Baseline Knowledge Attitudes Practices
Survey of Animal Health Workers on
Avian and Human Influenza

Prepared by
Nielsen Vietnam
for
Avian Influenza Behavior Change Communication (AI BCC)
Academy for Educational Development
Funded by
United States Agency for International Development

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Context

Methodology and Sample Design
- Research Objectives
- Sampling Techniques
- Respondent Definition
- How Did We Collect Data
- Questionnaire Flow

Detailed Findings
Under the Provincial Program on Avian and Human Influenza (AHI) funded by USAID, AED’s AI BCC project is implementing training, communication and research activities to improve understanding and practices of small commercial poultry farmers and animal health workers regarding AHI in 2009. The provincial package covers Ha Nam and Hung Yen in the north, Quang Tri in the center and Can Tho and Kien Giang in the south. AED is coordinating interventions with other USAID-partners i.e., FAO, WHO, Abt Associates.

Majority of AED interventions at the commune level are in three provinces – Ha Nam, Quang Tri and Kien Giang.

Through a competitive bidding process, Nielsen Vietnam was awarded a contract by AED to conduct a Knowledge- Attitudes-Practices (KAP) Survey of Animal Health Workers and Small Commercial (sector 3) Poultry Farmers to serve as baseline to monitor and assess training and other activities.

This is the report on the Baseline Animal Health Worker survey
Research Objectives: To gather information on

- Knowledge, understanding and beliefs of animal health workers on AI, its symptoms, modes of transmission, preventive measures in poultry and actions to take when an AI outbreak occurs in farms and communities.

- Knowledge, understanding and beliefs of animal health workers on transmission of AI to humans specifically symptoms of human H5N1 influenza and key preventive measures.

- Practices of animal health workers regarding prevention, control and reporting of AI occurrence in their areas of coverage, if outbreaks have occurred; if outbreaks have not occurred, what practices they are doing and plan to do.

- Knowledge of animal health workers on what actions to take if household members show symptoms of human H5N1 influenza.

- Sources of information on the above matters and perceived credibility of those sources.
Research Design

- **Sampling Techniques**
  - Purposive Sampling
  - Geographic coverage: Ha Nam, Quang Tri, Kien Giang
  - Fieldwork:
    - Ha Nam started on June 01 and ended on June 10
    - Quang Tri started on May 24 and ended on June 02
    - Kien Giang started on May 24 and ended on June 05

- **Sample Size**
  - Total sample size N=511
  - Ha Nam (N= 150 for AHW)
  - Quang Tri (N= 165 for AHW)
  - Kien Giang (N= 196 for AHW)

- **Respondent Criteria**
  - Animal Health Worker (AHW)
    - Licensed or non-licensed
    - Aware of Avian Influenza
How Were Animal Health Workers Recruited?

Overall, there are three levels of sampling for a sample design: Level 1 "Random Sampling"; Level 2 "Quota Sampling - Fixed Route“ and Level 3 "Quota Sampling - Open Route”.

In this study, we used Level 3 Purposive Random Sampling. Below describes step by step how animal health workers were recruited:

**Step 1**
- At Provincial level, Group Leaders (GL) contacted the key contact people of the Veterinary Department of Ha Nam, Quang Tri and Kien Giang. Here, an introductory letter was issued for GL to be used in Districts.

**Step 2**
- At District level, GL was provided with the key contact people of Communes.

**Step 3**
- At Commune, interviewers are provided contact information of the animal health workers from head of villages.
Ha Nam Province

- Location: the south-west of the Red River delta
- Area: 850 square km
- Population: 837,662
- Economy: mainly agriculture, forestry and aquaculture (making of one third of total provincial GPP)
- Other useful facts in 2008:
  - Number of licensed veterinarians: 57
  - Number of licensed animal health workers: 827

<table>
<thead>
<tr>
<th>No</th>
<th>District</th>
<th>Studied Communes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Binh Luc#* (n=30)</td>
<td>Dong Du*; Binh Nghia; Dinh Xa; Trang An; Dinh Nghia; Trinh Xa</td>
</tr>
<tr>
<td>2</td>
<td>Duy Tien# (n=30)</td>
<td>Duy Minh*; Yen Bac; Duy Hai; Hoang Dong</td>
</tr>
<tr>
<td>3</td>
<td>Ly Nhan# (n=30)</td>
<td>Nhan My; Nhan Thinh; Duc Ly; Dao Ly; Dong Ly; Nguyen Ly; Cong Ly</td>
</tr>
<tr>
<td>4</td>
<td>Kim Bang# (n=40)</td>
<td>Thanh Son; Lien Son; Khai Phong; Ba Sao; Thuy Loi; Ngoc Son; Dong Hoa; Thi Son; Kim Binh</td>
</tr>
<tr>
<td>5</td>
<td>Thanh Liem# (n=40)</td>
<td>Kien Khe; Thanh Ha; Thanh Tuyen; Thanh Binh; Lien Thuan; Thanh Luu; Thanh Thuy; Liem Can; Liem Kiet; Thanh Tan</td>
</tr>
</tbody>
</table>

*# where fieldwork was conducted
* where there was AI outbreak
Quang Tri Province

- **Location:** North Central Vietnam
- **Area:** 4,760 square km
- **Population:** 625,800
- **Other useful facts in 2008:**
  - Number of licensed veterinarians: 50
  - Number of licensed animal health workers: 543

### Studied communes

<table>
<thead>
<tr>
<th>No</th>
<th>District</th>
<th>Studied communes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gio Linh*# (n=45)</td>
<td>Gio My*; Trung Son*; Gio Thanh*; Gio Phong; Trung Hai</td>
</tr>
<tr>
<td>2</td>
<td>Trieu Phong*# (n=30)</td>
<td>Trieu Trung*; Trieu Do; Trieu Trach; Trieu Son</td>
</tr>
<tr>
<td>3</td>
<td>Vinh Linh# (n=30)</td>
<td>Vinh Thuy; Vinh Hoa; Vinh Long; Vinh Son</td>
</tr>
<tr>
<td>4</td>
<td>Cam Lo# (n=30)</td>
<td>Cam Thanh; Cam Tuyen; Cam Hieu</td>
</tr>
<tr>
<td>5</td>
<td>Dong Ha# (n=30)</td>
<td>Dong Luong</td>
</tr>
<tr>
<td>6</td>
<td>Hai Lang# (n=15)</td>
<td>Hai Thanh; Hai Truong</td>
</tr>
</tbody>
</table>

- # where fieldwork was conducted
- * where there was AI outbreak
# Kien Giang Province

- **Location:** Mekong delta of Southern Vietnam
- **Area:** 6299 square km
- **Population:** 1,634,043
- **Other useful facts in 2008:**
  - Number of licensed veterinarians: 17
  - Number of licensed animal health workers: 370

<table>
<thead>
<tr>
<th>No</th>
<th>District</th>
<th>Studied communes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Go Quao#* (n=30)</td>
<td>Vinh Tuy*; Thoi Quan; Dinh Hoa; Dinh An</td>
</tr>
<tr>
<td>2</td>
<td>Tan Hiep#* (n=30)</td>
<td>Tan Hiep A*; Tan Thanh; Tan An; Tan Hoi; Tan Hiep B; Thanh Dong 3; Thanh Tri</td>
</tr>
<tr>
<td>3</td>
<td>An Bien# (n=30)</td>
<td>Ham Yen*; Dong Thai; Dong Yen; Hung Yen; An Bien; Thu 3 Town; Tay Yen; Tay Yen A; Nam Thai; Nam Thai A</td>
</tr>
<tr>
<td>4</td>
<td>Giong Gieng# (n=30)</td>
<td>Ngoc Truc; Giong Gieng Town; Long Thanh; Ngoc Thanh; Da Ban Thach</td>
</tr>
<tr>
<td>5</td>
<td>Chau Thanh# (n=35)</td>
<td>Minh Luong; Mong Tho; Mong Tho B; Mong Tho A; Minh Hoa; Thanh L?c; Gi?c Tu ?ng; Vinh Hoà Hí?p; Vinh Hoà Phu; Binh An</td>
</tr>
<tr>
<td></td>
<td>Hon Dat# (n=23)</td>
<td>Son Kien; Nam Thai Son; Binh Giang; Binh Son; Hon Dat Town; Lin Huynh; My Hiep son; My Lam; My Phuoc; My Thai; My Thuan; Son Binh; Tho Son; Soc Son Town</td>
</tr>
<tr>
<td>6</td>
<td>Kien Luong# (n=18)</td>
<td>Duong Hoa; Kien Binh; Vinh Dieu; Vinh Phu; Kien Luong Town; Binh An; Binh Tri; Phu My; Hoa Dien; Phu Loi; Tan Khanh Hoa</td>
</tr>
</tbody>
</table>

*# where fieldwork was conducted  
* where there was AI outbreak
### Questionnaire Flow

<table>
<thead>
<tr>
<th>Section</th>
<th>Questions Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening questions</td>
<td>Q2-Q5</td>
</tr>
<tr>
<td>Awareness Of Avian Influenza</td>
<td>Q6-Q7</td>
</tr>
<tr>
<td>Past Training On Avian Influenza</td>
<td>Q8-Q17</td>
</tr>
<tr>
<td>Knowledge Of Avian Influenza Among Poultry</td>
<td>Q18-Q22</td>
</tr>
<tr>
<td>Prevention And Control Of Avian Influenza Among Poultry</td>
<td>Q23-Q62</td>
</tr>
<tr>
<td>Knowledge of Avian Influenza To Humans</td>
<td>Q63-Q75</td>
</tr>
<tr>
<td>Sources of Avian Influenza Awareness</td>
<td>Q76ab</td>
</tr>
<tr>
<td>Media Habits</td>
<td>Q77-Q82ab</td>
</tr>
<tr>
<td>Demographics</td>
<td>Q83-Q88</td>
</tr>
</tbody>
</table>

32 OPEN ENDED QUESTIONS, 56 CLOSED ENDED QUESTIONS
Business Needs Assessment

Methodology and Sample Design
- Research Objectives
- Sampling Techniques
- Respondent Definition
- How Did We Collect Data
- Questionnaire Flow

Detailed Findings
1. Avian Influenza Awareness
7 out of 10 AWH are males, 65% of them belong to class EF. Most of them are from ages 36 and above and have varied education levels. More than 80% have received AI training.
All AHWs are aware of Avian Influenza in overall and the top three knowledge of AI are related to “the transmission of AI”, “an infectious caused by H5N1 virus” and “cause fatal disease to humans”.

### What do you know about AI?

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is transmissible to humans</td>
<td>56%</td>
</tr>
<tr>
<td>Is an infectious disease caused by H5N1 virus in the air</td>
<td>45%</td>
</tr>
<tr>
<td>Cause fatal disease to humans</td>
<td>39%</td>
</tr>
<tr>
<td>A disease that can cause massive death</td>
<td>27%</td>
</tr>
<tr>
<td>Has strong spread</td>
<td></td>
</tr>
<tr>
<td>Avian flu is a very dangerous infectious disease among poultry</td>
<td>23%</td>
</tr>
<tr>
<td>H5N1 disease is originated from poultry</td>
<td>19%</td>
</tr>
<tr>
<td>Is transmissible among poultry</td>
<td>19%</td>
</tr>
<tr>
<td>Easily cause a fatality to poultry</td>
<td>19%</td>
</tr>
<tr>
<td>Easily transmit to humans through respiration</td>
<td>13%</td>
</tr>
<tr>
<td>H5N1 causes a heavy damage to the economy</td>
<td>10%</td>
</tr>
<tr>
<td>Has no cure yet/can only vaccinations for prevention for this disease</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Q6. Have you heard of Avian Influenza? (Close-end)
Source: Q7. What you know about AI? (Open-end)
More than 80% of AHW have attended an AI training recently and the key organizer is Sub-DAH.

Source: Q8. if you ever attended a training about Avian Influenza before? (Close-end)
Q11. Who organized the training? (Close-end)
What were the training about?
Those Who Attended AI Training (n=439)

Prevention methods to H5N1: 78%
Symptoms/ signs/ ways to recognize H5N1 among poultry: 25%
Vaccination skills/ knowledge: 14%
Communication about the Avian Flu awareness: 10%
Consequences/impacts of the disease: 9%
Causes of the disease: 7%
Skills to deal with the areas with H5N1 outbreaks: 7%
Communicate local community that H5N1 is a dangerous virus: 6%

When did it happen?
Those Who Attended AI Training (n=439)

1 month ago: 35%
2-5 months ago: 26%
6-12 months ago: 16%

Source: Q12. What was the training about? (Open-end)
Source: Q9. When was the last time attending the most recent AI training? (Close-end)
Aside from the most recent AI training, did you attend any other AI training?
All Animal Health Workers (n=511)

- Yes: 71%
- No: 29%

Who are the organizers?
Who Said Attended Another AI Training (n=129)

- Sub-DAH: 79%
- Vietnam Poultry Association: 9%
- Women union of province/district: 3%
- Local vet centre: 3%
- Association of local farmers: 2%
- Agricultural extension centre: 2%

Source: Q13. Aside from the most recent AI training, did you attend any other training on AI? (Close-end)
Source: Q16. Who organized this training? (Close-end)
The contents of the other AI training AHWs attended focus on prevention and symptoms and the training was conducted over one year ago.

**What was the training about?**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention methods to H5N1</td>
<td>72%</td>
</tr>
<tr>
<td>Trainings on symptoms/signs/ways to recognize H5N1 among poultry</td>
<td>22%</td>
</tr>
<tr>
<td>Vaccination skills/knowledge</td>
<td>15%</td>
</tr>
<tr>
<td>Skills to deal with the areas with H5N1 outbreaks</td>
<td>9%</td>
</tr>
<tr>
<td>Communicate local community that H5N1 is a dangerous virus</td>
<td>8%</td>
</tr>
<tr>
<td>Ways to clean breeding facilities</td>
<td>8%</td>
</tr>
<tr>
<td>Consequences/impacts of the disease</td>
<td>7%</td>
</tr>
<tr>
<td>Ways to raise poultry</td>
<td>5%</td>
</tr>
<tr>
<td>Communication about the Avian Flu awareness</td>
<td>4%</td>
</tr>
<tr>
<td>Disinfection methods</td>
<td>4%</td>
</tr>
</tbody>
</table>

**When did it happen?**

<table>
<thead>
<tr>
<th>Time Interval</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 month ago</td>
<td>7%</td>
</tr>
<tr>
<td>2-5 months ago</td>
<td>22%</td>
</tr>
<tr>
<td>6-12 months ago</td>
<td>24%</td>
</tr>
<tr>
<td>Over 1 year</td>
<td>47%</td>
</tr>
</tbody>
</table>

Source: Q17. What was the training about (Open-end)
Source: Q14. When did it happen (Close-end)
2. Knowledge of Avian Influenza among Poultry
Overall, most of AHW know all birds can get AI. Key reasons for poultry to get AI are related to “birds’ migration” and “transporting” poultry from place to place.
Symptoms recognized in Chicken and Ducks are similar. Very few AHWs mentioned “sudden massive death” as one of the common symptoms of AI.

**What are the symptoms that show CHICKEN get AI?**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sluggish/sick chicken</td>
<td>59%</td>
</tr>
<tr>
<td>Crest/skin/mouth/tongue becomes black and blue</td>
<td>49%</td>
</tr>
<tr>
<td>Suffers from in appetite</td>
<td>30%</td>
</tr>
<tr>
<td>Redden the skin areas without hair/at legs</td>
<td>29%</td>
</tr>
<tr>
<td>Salivates at mouth/nose</td>
<td>28%</td>
</tr>
<tr>
<td>Feather is ruffled up/lost</td>
<td>26%</td>
</tr>
<tr>
<td>Feces are white/green/light red/liquid</td>
<td>20%</td>
</tr>
<tr>
<td>Mass death among poultry</td>
<td>15%</td>
</tr>
<tr>
<td>High fever</td>
<td>15%</td>
</tr>
</tbody>
</table>

**What are the symptoms that show DUCK get AI?**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sluggish/sick chicken</td>
<td>51%</td>
</tr>
<tr>
<td>Suffers from in appetite</td>
<td>26%</td>
</tr>
<tr>
<td>Feather is ruffled up/lost</td>
<td>21%</td>
</tr>
<tr>
<td>Redden the skin areas without hair/at legs</td>
<td>20%</td>
</tr>
<tr>
<td>Mass death among poultry</td>
<td>18%</td>
</tr>
<tr>
<td>Convulsive/go around</td>
<td>17%</td>
</tr>
<tr>
<td>Salivates at mouth/nose</td>
<td>14%</td>
</tr>
<tr>
<td>Lose balance in movement</td>
<td>14%</td>
</tr>
<tr>
<td>Feces are white/green/light red/liquid</td>
<td>14%</td>
</tr>
<tr>
<td>High fever</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: Q20/Q21 Sign/symptom on duck/chicken that have got AI (Open-end)
80% of AHWs say ducks can be infected without showing any symptoms.

Source: Q22 Can ducks be infected with AI even without showing any symptoms (Close-end)
3. Prevention and Control of Avian Influenza among Poultry
Majority AHWs consider AI is very serious. Key reasons for considering AI very serious/serious is related to “fatality and incurability of H5N1”.

Why do you think AI is serious?

All Animal Health Workers (n=507)

- Fatal disease to humans/Quick death among humans if do not have timely cure: 70%
- Is transmissible to humans: 52%
- Heavy damages to the economy: 44%
- Cause massive death among poultry: 25%
- Speedy transmission: 20%
- Affect the public health: 6%
- Not cure for humans yet: 5%
- It is an infectious virus: 5%
- Cause death among poultry: 4%
- Wide spread: 3%
- Cause disease among poultry: 3%
- Transmit to other animals: 2%

Source: Q23 How serious is avian influenza (Close-end)

Source: Q24 Why do you think AI is serious (Open-end)
According to AHW, actions which are farmers can take to prevent AI in poultry are Vaccination, Regular Cleaning and Disinfection.

What can be done by farmers to prevent AI from occurring in poultry?

All Animal Health Workers (n=511)

- Timely/periodic vaccination: 67%
- Clean the breeding facilities regularly: 59%
- Disinfect the breeding facilities: 34%
- Spray lime around the breeding cage/holes for burying dead poultry: 9%
- Do not allow poultry run freely: 9%
- Keep flocks separately/separate sick poultry from the flock: 6%
- Raise certified and known poultry/assured breed: 6%
- Wear glove, mask, protection clothes when contacting poultry: 5%
- Protect the cage carefully/closed cage/open cage with fence: 4%
- Do not allow people to contact dead/sick poultry: 3%
- Do not prepare/eat sick/dead poultry: 2%
- Report to animal health centre: 2%

Source: Q25 What can be done by farmers to prevent AI from occurring in poultry (Open-end)
According to AHWs, if farmers find sick poultry in their farm, the first thing farmers should do is “report to the nearest vet” (74%) then “keep flock separately from the sick poultry (51%).
What should be done by farmers if they find dead poultry in their farm?

- Report to the nearest vet: 69%
- Bury dead poultry/put the dead poultry into a nylon pack and bury it deeply: 37%
- Destroy immediately after the poultry is dead: 26%
- Report to a local authority: 23%
- Disinfect the breeding facilities: 19%
- Spray lime around the breeding cage/holes for burying dead poultry: 14%
- Keep flocks separately/separate sick poultry from the flock: 11%
- Do not allow people to contact dead/sick poultry: 7%
- Do not transport, sell, buy sick poultry: 7%
- Do not prepare/eat sick/dead poultry: 6%
- Clean the breeding facilities regularly: 5%
- Do not throw the dead poultry negligently: 4%

Source: Q27. What should be done by farmers if they find dead poultry in their farms (Open-end)
When receiving a report of sick poultry from a farmer, the first action AHWs will do is “Come to identify the reason causing the death of the poultry” (63%).

**What should AHW do if they receive a report of sick poultry from farmer?**

<table>
<thead>
<tr>
<th>Action</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Come to identify the reason causing the sick of the poultry and if it is caused by H5N1</td>
<td>63%</td>
</tr>
<tr>
<td>Separate the sick poultry from the flock/Communicate people not to let their poultry to contact with the infected poultry</td>
<td>28%</td>
</tr>
<tr>
<td>Report to animal health centre</td>
<td>18%</td>
</tr>
<tr>
<td>Quickly come to the place reported with the H5N1 outbreak</td>
<td>18%</td>
</tr>
<tr>
<td>Report to everyone about the place with the outbreak and localize that place</td>
<td>15%</td>
</tr>
<tr>
<td>Test the sample to check if there is H5N1 or not</td>
<td>12%</td>
</tr>
<tr>
<td>Keep track of each poultry to give medicine</td>
<td>10%</td>
</tr>
<tr>
<td>Directly spray chemicals to disinfect the farm with other people</td>
<td>9%</td>
</tr>
<tr>
<td>Follow guideline</td>
<td>8%</td>
</tr>
<tr>
<td>Report to local government</td>
<td>7%</td>
</tr>
<tr>
<td>Burn the dead poultry (put into the nylon pack)</td>
<td>5%</td>
</tr>
<tr>
<td>Report to superior/specialized organizations</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Q28. What should you, as an animal health worker, do if you receive a report of sick birds from a farmer (Open-end)
If AHW receives a report of dead poultry from a farmer, AHWs will “Burn the dead poultry” (39%) and/or “Come to identify the reason causing death of poultry” (37%).
How likely do you think that there will be an AI outbreak in your commune?

All Animal Health Workers (n=511)

- Very likely not happen (1.0) 11%
- Likely not happen (2.0) 35%
- Slightly not happen (3.0) 17%
- Neutral (4.0) 6%
- Slightly happen (5.0) 2%
- Likely happen (6.0) 25%
- Very likely happen (7.0) 4%

Total (n=511)

Reasons AI unlikely to happen (n=481)
- Follow full vaccination: 50%
- Always prevent strictly: 14%
- Local people here have a good awareness of Avian Flu: 9%
- People keep their breeding facilities cleaned: 9%
- People carry out properly the communication activities: 6%

Reasons AI likely to happen (n=158)
- Raising habit to let poultry run freely: 6%
- Can not control the number of birds migrated from other places: 5%
- Poultry does not have proper vaccination: 5%

Majority of AHWs think an AI outbreak will not likely happen in their commune because poultry are vaccinated. The minority who say AI will likely happen cite the habit of letting poultry run freely, migration and not having proper vaccination as reasons.
As an AHW, are you doing anything to prevent poultry not getting H5N1 in your areas?

What are you doing?

- Communicate people to continue vaccinations: 100%
- Do not neglect with the cleaning of breeding facilities: 34%
- Follow guideline: 15%
- Communicate people to buy breeding animal with the clear origin and quarantined: 13%
- Directly spray chemicals to disinfect the farm with other people: 13%
- Instruct people about the methods to prevent H5N1: 11%
- Communicate people to not transport, sell sick poultry: 5%
- Request people to wear glove, mask, protection clothes when contacting poultry: 4%
- Communicate people to be aware of the danger of the epidemic disease: 4%
- Do not slaughter/eat sick/dead poultry: 4%
- Communicate people to wash their hands with clean water and soap before and after contacting poultry: 3%
- Distribute the lime around the cage/ buried hole: 3%

All AHWs say they are doing something to prevent poultry in their area from getting Al. Communicating to people to continue full vaccination is the main action (72%) followed by telling people not to neglect cleaning of breeding facilities (34%).
Apart from that, what else are you doing to prevent poultry in your commune from getting AI H5N1 even if there is no outbreak (Close-end)?

<table>
<thead>
<tr>
<th>Action</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash hand with clean water and soap BEFORE AND AFTER contacting with poultry</td>
<td>71%</td>
</tr>
<tr>
<td>Communicate farmers/others not buy or sell poultry that has been sick or dead</td>
<td>70%</td>
</tr>
<tr>
<td>Communicate farmers to only buy breeders from certified or known sources</td>
<td>67%</td>
</tr>
<tr>
<td>Communicate farmers/others to keep poultry in a protected environment (enclosed building/fenced area)</td>
<td>66%</td>
</tr>
<tr>
<td>Immediately report of sick or dead poultry to veterinary officials and local authorities</td>
<td>63%</td>
</tr>
<tr>
<td>Communicate farmers/others avoid contacting with sick and dead poultry</td>
<td>61%</td>
</tr>
<tr>
<td>Communicate to farmers to wear mask and gloves when handling poultry</td>
<td>59%</td>
</tr>
<tr>
<td>Communicate farmers/others to keep all poultry brought to the farm separate from other poultry for at least 2 weeks</td>
<td>58%</td>
</tr>
<tr>
<td>Communicate to farmers to clean and disinfect their farm regularly</td>
<td>54%</td>
</tr>
<tr>
<td>Communicate farmers/others to control entries into the farm (do not let middleman enter the farmyard, keep visitors away from poultry etc)</td>
<td>54%</td>
</tr>
<tr>
<td>Communicate farmers/others to vaccinate poultry against AI</td>
<td>40%</td>
</tr>
</tbody>
</table>

Other actions by AHWs to prevent poultry in their area are related to hygiene and communication like washing hands with soap and water.

Source: Q35. Apart from that, what else are you doing to prevent poultry in your commune from getting AI H5N1 even if there is no outbreak (Close-end)
All AHWS report they are doing something to inform farmers in their area on what to do if there is an AI outbreak. 25% of AHWs say that they request farmers to report immediately to vet centre when they have an AI outbreak in poultry.

Source: Q36. Are you doing anything to inform farmers in your area on what to do if there is an AI outbreak (Close-end)

Source: Q37. As an animal health worker, what are you doing to inform farmers on what to do if there is an AI H5N1 outbreak (Open-end)
Other actions by AHWs are mostly communication activities as described as below.

Apart from that, what else are you doing if there is an outbreak?

All Animal Health Workers (n=511)

- Communicate to farmers to wash hands with clean water and soap before and after contacting with poultry: 75%
- Communicate with farmers to immediately report sick or dead poultry to vet or village head: 72%
- Communicate with farmers not to transport any poultry from outbreak area: 70%
- Communicate with farmers to use mask and gloves when handling any poultry: 66%
- Communicate farmers/others avoid contacting with sick and dead poultry: 62%
- Communicate with farmers not to eat sick or dead poultry: 60%
- Communicate farmers/others that if people had contact with poultry and have fever to immediately go to their local health center or hospital: 59%
- Communicate farmers/others not buy or sell poultry that has been sick or dead: 57%
- Communicate with farmers to clean and disinfect their farm: 57%
- Communicate farmers/others eat only thoroughly cooked poultry and poultry products (no pink meat or runny eggs): 57%
- Communicate farmers/others to control entries into the farm (do not let middleman enter the farmyard, keep visitors away from poultry etc): 50%

Source: Q38. Apart from that, what else are you doing to inform farmers on what to do if there is an AI outbreak (Close-end)
Almost all AHWs claim to give vaccination to poultry in their area. Most AHW gave vaccination within last month.

**Have you given vaccination to poultry in your area?**

All Animal Health Workers (n=511)

- **99%** Yes
- **1%** No

**When was the last time you gave vaccinations?**

Those who gave vaccinations (n=506)

- **Last week** 14%
- **Last two weeks** 23%
- **Last three weeks** 16%
- **Last month** 15%
- **Before last month** 27%

Source: Q40. Have you given vaccinations to poultry in your area (Close-end)

Source: Q41. When was the last time you gave vaccinations (Close-end)
93% AHW say ducks require 2 vaccinations. 77% AHW say 28-30 days is the days apart the first and second vaccination. Most of AHW claim giving vaccination to ducks from 15 days or older.

How many days apart should the first and second vaccination be given?

Those who ans Code 2 to 3 in Q43 (n=502)

- 1-14 days: 4%
- 15-27 days: 15%
- 28-30 days: 77%
- Over 30 days: 5%

First Vaccination To Ducks

All Animal Health Workers (n=511)

- 1-14 days: 4%
- 15-27: 15%
- 28-30 days: 77%
- Over 30 days: 5%

Q43. How many vaccinations do ducks require (Close-end)

Source: Q44. How many days apart should the first and second vaccinations be given (Close-end)
Source: Q45. When should the first vaccination for ducks be given (Close-end)
84% of AHWS say that vaccination is not harmful to young ducks. Of the 16% AHWS who say that vaccination is harmful to young ducks, 53% claim that young ducks can get side effects from vaccinations.

**Why do you think vaccination harmful to your duck?**

Those who ans Code 2 to 3 in Q43 (n=83)

- Young duck can get side effect from vaccination such as light fever, quit eating (53%)
- Immune system of young ducks is weak and vaccination is strong hence this can cause fatal harm to young duck (20%)
- Vaccination for weak young duck will only weaken them (13%)
- Cause the duck grow slowly (12%)
- Cause slow growth in the young ducks' feather (11%)
- Some young ducks can not stand the chemicals in the vaccination (8%)
- Affect the wings of the ducks (1%)

Q46. Is vaccination harmful to young ducks (Close-end)  
Source: Q47. Why do you think that vaccination harmful to young ducks (Open-end)
Nearly all AHWs say they wear something when handling poultry. 97% say they wear mask and gloves when handling poultry. Of those who wear mask and gloves, 65% say they wear them always.
All AHWs say they wash hands with soap and clean water when handling poultry. 61% of AHWS report that they always wash before and after handling poultry while 21% say they always wash after handling poultry.
87% of AHWs who always wash hands before and after handling poultry say the reason is to prevent transmitting disease to poultry. 63% AHWs report changing clothes frequently after handling poultry.

**Why do you wash your hands?**

Those who claimed always wash hands (n=312)

- Prevent transmitting germs to poultry/Prevent transmitting the disease from poultry: 87%
- Protect myself: 30%
- Kill germs: 12%
- I also have germs on my hands before contacting poultry: 2%
- Avoid feeling of dirt: 1%

Source: Q53R1. Why do you wash your hands with soap and water when handling poultry (Open-end)

**How Often Do You Change Your Clothes After Handling Poultry?**

All Animal Health Workers (n=511)

- Every time: 14%
- Frequently: 63%
- Sometimes: 13%
- Rarely: 9%
- Never: 1%

Source Q54. How often do you change your clothes after handling poultry (Close-end)
82% of AHWs say they do something before entering a farm. Of these, 80% report washing hands with soap and water, 52% report washing shoes or slippers with soap and water.
34% claim to know what is a PPE (Thiết Bị Bảo Hồ Cá Nhân). Of these, 75% say that PPE is mask and/or gloves.

Source: Q57. Do you know what a “Personal Protective Equipment” (PPE) is (Close-end)

Source: Q58. What is PPE (Open-end)
85% of those who know PPEs say it is easy to access. Dong Ha vet centre and sub vet department are two key places to access PPE. 85% of those received training on PPE.

Source: Q59. Do you have easy access to a PPE? (Close-end)
Source: Q60. Where can you easily get one? (Open-end)
Source: Q61. Have you been trained on how to put it on and use a PPE? (Close-end)
4. Avian Influenza Prevention and Control Among Humans
85% of AHWs say they can recognize signs of AI in humans. Causes for humans to get AI are eating sick poultry and contact with infected poultry. 92% of AHWs say high fever is the key symptom of a human with AI.

Can you always realize when human get AI?

All Animal Health Workers (n=511)

- Yes: 85%
- No: 14%
- DK: 1%

What cause human to get AI?

Those Who Were Aware Of AI (n=433)

- Eat sick poultry: 52%
- Transmits H5N1 to humans when contacting poultry: 38%
- Do not wear PPE when contacting poultry: 35%
- Eat unwell-cooked poultry: 15%
- Through respiration when contacting sick poultry: 6%

What are sign and symptom of AI among human?

Those Who Were Aware Of AI (n=433)

- High fever: 92%
- Difficult breathing: 55%
- Cough: 36%
- Stiff breast: 27%
- Tired: 25%
- Headache/lose balance: 21%

Source: Q62. Can you always realize when humans get AI (Close-end)
What should you do if you think someone get AI?

All Animal Health Workers (n=511)

- Bring immediately to health center: 91%
- Inform community health worker: 58%
- Bring immediately to doctor/Hospital: 53%
- Keep patients separated: 3%
- Get medicine from pharmacy/medicine shop: 3%

91% of AHWS say that if they think someone has AI, the person should be brought immediately to health center.

Source: Q65a,b. If you think someone has AI, what should you do? (Close-end)
24% of AHWS report having had an AI outbreak in their commune; of these, 86% say that the outbreak happened in the commune more than a year ago.

Source: Q66a,b. Have there been any outbreak of AI in this commune? (Close-end)

Source: Q67b. How long did it happen in your commune? (Close-end)
12% of AHWs report having had an AI outbreak in their village; of these, 95% say the outbreak happened in the village more than a year ago.

Source: Q66a,b. Have there been any outbreak of AI in this village? (Close-end)

Source: Q67a. How long did that happen in your village? (Close-end)
16% of AHWs say they face some difficulties which prevent them from doing their work effectively. Of these, 52% say the difficulty is low awareness of local people resulting in non-cooperation in vaccination while 21% say “little allowance”.

Source: Q68. As AHW, do you confront any problems that prevent you from doing your work effectively? (Close-end)

Source: Q69. what are these problems? (Open-end)
AHWS recommend actions to solve these problems as below:

- Explain and communicate with the farmers about the danger of the epidemic disease for the community (39%)
- Request for more allowance to assist communication (23%)
- Communicate people that vaccination is not harmful to poultry (11%)
- Provide the transport (e.g. boats, etc) (7%)
- Communicate people through training (6%)
- Try to persuade by my words (6%)
- Request superior to handle cases (6%)
- Need the support from local government (6%)
- Persuade people about the importance of vaccination in prevention of the epidemic disease (5%)
- Improve the road conditions for easier commuting (5%)
- Training on epidemiology (2%)
- Training on how to handle when there is AI outbreak (2%)

Source: Q70. What do you think can be done to help in solving these problems? (Open-end)
Of things which will help them in improving their work, AHWs cite training on epidemiology (55%), regular meetings with vet (50%), training on culling and outbreak response (50%), among others.
76% of AHWs report using visual aids in their work. Aids include vaccination flyers (74%), leaflets (70%) and duck leaflets (69%). All AHWS find them useful in their AI communication. Many AHWs were able to show these materials.
Key sources of AI information for AHWs are television (99%), followed by vet and AI training (73%), loudspeaker (67%), radio (61%). AHWS think television is the most reliable source of AI information followed by AI training.

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television</td>
<td>99%</td>
</tr>
<tr>
<td>Vet</td>
<td>73%</td>
</tr>
<tr>
<td>AI training that I attended</td>
<td>73%</td>
</tr>
<tr>
<td>Loudspeaker</td>
<td>67%</td>
</tr>
<tr>
<td>Radio</td>
<td>61%</td>
</tr>
<tr>
<td>Newspaper/magazine</td>
<td>53%</td>
</tr>
<tr>
<td>Neighbor</td>
<td>50%</td>
</tr>
<tr>
<td>People Committee</td>
<td>48%</td>
</tr>
<tr>
<td>Leaflets</td>
<td>46%</td>
</tr>
<tr>
<td>Friends/relatives</td>
<td>45%</td>
</tr>
<tr>
<td>Dept of Animal Health (DAH) or Ministry of Agriculture and Rural Development (MARD)</td>
<td>41%</td>
</tr>
<tr>
<td>Billboards/posters</td>
<td>27%</td>
</tr>
<tr>
<td>Agricultural extension worker</td>
<td>24%</td>
</tr>
</tbody>
</table>

Q76a. Open-ended

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television</td>
<td>49%</td>
</tr>
<tr>
<td>AI training that I attended</td>
<td>27%</td>
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<tr>
<td>Dept of Animal Health (DAH) or Ministry of Agriculture and Rural Development (MARD)</td>
<td>11%</td>
</tr>
<tr>
<td>Vet</td>
<td>8%</td>
</tr>
<tr>
<td>People Committee</td>
<td>2%</td>
</tr>
<tr>
<td>Radio</td>
<td>1%</td>
</tr>
<tr>
<td>Leaflets</td>
<td>1%</td>
</tr>
<tr>
<td>Loudspeaker</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: Q76B. Which one do you consider your single most reliable source of information on AI? (Close-end)
5. Media Habits
AHW watched TV 1-3 hours a day, whilst they listened to the radio rarely, read newspaper one or two times a week and rarely read magazine.
VTV3 and VTV1 are the most often TV channels whilst FM is the most often radio channel.

**Most Often Radio Channel**
Those who listen to radio (n=422)

- Radio station of VN FM: 61
- Radio station of VN AM: 22
- Radio station of HCM people: 5
- Kien Giang radio station: 5
- Ha Nam radio station: 3
- Can Tho radio station: 3

**Occasional Radio Channel**
Those who listen to radio (n=422)

- Radio station of VN FM: 53
- Radio station of VN AM: 30
- Ha Noi radio station: 19
- Can Tho radio station: 16
- Ha Nam radio station: 14
- Radio station of HCM people: 10

**Most Often Tivi Channel**
All Animal Health Worker (n=511)

- VTV 3: 45
- VTV 1: 26
- Kien Giang TV: 18
- Quang Tri TV: 4
- VTV 2: 3
- Can Tho TV (HCMC/CT): 2

**Occasional Tivi Channel**
All Animal Health Worker (n=511)

- VTV 3: 60
- VTV 1: 54
- Kien Giang TV: 51
- Quang Tri TV: 28
- VTV 2: 27
- Can Tho TV (HCMC/CT): 24

Source: Q80/Q82.
Thank You