

More than cleaning the coops:

A review of avian influenza prevention and control practices among backyard poultry farmers in Southeast Asia in 2006-2007

Susan Zimicki, Ming Hung, Anton Schneider, Nora De Guzman, and Angelique Smit

November 5, 2007



What is AED?

- International NGO, not-for-profit HQ in Washington; offices in 60 countries
 - 45 years experience
 - communication and health, education, agriculture and environment
 - In October 2005, given mandate for emergency communication to backyard farmers in Southeast Asia
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Context in December 2005

□ Outbreaks in poultry

- Vietnam – nearly 400 in 2005; >2000 since 8/04
 - 50+ million poultry died/culled
 - Started vaccinating commercial poultry in May, then expanded
- Cambodia – outbreaks in Feb-Mar 2005
- Laos – no outbreaks

□ Human illness

- Vietnam – 93 cases, 42 deaths
 - Cambodia – 4 cases, 4 deaths
 - Laos – no cases
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State of knowledge about AI

- Little known about transmission
 - Hypothesized importance of
 - Wild birds
 - Backyard farms
 - Suggested preventive measures (modeled on commercial biosecurity):
 - Enclosure
 - Separating species
 - Hygiene
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Southeast Asia Process

- Rapid baseline research (KAP, FGD)
 - Interventions
 - Training
 - Integrated communications (advocacy, mass media, IPC, CBC)
 - Proposed actions:
 - Fence/cage poultry
 - Quarantine new poultry 14 days
 - Wash hands with soap and water
 - Clean yard every day
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Sites and timing of surveys

Several provinces in each country:

- Vietnam - 2
 - Bac Ninh & Tien Giang (12/05; 5/07)
 - Cambodia - 2
 - Kandal & Pursat (1/06; 7/07)
 - Laos – 4
 - Vientiane Capital Region, Luang Prabang, Savannakhet, Champasack (9/06; 9/07)
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Survey methodology

- Survey in each location representative of that province
 - Small (240-300)
 - Dispersed clusters (10 hh, 5-7 hh between)
 - Backyard farmers
 - Chickens and/or ducks
 - A total of 10-100 poultry
 - Key decision maker or someone who cares for chickens (adult)
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Challenges to interventions

- Low risk perception/fatalism
 - 30-60% of poultry die of non-AI causes
 - AI distinctive only in sudden high mortality in chickens
 - Human transmission – rare event
 - Social undesirability of reporting
 - Results in culling for 3 km around
 - Compensation uncertain, slow
 - Livelihood issue – some changes major
 - People may not be able to afford to cage or fence their poultry
 - May not have protective equipment
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Reactions to suggested interventions

- Enclosing birds – difficult
 - Cost of feeding
 - Cost of fencing
 - Lack of space
 - Particularly difficult to fence ducks – need water
 - Temporary quarantine – possible
 - Handwashing with soap
 - Time consuming
 - Necessity not clear if hands not obviously dirty/smelly
 - Not everyone has soap
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Awareness of AI transmission routes

	Contact with sick birds	Contaminated environment, food	Human agency
VIETNAM			
Bac Ninh	93.3%-96.3%	51.0%-58.6%	26.3%-26.6%
Tien Giang	84.7%-71.1%	39.7%-20.4%	7.0%-1.1%
CAMBODIA			
Kandal	59.6%-88.5%	17.2%-73.7%	4.0%-2.1%
Pursat	83.7%-85.1%	40.0%-52.8%	9.4%-1.3%

Ownership of poultry

	Median flock size	% owning both chickens and ducks
VIETNAM		
Bac Ninh	20 - 20	15.7% - 11.3%
Tien Giang	12 - 15	35.3 % – 37.7%
CAMBODIA		
Kandal	20 - 12	30.0% - 19.4%
Pursat	15 - 12	37.6% – 24.5%

Preventive behaviors – Enclosing chickens

	All or most of the time	Some of the time
VIETNAM		
Bac Ninh	69.3% - 63.1%	18.4% - 25.4%
Tien Giang	32.4% - 16.4%	14.5% - 30.7%
CAMBODIA		
Kandal	3.6% - 1.6%	30.9% - 41.8%
Pursat	2.0% - 1.3%	46.5% - 49.3%

Preventive behaviors – Separating chickens and ducks

	Owning both chickens and ducks	Separating them all the time
VIETNAM		
Bac Ninh	15.7% - 11.3%	76.6% - 84.8%
Tien Giang	35.3 % – 37.7%	84.9% - 63.4%
CAMBODIA		
Kandal	30.0% - 19.4%	32.0% - 1.6%
Pursat	37.6% – 24.5%	38.0% - 0%

Preventive behaviors – Hygiene-related

	Cleaning the yard daily	Washing hands with soap frequently/every time
VIETNAM		
Bac Ninh	19.1% - 22.2%	76.6% - 76.3%
Tien Giang	32.2% - 47.3%	70.0% - 75.8%
CAMBODIA		
Kandal	37.6% - 34.3%	51.2% - 90.5%
Pursat	46.6% - 49.3%	43.2% - 86.2%

Preventive behaviors – Other

	Poultry allowed to enter the house	Protecting self (mask, gloves/plastic bag)
VIETNAM		
Bac Ninh	11.3% - 8.0%	54.1% - 63.0%
Tien Giang	61.7% - 37.7%	22.7% - 38.2%
CAMBODIA		
Kandal	78.0% - 68.4%	3.7% - 53.5%
Pursat	87.3% - 51.3%	1.7% - 52.8%

Conclusions - 1

- Variation site to site within countries
- More positive change in Cambodia than Vietnam – consistent with
 - Density of intervention
 - Recency of outbreaks
 - Vietnam's policy of vaccination

Conclusions - 2

- People did not comply with all suggested changes in practices
 - enclosing birds most or all of the time
 - In both countries, interviewers reported that it was harder to find people to respond to survey (fewer people own poultry)
 - Some easy protective behaviors increased, even without prompting
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www.avianflu.aed.org

