, special interest groups, care groups and members of the general public:*

1. When did you first hear about AI?
2. Where did you obtain the information?
3. Where did you obtain most information about AI?
4. Which source of information did you find easy to understand?
5. How did the information about AI help you?
6. What have you done to help your family and community avoid AI?
7. How would you want your community better educated about AI in the future?

*For science/society journalists/reporters:*

1. Did you cover the AI threat to Uganda? Why?
2. How easy was it to obtain information about AI?
3. Do you think journalists were adequately helped with reporting about AI? Why?
4. What challenges did you encounter in reporting on AI?
5. Did you think AI was a serious threat warranting serious media attention? Why?
6. What would you have liked to see done better to improve information flow to the media about AI?
7. Do you think the Ugandan mass media made a serious contribution to helping prevent and control AI?

*For children/general:*

1. Have you heard about bird flu?
2. What is it?
3. Who told you about it?
4. When did you first hear about it?
5. Who did you tell about it?
6. What did you tell the person(s) about bird flu?
7. Did you get frightened about bird flu?
8. What have you been doing to avoid it?
9. What did you tell other people close to you to do to avoid catching bird flu?

*For children in the FAO project primary schools Kyantuuhe, Kiwatule and Ayira:*

1. Have you heard about bird flu?
2. What is it?
3. Who told you about it?
4. When did you first hear about it?
5. Who did you tell about it?
6. What did you tell the person(s) about bird flu?
7. How did the booklet and the training you were given help you to understand bird flu?
8. How did your teachers help you to understand bird flu?
9. Did you get frightened about bird flu?
10. What have you been doing to avoid it?
11. What did you tell other people close to you to do to avoid catching bird flu?
12. How has the knowledge from the booklet helped you to understand rearing poultry?
13. What have you done at home to help your parents/guardian look after poultry better?

## Categories of Interviewees and FGD Participants

*Interviewees:*

- Ten individual officers and managers from key ministries and organizations, such as the Ministries of Health and of Agriculture, Animal Industry and Fisheries, UNICEF, WHO, FAO, AFFORD/UHMG and Timeline Communications.
- The district medical officers, veterinary officers and education officers for the districts of Kampala, Kanungu and Lira.

- Five high-profile political and civic leaders in each district, able to provide opinion leadership, such as local council chairpersons, district council speakers, councillors and mayors.
- Five print and electronic news editors and five current issues programme producers from Kampala-based media companies, with equal numbers from English and local language media.
- Two editors and two programme producers from media companies in Lira and Kanungu.
- Two randomly selected parents (a mother and a father) of children from the Promoting Strategies for Prevention and Control of HPAI project in each of the three districts.
- Two teachers (a male and a female) from each of the three schools participating in the Promoting Strategies for Prevention and Control of HPAI project.

*FGD participants (eight per FGD):*

- Two FGDs in each district involved farmers, care groups, opinion leaders and members of the general public. Farmers had their own separate FGD.
- One FGD in each district involved journalists from the print and electronic media, to explore their role in obtaining and disseminating information about AI.
- One FGD in each district involved children, to establish the media habits of children and whether pupils who had been exposed to the messages had shared the information with their peers.
- One FGD in each district involved children who had participated in the FAO Promoting Strategies for Prevention and Control of HPAI project.

## Media Content Analysis Coding Sheet

1. **Publication**
2. **Day and date**:
3. **Pagination:** On what page does the article appear?
4. **Type of article**
   News, feature
   Commentary/opinion
   Editorial
   Letter to the editor
   Special report/investigative
   Caption story (picture with caption)
5. **Length of article**
   Full page
   Half page
   Quarter
   Brief
6. **Nature of article:**
   Positive
   Negative
7. **Issue covered** (brief explanation of key point in the article)
8. **Main Source:** (Ministry of Health official/other – specify)
9. **Context** (exclusive interview, event coverage)