Influenza A (H7N9) Control in China

Zhang Zhongqiu

China Delegate to OIE

DG, Veterinary Bureau, Ministry of Agriculture, the People's Republic of China

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Outline

1. Human cases of H7N9
2. Control measures
3. Surveillance data analysis and pathological study

1. HUMAN CASES OF H7N9

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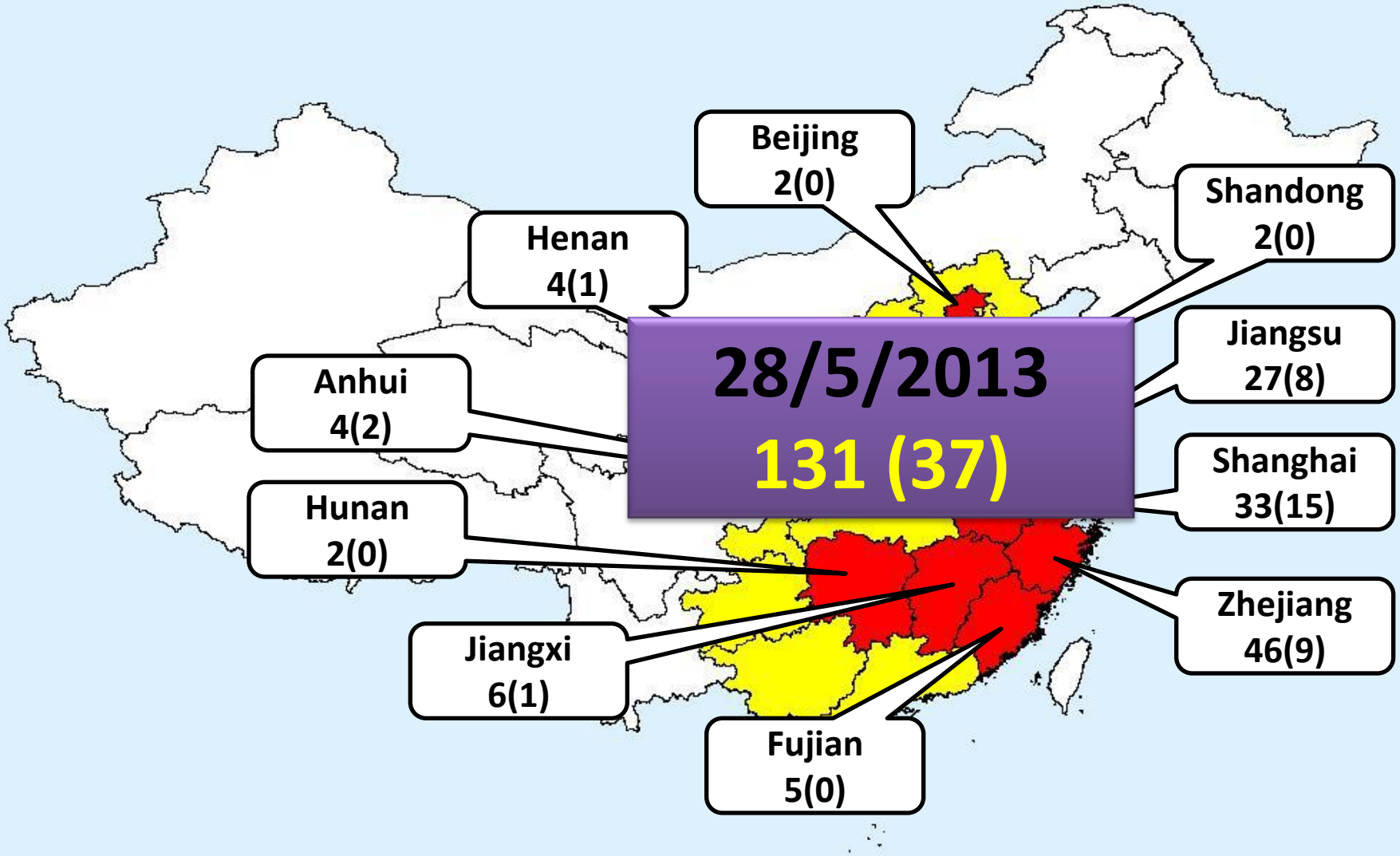
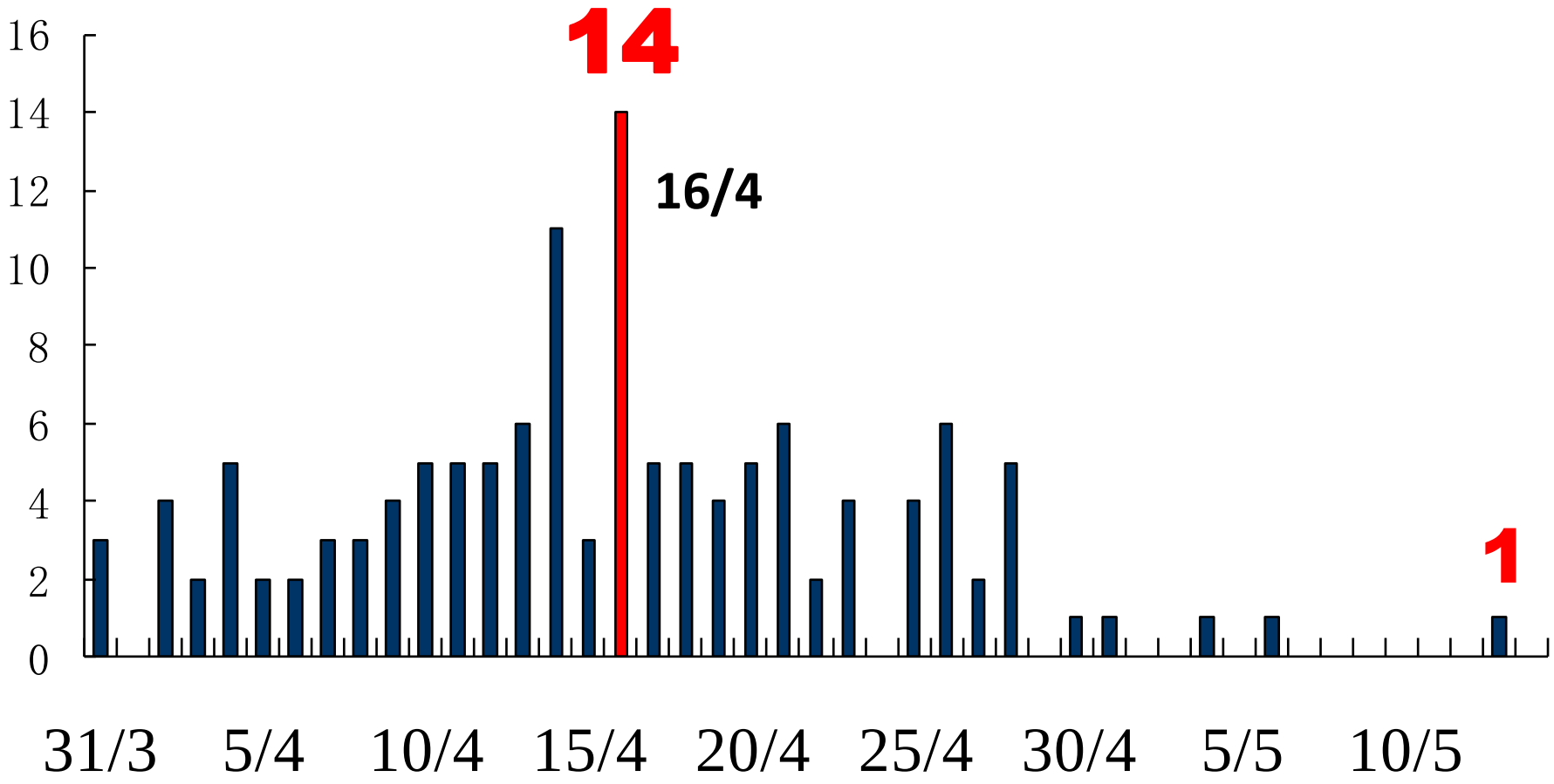


1. Human cases of H7N9



2. CONTROL MEASURES

2. Control measures

2.1 Cross-sector collaboration

Cross-sector collaboration mechanism for joint prevention and control was established at central and local levels

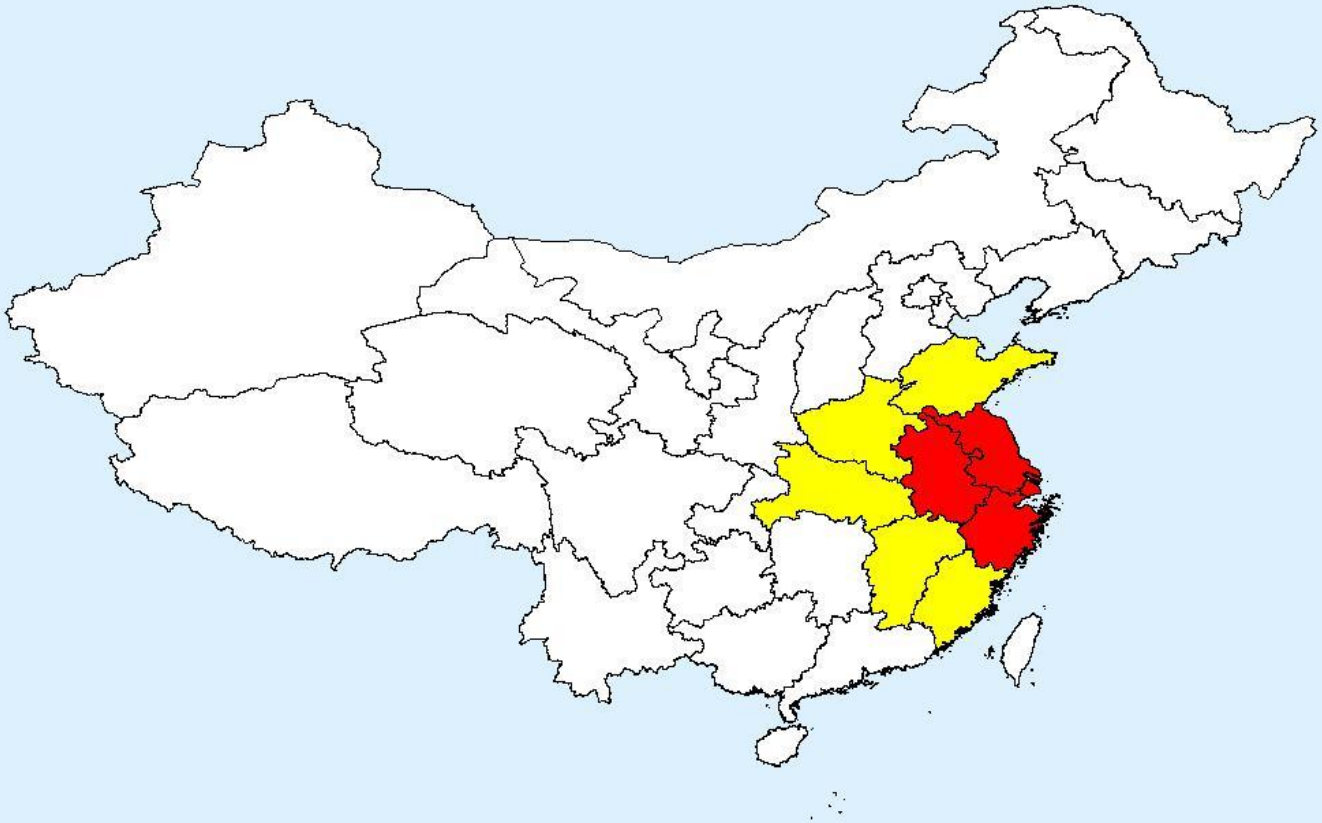
2. Control measures

2.2 MOA decided to temporarily manage the disease as Category I animal disease (the highest level).

2. Control measures

2.3 Enact *Surveillance Plan for Animal H7N9 Avian Influenza Emergency*" and "*Epidemiology Investigation Plan for Animal H7N9 Avian Influenza Emergency*".

2. Control measures



2. Control measures

2. Control measures

2.4 Animal H7N9 Emergency Response Guideline

1. Cull **infected flock**, disinfect and restrict movement, close market once H7N9 positive samples were found, ;
2. Definition of **infected flock**

Farm	→	Same Building
LBM	→	Same market
Backyard	→	Same Household

So far, **561442** poultry have been culled and all from the LBMs.

2. Control measures

2. Control measures

2.5 Supervision of live bird markets (LBMs)

- surveillance
- inspection and quarantine
- encourage slaughtering on site and consumption of frozen poultry products

2. Control measures

Closure of live bird markets

2. Control measures

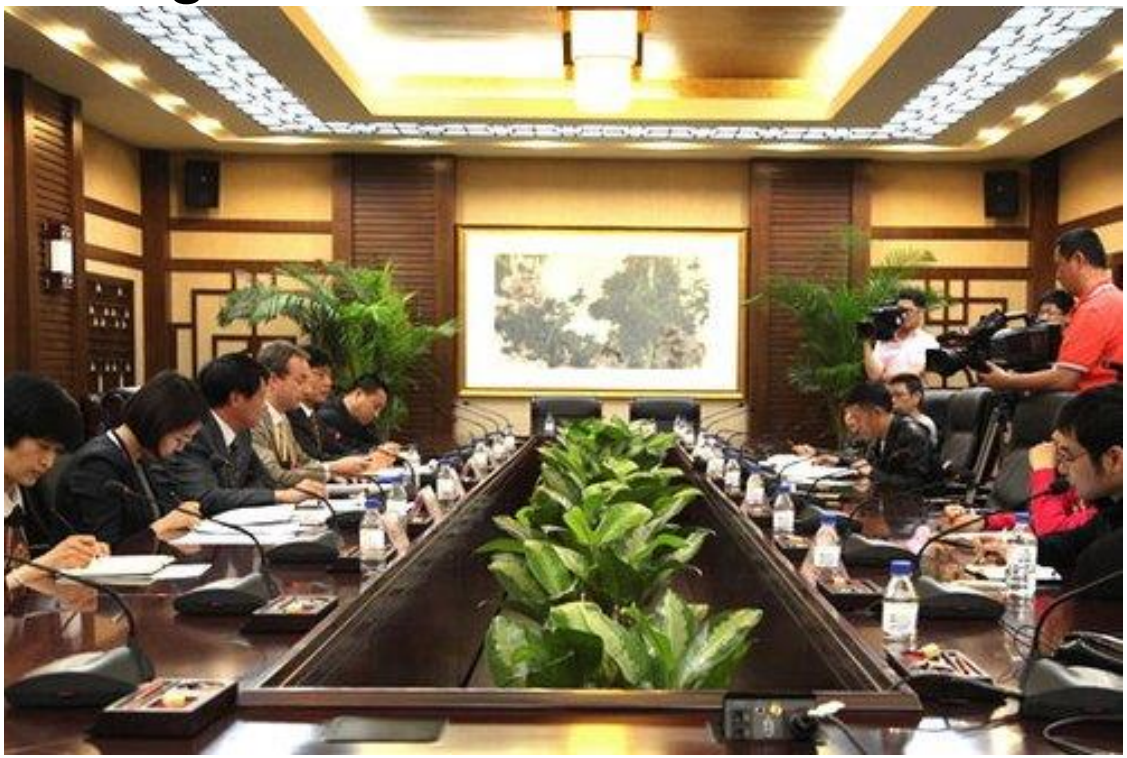
2.6 Timely notification

- Timely notified OIE, FAO and other international organizations, relevant countries and regions;
- Timely release information to the public via media.

2. Control measures

2.7 International cooperation

- Joint field investigation with the OIE



2. Control measures

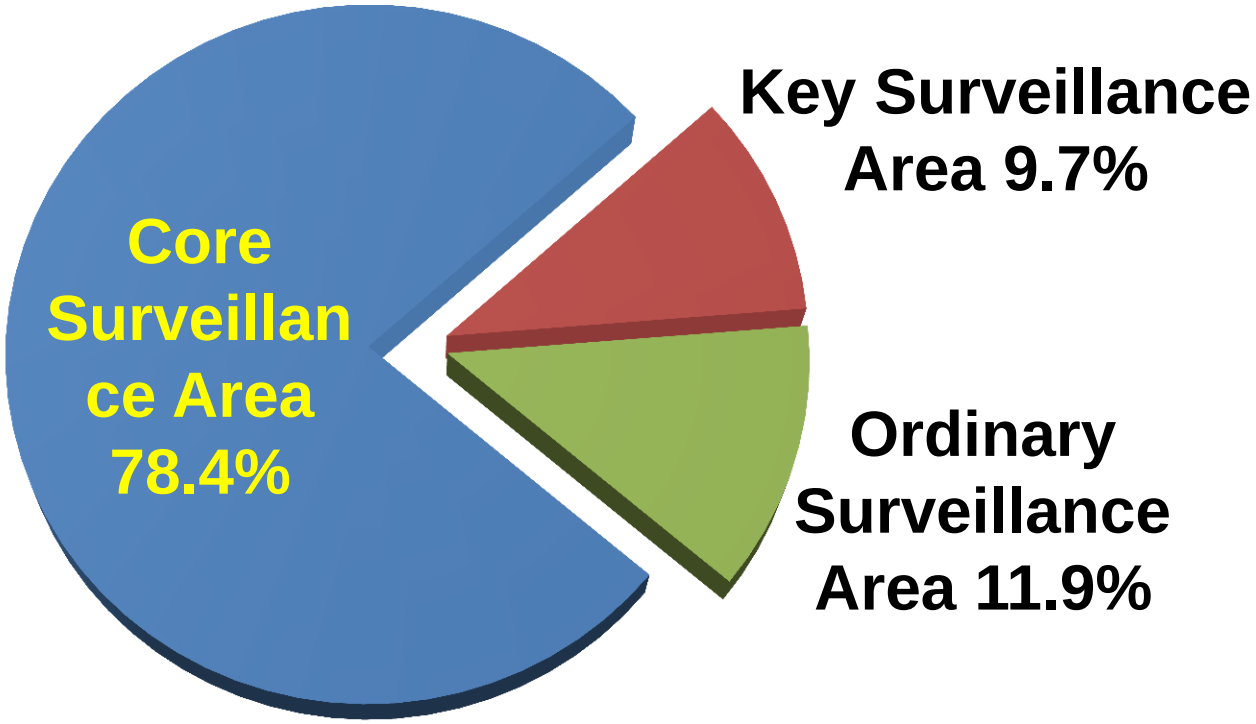
- FAO Emergency Center for Transboundary Animal Diseases (ECTAD) China Office

3. SURVEILLANCE AND PATHOLOGY STUDY

3. Surveillance and Pathology Study

3.1 Surveillance Areas

899,758 samples in **42107** sites



3. Surveillance and Pathology Study

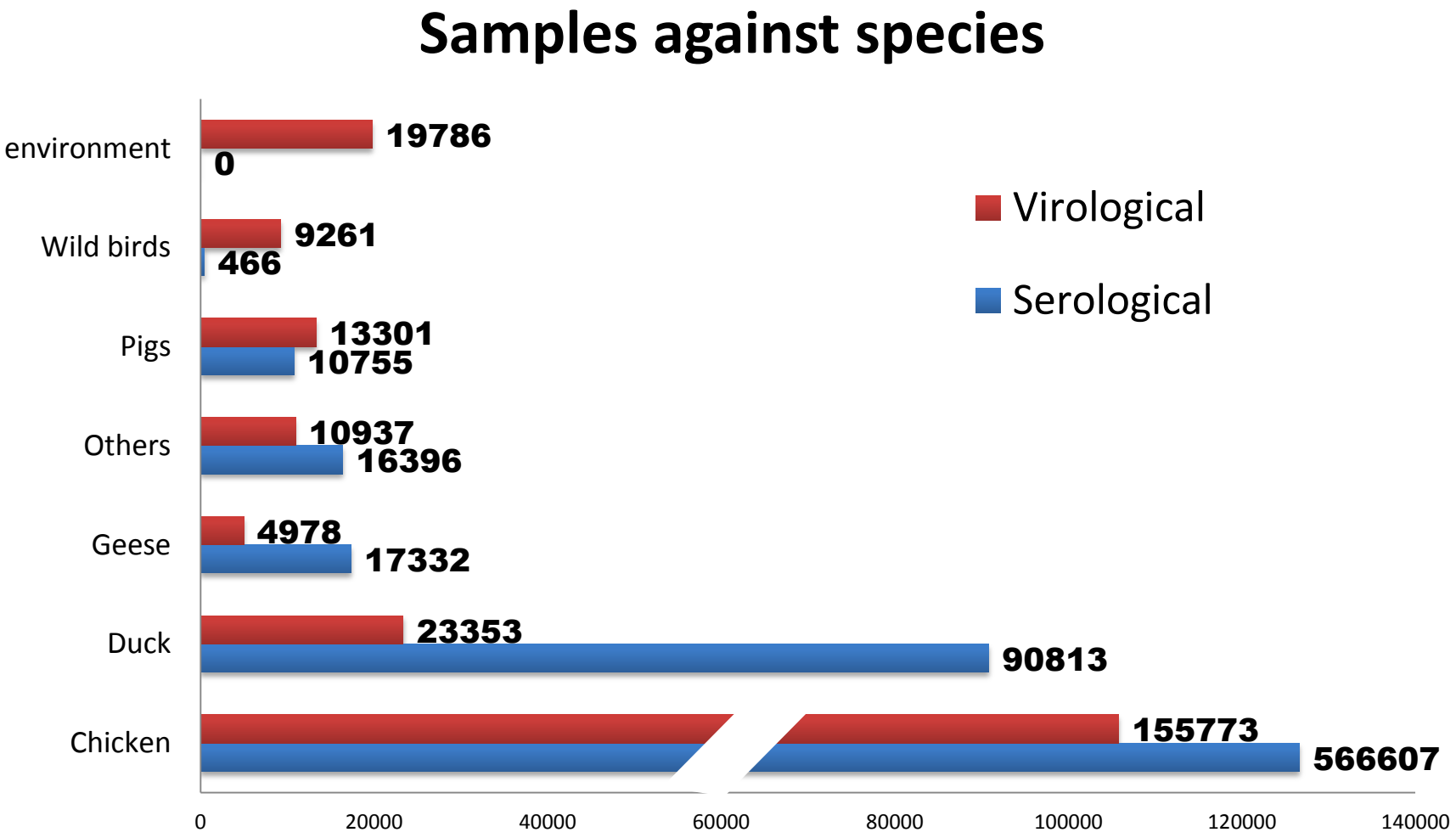
3.2 Type of Samples

Sample	Surveillance No.	Rate	Positive No.	Positive Rate
Serological	702369	78.06%	35	0.005%
Virological	197389	21.94%	53	0.027%

3 samples were found viruses and positive of antibody

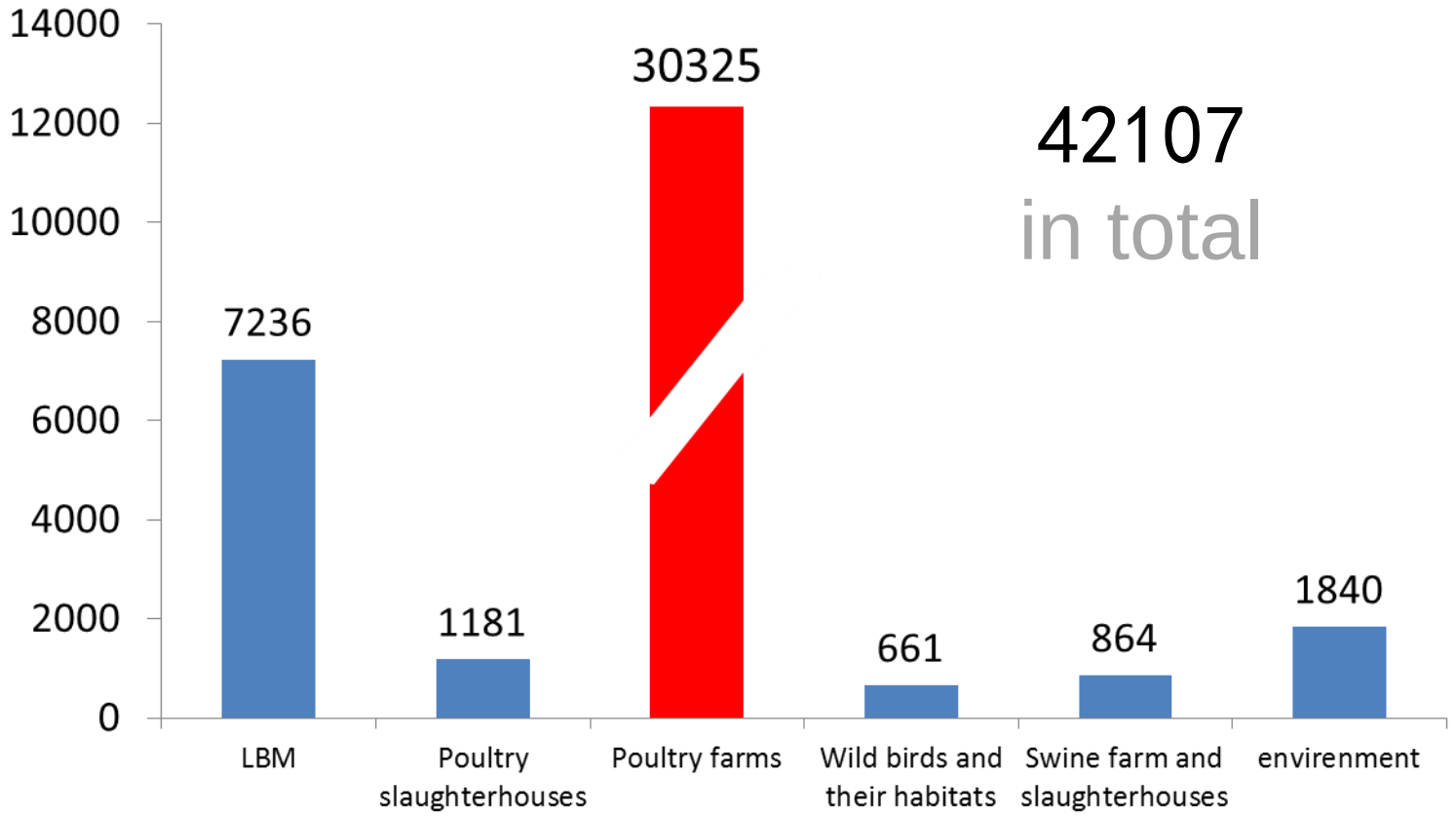
By 28/5/2013

3. Surveillance and Pathology Study

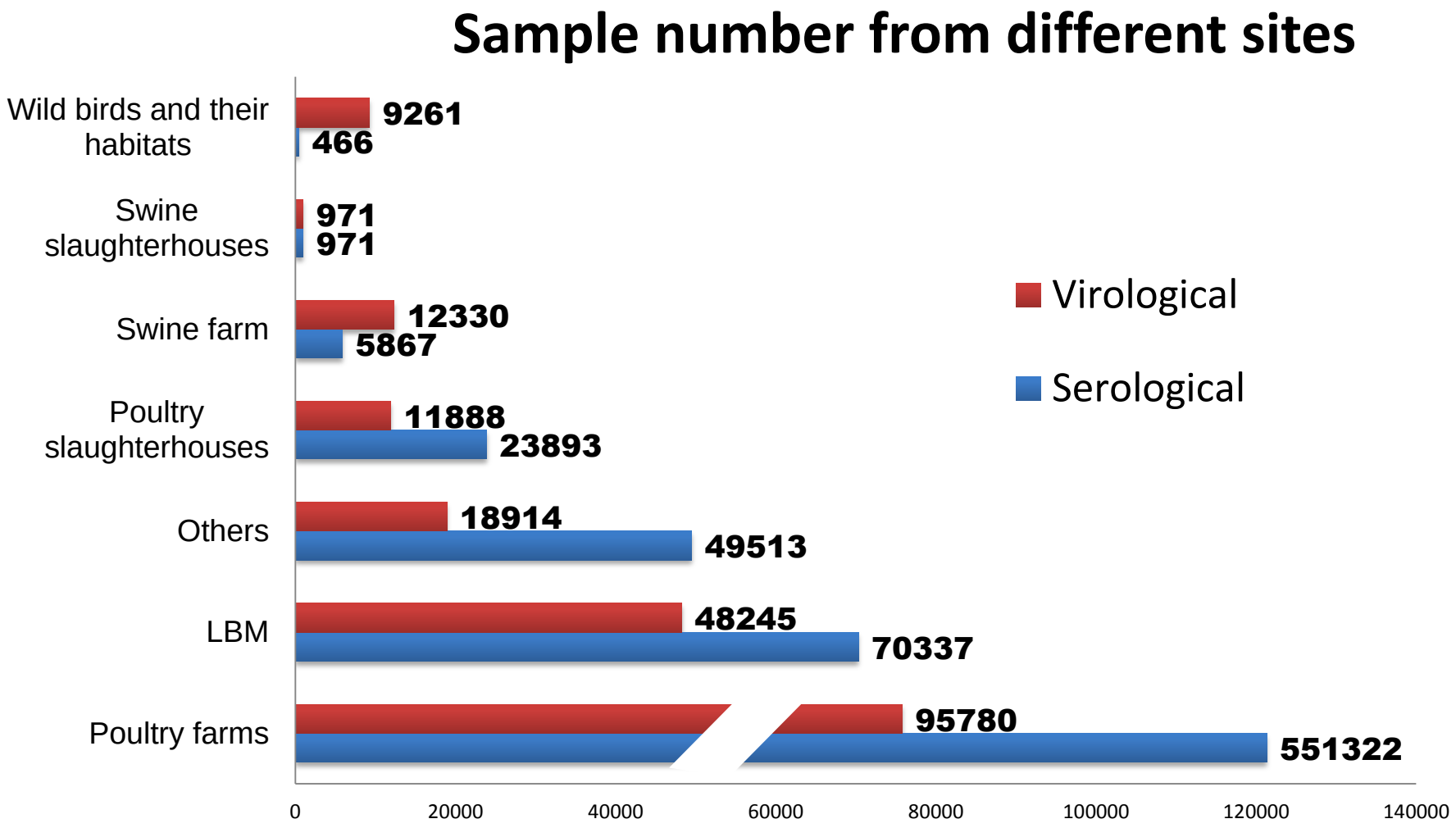


3. Surveillance and Pathology Study

3.3 Sampling Sites



3. Surveillance and Pathology Study



3. Surveillance And Pathology Study

3.4 Positive samples from different sites

Site	Species	Virological Positive No.	Serological Positive No.
LBM	Duck	4	
	Pigeon	3	
	Chicken	33	25
	Environment	12	
Field	Carrier Pigeon	1	
Farm	Chicken		10
Total		**53**	**35**

3. Surveillance and Pathology Study

3.5 Other surveillance results

Institute	Supplies to HK	Samples	Positive
AQSIQ	746,212	51876	0
Hongkong		120/day	0

3. Surveillance and Pathology Study

MOH: 1374 serological sample collected from occupational groups in Henan Province, all results negative. 500 samples collected from Jiangxi, with all negative.

As for 44 million farming households, there have been no reported clinical cases.

This result fully demonstrates that the risk of H7N9 is low in poultry farms.

3. Surveillance And Pathological Study

3.6 Pathological test in SPF chickens

A/chicken/Shanghai/S1053/2013

A/pigeon/Shanghai/S1069/2013

IVPI = 0

None of the chickens showed clinical signs or died during the period of ten days, therefore, these viruses are non-pathogenic to chickens.

3. Surveillance and Pathology Study

3.6 Pathological test in SPF chickens（2）

- Viruses isolated from chicken show no pathologic to ducks and mammals.
- Viruses isolated from human show higher pathologic to mammals than those isolated from poultry.
- H7N9 virus can transmit among chicken horizontally, but low transmission among ducks

Conclusions

1. H7N9 influenza virus is low pathogenic to chickens, with IVPI=0.

2. H7N9 viruses were only found in chicken, duck and pigeon, not in pig or other animals.

3. Limited range of infection: all positive animals were found in live bird markets.

4. Surveillance results showed no virologically positive samples found in farms.

Thank you for your attention!