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ISSUE BRIEF

MAY 2007

# HYGIENE IMPROVEMENT AND AVIAN INFLUENZA

Hygiene improvement has long been considered a critical element of public health. Now, with the emergence of avian influenza in animals and in some cases among humans, it is all the more crucial to recommend and implement activities related to improved hygiene and sanitation in the hopes of stemming the further spread of the avian virus and preventing a possible pandemic.

Avian influenza is an animal infection caused by the H5N1 subtype of the Influenza A virus, commonly known as “highly pathogenic avian influenza” (HPAI). To date, risk to humans has been limited to people who have had contact with infected poultry or contaminated surfaces. Most of these human cases have occurred in rural or suburban areas where households keep small poultry flocks.

HPAI usually spreads when live birds (such as chickens, turkeys, and ducks) carrying the infection are bought and sold and when there is contact with bird droppings on equipment, cages, feed, vehicles, or shoes/clothing. Engaging in good hygienic practices is therefore an imperative safety measure to help prevent the virus from spreading among domesticated poultry. This also reduces the chances that the virus will spread from animals to humans.

It is important to note that HPAI is relatively simple to destroy compared to other viruses because it is sensitive to soaps and other detergents. Alcohol, alcohol-based sanitizers, and bleach are also effective in destroying the virus. However, HPAI seems to survive well in water, and simply washing without soap or



P. Mantey/AED

**Promoting hand washing and providing soap through social marketing would go a long way in stemming the tide of HPAI.**

another disinfectant may not prevent the virus from being spread.

## PREVENTION

Most of the channels through which HPAI is spread are directly connected to hygiene practices, and improved hygiene is thus key to containing the avian influenza virus. In areas at risk for HPAI, specific hygiene-related practices are recommended by the World Health Organization and other health organizations for households in contact with poultry, including washing hands with soap

and water before and after touching live birds, eggs, eggshells, or uncooked meat; sweeping and disposing of fecal droppings from yards and coops; and removing, brushing off, or disinfecting shoes/clothing in contact with the farmyard before entering a home.

## **PREVENTION AND CONTROL CHALLENGES**

There are inherent challenges—lack of clean running water, the expense of soap and chemical disinfectants, and a lack of sanitation facilities—to being able to carry out many of these prevention and control actions as most of them rely on optimal behaviors and resources and they may not be feasible in many resource-poor settings. In addition to not having running water or being able to afford soap or disinfectants, many households will be unable to afford masks, gloves, or other protective equipment recommended in case of an HPAI outbreak. Finding feasible options to support the recommended hygiene practices and more realistic alternatives in resource-poor communities is the key to encouraging the adoption of new behaviors.

### **LACK OF ACCESS TO WATER AND SOAP**

Overall, the amount of water that is required to follow recommended prevention practices is daunting. In addition, in many communities, soap is not commonly used for hand washing. Hands are usually washed with water only, or rubbed on the ground. Proper hand washing technique includes placing hands together under running water, lathering thoroughly with soap and covering all surfaces, rinsing hands under water, drying hands completely with a clean towel/cloth, if available, or air drying.

Many communities do not have a plentiful supply of water close to home, and women and children who have walked hours to obtain a bucket of water may be reluctant to use it for hand washing. In this case, a “tippy tap”—a closed vessel with a spigot that provides a slow, steady stream of water for washing hands—can be used to provide running water sparingly for hand washing. A tap is also preferable to having an open bucket of water for hand washing, as this can easily become contaminated from previous hand washings or airborne fecal

particles. A covered kettle of water that can be poured over hands to rinse them could also be used.

### **LACK OF ACCESS TO DETERGENTS**

Everything that has touched bird droppings, such as cages, shoes, clothing, and farm implements should be disinfected prior to contact with other poultry. It is also recommended that people thoroughly wash (with soap) or disinfect their clothing and footwear prior to entering their homes.

However, many households do not have access to chemical detergents and disinfectants. To address this, many communities in Southeast Asia were instructed to instead brush off their clothing and shoes before entering their homes from the farmyard—if they could not wash and disinfect their shoes, that is—figuring that eliminating at least some of the fecal particles is preferable to tracking them into the house.

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### **LACK OF ACCESS TO SANITATION**

As with human fecal matter, many communities will have problems finding a hygienic way to dispose of avian fecal matter, especially if they follow directions to sweep up and dispose of poultry feces and feed every day. This can be addressed collaboratively, with community members joining together to construct

a communal incinerator or pit for burial of waste that is at least 3 meters away from water sources and human living areas.

## **INCREMENTAL CHANGES THAT CAN BE MADE**

Some experts maintain that to effectively control and eliminate animal-based viruses such as HPAI, eradication must combine hygiene promotion with intensive monitoring and the administration of vaccines. This all-or-nothing approach, however, is not feasible in most communities. Below are some hygiene-related recommendations that health officers, program managers, and others interested in expanding their prevention and control programs for highly pathogenic avian influenza in resource-poor settings should consider:

### **POLICY MAKERS/PROGRAM MANAGERS**

- For the urban and rural poor, take into account the



**In areas where access to water is a challenge, a tippy tap—a closed vessel with a spigot that provides a slow, steady stream of water for washing hands—may be used to provide running water sparingly for hand washing.**

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availability of water and soap/detergent/disinfectants and recommend realistic practices for each community based on those factors.

- Employ established assessment techniques to determine which barriers to optimal behaviors exist in each community and which barriers can most easily be addressed. Practices for intervention can then be prioritized.
- Understand local views and practices and do not pursue too many changes all at once. Experience from past hygiene programs has shown that more successful programs concentrate on a few important behaviors that can be changed, rather than attempting to change every behavior related to interacting with poultry. Promoting hand washing and providing soap through social marketing would go a long way in stemming the tide of HPAI.
- Consider the issues of access to water and hygiene products and the constraints in obtaining them, and how—through policy or political will—citizens can be assisted in obtaining water and products such as soap, bleach, or other disinfectants; gloves and plastic bags; and surgical masks more easily. Potentially consider the role of private-public partnerships in heightening access to these resources.
- Develop specifically tailored guidelines, curricula, and communication materials and messages on proper hygiene practices for HPAI that can be used in affected communities.

## COMMUNITY LEADERS

- Involve communities at every stage in the process of any hygiene promotion activities. Community leaders have a large role to play in helping to educate the members of their community about the dangers of HPAI and the ideal prevention and control measures. This can be accomplished through basic person-to-person communication, loudspeakers, leaflets, or other available media. Information can be provided in a variety of locations where community members congregate such as marketplaces, religious buildings, and schools.

## HOUSEHOLDERS

- Encourage householders to take incremental steps toward preventing and controlling HPAI. Examples include: avoiding any unnecessary close contact with birds (poultry should not be allowed into a family's home); avoiding having children collect eggs or help slaughter or prepare poultry; ensuring that poultry meat and eggs are thoroughly cooked; and keeping poultry penned, fenced, or caged and away from other animals and wild birds, or from any source of water that could have been contaminated by wild birds.
- Educate the members of the household who are most in contact with poultry and who are responsible for fetching water (usually women) on how to protect against the spread of HPAI.

## BEHAVIOR CHANGE

Regardless of the actions taken, experience has borne out several considerations for successful hygiene improvement efforts: the use of a multitude of channels to reach the target audience; the use of activities that offer a proper amount of personal or household contact; the use of materials targeted to different audiences such as women and children and the persons who have the most contact with household or farmyard poultry; and the building of programs around existing cultural norms related to hygiene. In the end, improving any hygiene-related behavior takes time, as most hygiene behaviors are learned early in life and are ingrained. It is thus essential to set realistic goals and take one small step at a time.

## RESOURCES ON AVIAN INFLUENZA

### World Health Organization

[http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)  
Situation updates, reports of confirmed cases, fact sheets.

### World Organization for Animal Health

[http://www.oie.int/eng/AVIAN\\_INFLUENZA/home.htm](http://www.oie.int/eng/AVIAN_INFLUENZA/home.htm)  
Summary of regulations and surveillance of animal diseases.

### Pan American Health Organization

<http://www.paho.org/English/ad/dpc/cd/flu-avi.htm>  
Avian influenza resources.

### U.S. Agency for International Development

<http://www.usaid.gov>  
Information on international response to avian influenza.

### U.S. Centers for Disease Control and Prevention

<http://www.cdc.gov/flu/avian/>  
Background on infection, transmission, vaccines and more.

### United States Department of Agriculture

<http://www.usda.gov>  
Information on animal-related control of avian influenza.

### Communication Initiative Resources on Avian Influenza

<http://www.comminit.com/avianinfluenza.html>  
Resources for addressing outbreak and prevention communication.

### PandemicFlu.gov

<http://www.pandemicflu.gov/>  
One-stop access to U.S. government avian and pandemic flu information. Managed by the U.S. Department of Health and Human Services.

The Hygiene Improvement Project (HIP) is a five-year USAID-funded project led by the Academy for Educational Development (contract # GHS-I-00-04-00024-00), partnering with ARD Inc., the Manoff Group Inc., and IRC International Water and Sanitation Centre in the Netherlands. HIP aims to reduce diarrheal disease prevalence through the promotion of key hygiene improvement practices, such as hand washing, safe disposal of feces, and safe storage and treatment of drinking water at the household level, as well as the integration of hygiene improvement practices into HIV/AIDS and other health and non-health activities. With its emphasis on “behavior first,” HIP identifies, promotes, and facilitates improved behaviors that have significant positive impact on health and are feasible for users.



FOR ADDITIONAL INFORMATION:  
HYGIENE IMPROVEMENT PROJECT  
ACADEMY FOR EDUCATIONAL DEVELOPMENT  
1825 CONNECTICUT AVE., NW  
WASHINGTON, DC 20009-5721  
[hip@aed.org](mailto:hip@aed.org) - [www.hip.watsan.net](http://www.hip.watsan.net)