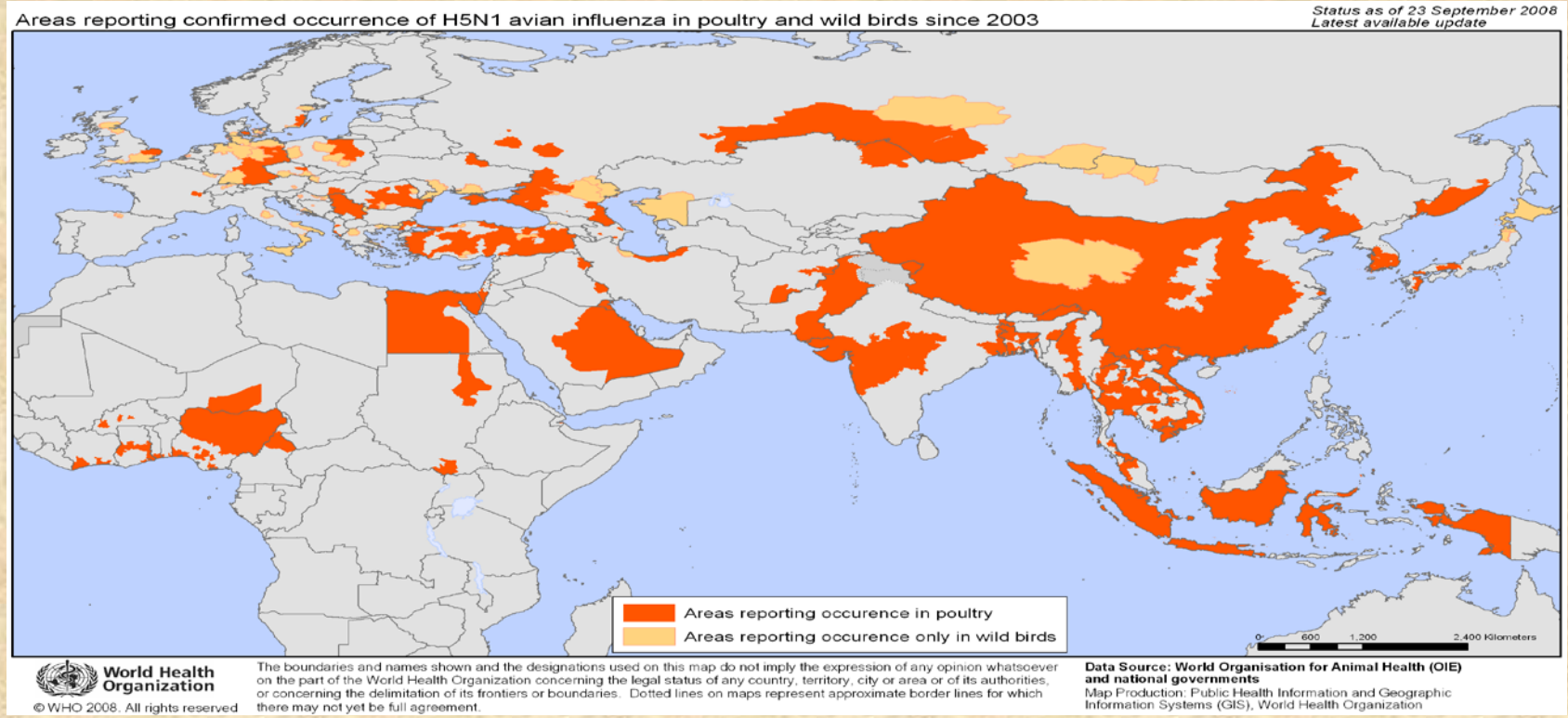
Avian Influenza Risk Perception Among Egyptian Poultry Handlers



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Avian Influenza (AI)

AI is an infectious viral disease of birds, including domestic poultry (as chickens, ducks and geese),

waterfowl and shorebirds.

The A (H5N1) virus subtype, a highly pathogenic AI virus, first infected humans in 1997 during a poultry outbreak in Hong Kong SAR, China.

Since its widespread re-emergence in 2003 and 2004, this avian virus has spread **from** Asia **to** Europe and Africa, resulting in:

- Millions of poultry infections,
- Several hundred human cases, and
- Many human deaths.

AI risk factors:

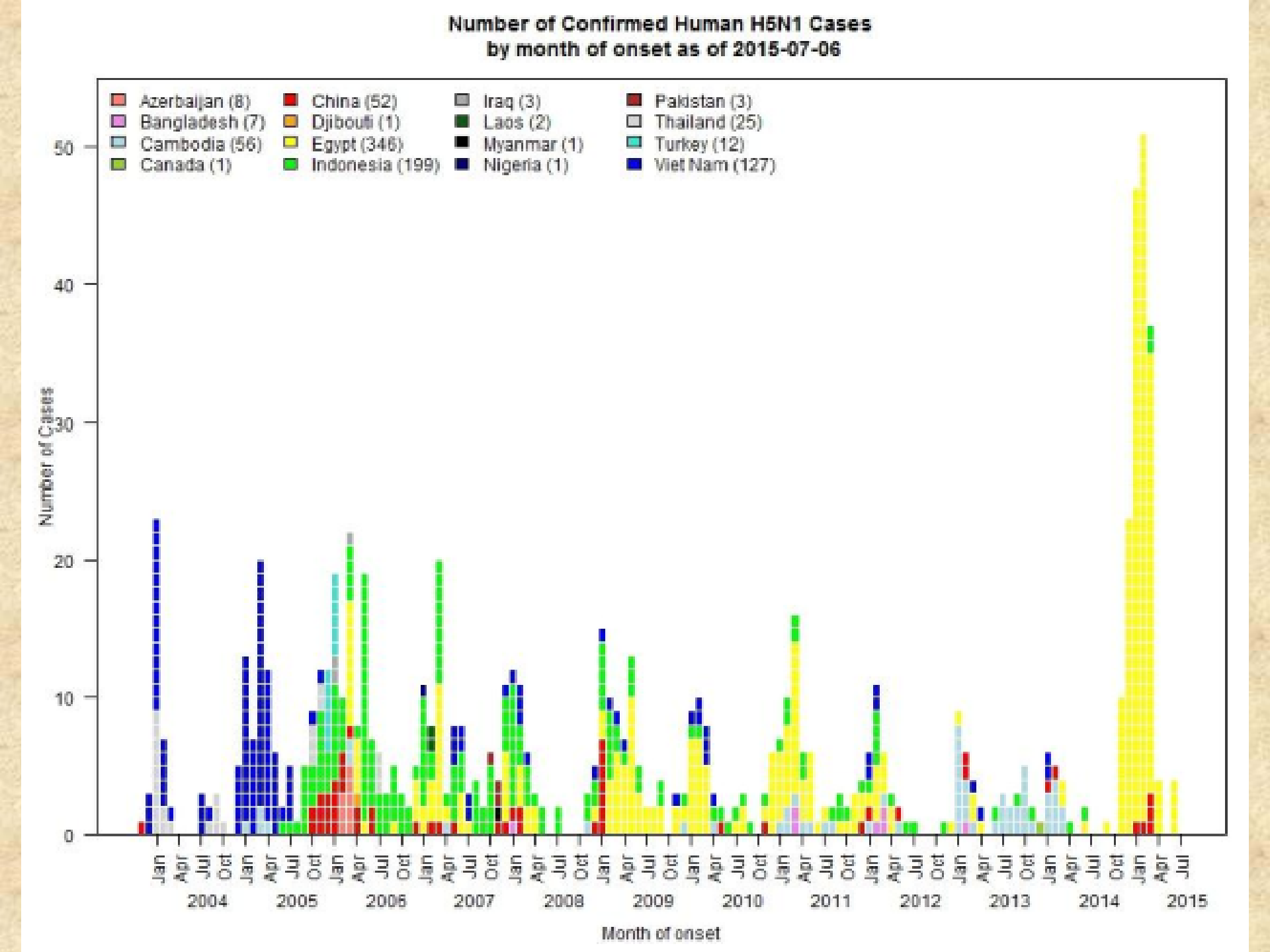
The primary risk factor for human infection is the direct contact with infected poultry as holding live or dead poultry, slaughtering, or defeathering them.

Also, indirect contact with contaminated environments.

The global situation of avian influenza H5N1:

A total number of 844 laboratory-confirmed human cases have been officially reported to the WHO from 2003 through 17 July 2015 from 16 countries.

Of these cases, 449 have died (CFR, 53.2%)


Number of Confirmed Human H5N1 Cases
by month of onset as of 2015-07-06
Azerbaijan (8)
Bangladesh (7)
Cambodia (56)
Canada (1)
China (52)
Djibouti (1)
Egypt (346)
Indonesia (199)
Iraq (3)
Laos (2)
Myanmar (1)
Nigeria (1)
Pakistan (3)
Thailand (25)
Turkey (12)
Viet Nam (127)
Number of Cases
0
10
20
30
40
50
Jan
Apr
Jul
Oct
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Month of onset

Egypt AI status

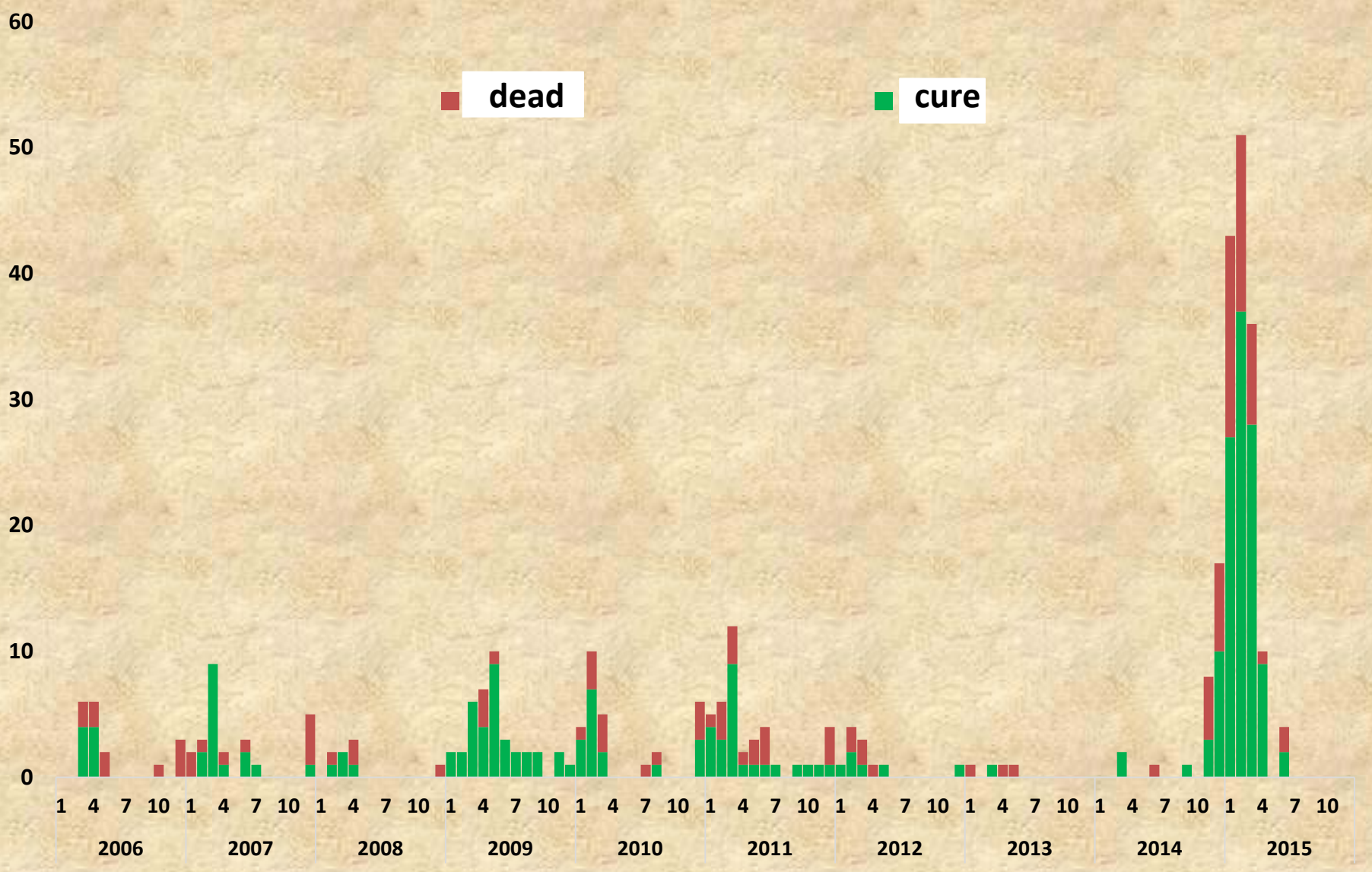
Since the emergence of H5N1 in 2006 until July 2015, a total of 265 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been reported, of which 97 have been fatal (CFR, 36.6%).

Egypt AI status

AI confirmed human cases have **surged** into unexpected levels since mid-November 2014.

From 15 November 2014 till 17 July 2015, 88 laboratory-confirmed human cases of H5N1 were reported, 37.5% (KFR 33/88) have died.

Egypt AI


dead
cure
60
50
40
30
20
10
0
1 4 7 10 1 4 7 10 1 4 7 10 1 4 7 10 1 4 7 10 1 4 7 10 1 4 7 10 1 4 7 10 1 4 7 10
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015

Risk perception

Understanding risk and how it is perceived is a crucial step toward creating programs and campaigns to raise awareness and make communities and workplaces safer.

Risk perception

Risk is the likelihood of an incident is to occur, and given its occurrence, how severe the consequences would be.

Risk perception is the ability of an individual to discern a certain amount of risk, and **risk tolerance** refers to a person's capacity to accept a certain amount of risk.

Risk perception

The inability to accurately perceive risk may lead to higher risk tolerance levels, which can encourage high-risk behaviour

In 2006, Egypt suspended sales of live birds and started a wave of birds culling in many H5N1 infected poultry farms and in houses' backyards.

But in 2011, selling and slaughtering live birds resumed and people started to raise birds in the houses' backyards.

Aim of the study:

To determine poultry workers' knowledge of AI disease, their perception of risk to get infected throughout their work close to poultry, and their personal protective practices.

Study subjects:

This is a survey of 62 poultry workers (in Ismailia governorate), who are at high risk of getting infected with AI (H5N1) virus through direct or indirect contact with poultry or their waste/secretions (i.e. rear, sell or slaughter/defeather live poultry).

Data collection:

We conducted a structured interview using a predesigned questionnaire including:

- Demographic data,
- Basic knowledge about Avian influenza disease
- HBM theoretical construct (to assess risk perception)

HBM Dimensions are:

1-Perception of susceptibility to AI;

2-Perception of severity/seriousness of AI;

3-Perceived benefits from using protective measures;

4-Perceived barriers to protect against getting AI;

5-Self-efficacy regarding the ability of self protection from AI;

6-Action cues (what can help the poultry worker to protect him/herself from AI.

Results:

Socio-demographic characteristics of the study group (N=62)

Socio-demographic variable	No.(%)
Age	
< 30	**23 (37.2)**
30-40	**29 (46.7)**
> 40	**10 (16.1)**
Gender	
Female	**57 (92)**
Male	**5 (8.0)**
Education	
Primary or less	**47 (75.8)**
Middle/high school	**15 (24.2)**
Residence	
Urban	**40 (64.5)**
Rural	**21 (35.5)**
Poultry contract/job nature	
Rearing	**35 (56.4)**
Selling	**47 (75.8)**
Slaughtering/defeathering	**51 (82.2)**

knowledge and risk perception among study subjects, regarding exposure to Avian Influenza virus

Questions	Yes No.(%)	No No.(%)
Have you heard about AI disease?	60 (96.7)	2 (3.3)
What is the source of knowledge about AI?	N=60	
-TV/radio	39 (65)	
-Friends/neighbours	31 (51.7)	
-Health care settings	6 (10)	
Do you know that AI can be transmitted from poultry to man?	32 (53.3)	28 (46.7)
For "Yes" answer: How AI can be transmitted to man?	N=32	
-Poultry waste/feather/secretions	7 (21.8)	
-Meat (not cooked well)	10 (31.3)	
-Dead poultry	18 (56.3)	
-Unclean environment	2 (6.2)	
HBM dimensions (1-6): 1-Do you think you are susceptible to infection from poultry?	24 (40.0)	36 (60.0)
2-Do you think AI disease is serious (kill people)?	18 (30.0)	42 (70.0)
Do you use personal protective methods regularly?	5 (8.1)	57 (91.9)

knowledge and risk perception among study subjects, regarding exposure to Avian Influenza virus

Questions	Yes No.(%)	No No.(%)
3-Do you think/use the following tools might protect you from AI:		
-Face mask	**5 (8.4)**	**55 (91.6)**
-Gloves	**17 (28.4)**	**43 (71.6)**
-Hand washing after poultry contact	**38 (63.4)**	**22 (36.6)**
-Coat & boot	**12 (20.0)**	**48 (80.0)**
4-Why you cannot use protective methods?		
-Cost	**51 (85)**	**9 (15)**
-Do not feel comfortable with them	**28 (46.7)**	**32 (53.3)**
-Not useful	**34 (56.6)**	**26 (43.4)**
5-If you know that there are methods will protect you from AI, are you confident you will use them correctly all the time?		
-Face mask	**7 (11.6)**	**83 (88.4)**
-Gloves	**46 (76.6)**	**14 (23.4)**
-Hand washing after contact	**60 (100)**	**0 (0.0)**
-Coat & boot	**13 (21.6)**	**47 (78.3)**

knowledge and risk perception among study subjects, regarding exposure to Avian Influenza virus

Questions	Yes No.(%)	No No.(%)
To protect yourself from AI, can you stop working/handling with poultry (do another job)?	**21 (35)**	**39 (65)**
6-What might help you use protection from AI?		
-Reminder from family/friend	**43 (71.7)**	**17 (28.3)**
-TV/media news	**36 (60.0)**	**24 (40.4)**
-Periodic checkups from local health office/penalty	**60 (100)**	**0 (0.0)**
Where do you go first when you suffer flu symptoms/become sick?		
-Fever hospital/primary care unit	**13 (21.7)**	
-Private physician	**5 (8.3)**	
-Get medicine from pharmacy	**42 (70.0)**	

Conclusion and recommendation

Avian Influenza risk perception is poor among the poultry handlers on the AI disease, how it is transmitted, how serious is the disease and their susceptibility.

Poultry workers are in need to use personal protective measures and to get supported in getting it. They need to learn to seek medical help at fever hospital (where people are well trained) once they get the disease symptoms.

Conclusion and recommendation

Ministry of Health should intensify media education programs -in a simple and clear way- on risk of Avian Influenza among poultry handlers.

Health authorities need to motivate and check upon poultry handlers on use of personal protective equipments.


Thank
You!