AI.COMM: Global Avian Influenza Behavior Change and Communications Support Activity

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The Evolution of Avian Influenza Messages: Observations from Three Years of Outbreak Response

INTRODUCTION

Over the past three years, the situation with avian influenza, known more precisely as H5N1, has evolved in myriad ways. The epidemiology and basic knowledge about the whys and hows of transmission have gone from broad assumptions to specific facts, and audiences and populations targeted as most-at-risk also have been adjusted accordingly.

As with any emerging infectious disease there are new findings about the virus and its nature which AI.COMM applied to its behavior change and communication messages to reflect this new understanding about the virus. Because of these findings— and our experiences in the field—AI.COMM has refined its messages from multiple broad statements to specific realistic practices. This paper follows the evolution of message development and refinement by the AI.COMM project, a global behavior change and communication project funded by USAID and led by AED.

BACKGROUND

The message development process began in late 2005, when USAID/Global Health provided funding to AED to support behavior change and communication activities to prevent and contain the H5N1 virus in Southeast Asia. The SE Asia project, called AI-BCC, continued and a second, global project, AI.COMM, began in 2006 that included rapid response in emergency situations in Africa and South Asia and longer-term programs in South Asia. AED, which has been a leader in BCC in the human health arena—especially in emerging infectious diseases, child survival and maternal health—based many of its initial technical decisions on H5N1 on learned lessons and challenges from previous public health experiences. Indeed, the project began operations in 2005 with limited epidemiologic data on H5N1 and even less information on many of the target audiences. The project proceeded thereafter with a flexible approach that allowed for the modification of information and strategy based on the rapidly changing situation and information environment.

AED’s initial AI work in Southeast Asia began with conducting Knowledge, Attitudes and Practices (KAP) studies among rural backyard poultry farmers (Sector 4) in Cambodia, Lao PDR, and Vietnam in late 2005 and into 2006. The purpose of the KAP was to obtain an initial snapshot of the awareness levels and general practices that might help or hinder the prevention and control of avian influenza outbreaks. Combined with the general epidemiology data and pre-testing of messages, the project developed a core set of messages that aimed to change (individual) practices so that they would ultimately become best practices (in other words, something done habitually or customarily).
THE ROLE OF EVOLVING INFORMATION IN REVISING MESSAGES

Because very little was definitively known by scientists and general populations about transmission and other epidemiologic issues, much of the communication activities and messages focused on relaying information about transmission of the virus. For example, in early 2006, lists of almost all symptoms of the H5N1 virus infection in poultry were included in all print materials including brochures, calendars, posters and talking points to the media and thought leaders. Part of the reason for the focus on information was that there was not one single practice that could be pinpointed to prevent or control the spread of the virus.

Even with all this information, farmers still did not understand the difference between H5N1 symptoms and common poultry maladies such as Newcastle Disease. The important difference was that H5N1 was or could be lethal to humans while Newcastle was not. This confusion, in turn, made them less likely to report outbreaks among their flocks because these symptoms were common and deemed a normal part of raising poultry. It did not help matters that in some countries, the term used to describe avian flu, Newcastle, and various other poultry diseases was one and the same. With more data from an emerging body of science and the project’s research, the laundry list of symptoms that was present in messages was thus winnowed down to one critical message—avian influenza can spread quickly and cause sudden death in large numbers of birds—which, it was hoped, would lead to an increase in reporting practices.

Messages also began to evolve as more was learned about the epidemiology and other aspects of H5N1. At the beginning of the epizootic, for example, vaccination of poultry was urged, but was later de-emphasized as the effectiveness and cost of the vaccines came into question. Separation of chickens from ducks and other animals also was emphasized, although it was not made completely clear in all initial communications that this was to avoid interaction with the saliva, feces, mucous or other discharge from potentially infected birds, or because ducks were “carriers” of the virus. Moreover, initial messaging targeted wild birds as the reason why domestic poultry should be fenced, whereas by 2007, messaging included other types of birds that could possibly be carrying the H5N1 virus.

The messages also became more nuanced after experience revealed that feces was a main vector for transmission of the virus, and that fecal matter or fomites and residue could be found on everything from egg crates to trucks to the feathers of a chicken. By 2008, messages were tweaked to highlight feces as a main culprit of virus transmission, and discuss all the possible ways feces could contaminate everyday items, emphasizing the insidious nature of an invisible virus.

New introductory messages on AI, for example, were re-tooled as follows (emphasis added):

Even though you cannot see it, the H5N1 virus can live in the feces (droppings), saliva, mucous and blood of infected birds.

Anything that touches the droppings, saliva, mucous or blood of infected poultry can carry the virus. This could be shoes, clothing, cages, egg bins, knives, cutting boards or other tools. Droppings and mucous can also stick to the feathers and feet of poultry—even if you cannot see it—and the virus can be spread that way, too.

Despite the progression of the project’s messages, however, it was challenging to make them stick in light of competing (and sometimes contrasting) messages coming from other sources. In many countries, there were multiple groups developing materials on avian influenza and, in some cases, this confused farmers and others who were trying to take action to prevent and control outbreaks. To minimize this, AI.COMM often led message harmonization workshops or participated in other collaborative meetings with local and national governments, local and international NGOs, and international agencies such as UNICEF and FAO so that differences in messages and approaches could be reconciled.

THE ROLE OF PRACTICES IN THE EVOLUTION OF MESSAGES

As has been learned from other public health communication activities, we must be realistic about what we can recommend that people do to prevent or contain a virus. Indeed, experience from countless communication efforts in other infectious diseases, family planning, and diarrheal diseases applies to H5N1: ideal behaviors (which are still undetermined pending more epidemiology studies in the case of AI) are rarely obtained and sustained, and ingrained practices are extremely difficult to change in a short period of time.
Though based on the best judgment and experience of the U.N. Food and Agriculture Organization (FAO), World Health Organization (WHO) and other international bodies, our messages have had to be adjusted to be realistic and build on what target audiences could feasibly accomplish instead of asking them to completely alter well-established animal husbandry practices or lifestyles. As it turned out, many of the practices that were promoted (e.g., separation of new poultry from existing flocks and other animals), went against traditional practices. Because these traditions had been proven to be beneficial to poultry farmers through the generations, they were not inclined to adopt these new promoted practices that might be less successful for poultry raising. The farmers also questioned why they would adopt new and difficult practices promoted by veterinarians or animal health workers who had less experience in animal husbandry than they did.

Another example of this was that initial messages emphasized building fences or caging birds to prevent them from roaming. Follow-up KAP studies in 2007, however, confirmed that farmers were not very likely to do this because of the predominant animal husbandry and cultural practices. For example, research inquiries in Cambodia, Lao and Indonesia yielded rational explanations from farmers about why they would not cage their chickens, including the belief that chickens were healthier if allowed to roam. In some cases, farmers reported allowing their birds to sleep inside their homes due to fears of theft at night, so instructing them to keep birds outside of their homes would most likely not have been a successful recommendation. Further research also showed that though farmers knew what correct practices were—through communication and training—they did not believe these practices would work, so they did not adopt them.

Instead, by 2008, after processing follow-up KAP studies and other data, revised messaging focused on actions farmers and households felt were easier—or fit into existing behavioral patterns -- and that ended in some of the same desired results, such as sweeping away feces more regularly, and washing hands before and after cleaning or handling poultry. All the while, it was important to balance creating instructional messages (e.g., you should change your practices to this…), with a motivational factor (i.e., why should I change my practices and how will it benefit me?). Initial messages were purely instructional, while later-stage messages attempted to provide an argument about why people should change their practices.

Addressing the elusive motivational factor proved to be particularly challenging in countries where outbreaks were controlled well—or were not widespread -- as the risk perception of farmers and the general public was low. Because their perception of personal risk was low, they were not inspired to make any changes. In 2006, for instance, farmers admitted that they had become accustomed to common yearly poultry deaths, which are unremarkable and usually not reported. Another interesting balancing game was how to carry out effective risk communication when many of the discipline’s maxims (e.g., extremely brief, directive messages) ran counter to what research had found was lacking—explaining the whys of the promoted practices. Supporting these messages with interpersonal communications was therefore deemed increasingly essential to illuminate the reasons why people should take action and to place the disease into context.

Additional qualitative and quantitative research in 2007 and 2008, as well as anecdotal observations, led to the addition of certain messages to later stage materials, such as the caveat that households should not prepare poultry that appears to be sick or that has suddenly died in addition to simply reporting the die-off to authorities. It turned out that, after a large AI-related die-off of poultry, most families were inclined to eat the birds, as they did with birds felled by Newcastle Disease, so as not to waste those precious valuable resources, especially among families living in poverty.

**KEEPING IT SHORT AND SIMPLE**

Streamlining messages so that the desired practices are attainable, simple and easy to follow, is key. When AED began developing messages in 2006 based on initial project research and the available science on the virus, the list swelled to over 25 messages. As more data emerged in 2007 and 2008, the project pared down and prioritized which messages would have the most impact on people’s health—and would be relatively easy to change in light of people’s complex realities -- and began to see a pattern that all of the messages could be divided into three key practices: hygiene and sanitation (keep things clean), distancing and separation (keep your poultry fenced in), and reporting (report sick or dead animals to the proper authorities).

The following table provides some examples of messages for each category.

Messages also have been adjusted so that they will resonate with low- or non-literate audiences. In the beginning, because there was a paucity of information on H5N1 and numerous organizations developing communication materials, donors and audiences wanted as much information as they could get, and materials reflected this by being heavy on text and short on pictorial representations. As priority practices and messages emerged, some of the information could be pared down and allow for fewer words and more images that would understood by more audiences.
Nowhere is this more evident than in Lao, where an initial 2006 brochure for the Lao Women’s Union provided “everything you ever wanted to know about avian flu” in a three-paneled brochure. A brochure intended for farmers was developed later that year, and incorporated more illustrations to accompany the text, but it was still too wordy. The brochure was revised again in 2008 and features the most simplified messages, emphasizing their visual representation rather than the words themselves.

LOOKING FORWARD

As funders increasingly focus on capacity and infrastructure building, this program will also continue to move from emergency response and more toward a longer-term, programmatic orientation that emphasizes preparedness for a variety of public health issues and outbreaks. Many of the same practices promoted to prevent animal-to-animal or animal-to-human transmission of AI (e.g., disinfection, hand washing, keeping sick individuals separate from others in the

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<th>AUDIENCE</th>
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<td><strong>HYGIENE AND SANITATION</strong></td>
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| Farmers | ■ Change your clothes after feeding/cleaning poultry  
■ Clean tires/bikes/shoes before entering a farm or moving from one farm to another farm.  
■ Sweep your yard regularly to remove feces and other potentially contaminated debris. |
| Poultry Slaughterer (Restaurant/Market) | ■ Wash knives with soap and water after slaughtering or defeathering poultry.  
■ People can also become sick with the H5N1 virus. That is why it is important to safely slaughter and prepare poultry for eating.  
■ Wear protective clothing—mask, gloves, shoes—when slaughtering poultry. |
| Poultry Transporters | ■ Clean tires/bikes/shoes with soap and water before entering a farm from another farm.  
■ Wear protective clothing—such as a mask—when moving poultry |
| All Households | ■ Cook poultry well; do not eat runny eggs or pink meat.  
■ Wash hands and surfaces with soap and water where you have prepared poultry |
| Animal Health Workers | ■ Wear gloves and a mask when you come in contact with poultry  
■ Wash your hands with soap and water after you have touched poultry to remove poultry droppings, mucus and salvia |
| **DISTANCING AND SEPARATION** | |
| Farmers | ■ Keep your poultry in enclosed area and not to mingle with poultry from other farms  
■ Separate your poultry from ducks, geese or wild birds.  
■ Keep all new poultry separate from your flock for 14 days to ensure that they do not have the bird flu virus.  
■ Cage, fence, or pen your poultry |
| Market and Poultry Vendors | ■ Separate your chickens, ducks, and geese in the market place  
■ Keep new chicks separate from older poultry for 14 days to ensure they do not have the bird flu virus |
| Households | ■ Keep poultry in a safe place—but do not sleep with poultry  
■ When family members are sick—keep them comfortable and separate from other family members until they are well |
| Human Health Workers | ■ Counsel your caregivers to keep patients away from other members of the household and community |
| **REPORTING** | |
| All Audiences: Farmers, Households, Community Leaders, Animal and Human Health Workers | ■ Report sick birds to appropriate authorities  
■ Call authorities if a large number of birds die within a short period of time. (Massive and sudden die-offs) |
| Households | ■ Tell your local health care provider if you develop any symptoms of a flu or virus |
| Animal and Human Health Workers | ■ Report possible flu cases to appropriate authorities |
household) can be easily applied to other infectious disease situations. This transition is already occurring in most countries with increasing work on pandemic influenza preparedness that, it is hoped, will build a foundation of public health response that will last even if AI is eradicated.

Additional audience segmentation will also be conducted to further fine-tune the messages and, in conjunction the most up-to-date epidemiologic data, create messages that best reflect behavioral determinants and motivations for each sub-audience, or segment. Indeed, farmers are not a homogeneous group and have different beliefs, behaviors and practices depending on whether they are backyard subsistence farmers or small commercial farmers, or whether they only raise poultry or have a mixed lot. At the same time, messages will continue to be adjusted so that they reflect and integrate new developments and information related to the virus.

Experience has reinforced that high levels of awareness or knowledge do not necessarily translate into changed behaviors or new customary practices. While awareness is relatively easy to influence, very few behaviors are easy to change. Universal types of behaviors such as hand washing can be influenced much more quickly than deep-seated poultry raising practices. And, until the definitive epidemiology on the virus is determined, AED is working with promoting practices and not the specific defined behaviors that arrive at those practices. It is anticipated that additional research will help to illuminate ways to bridge the gap between knowledge, awareness, and change in behaviors.

Finally, it is important to note that messages are not created in a vacuum, nor are they delivered in one. The qualitative research confirmed the importance of interpersonal communication and community networks in delivering messages, and in some cases, the vital role of the media as the primary go-to source of information. As a result, a wide range of communication strategies—mass media, interpersonal communication, and community mobilization activities—have been used to repeat and reinforce messages because frequency will drive knowledge and contribute to behavior change, and eventually promote new social norms that are conducive to safe and healthy poultry raising practices.

Channels such as community networks (e.g., farmers groups or village chiefs) have proven to be particularly effective in delivering more depth of information, and more trusted information. The trust factor was especially crucial, as one of the central tenets of effective risk communication is defusing sources of distrust. Casting the net wider to engage increasing numbers of stakeholders (e.g., women's unions, village chiefs, tuk tuk drivers), is also important and creates a feeling of ownership as more groups are invited to participate in community activities.

Each region, country or community needs to reflect upon what their existing practices and behaviors have been, and accordingly tailor their messages so that they are realistic. Only practical suggestions will ultimately yield the results we are hoping for if we wish to contain the spread of H5N1 or avert a possible human influenza pandemic.

Please visit www.avianflu.aed.org to see the messages applied to various communication materials in different countries and regions and for different audiences.

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