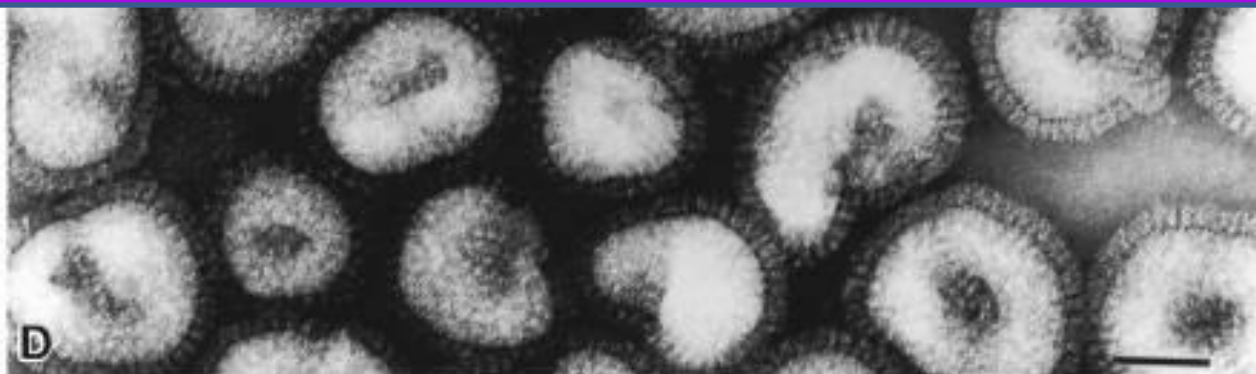


TỔNG QUAN BỆNH CÚM



TS BS NGUYỄN NGỌC RẠNG

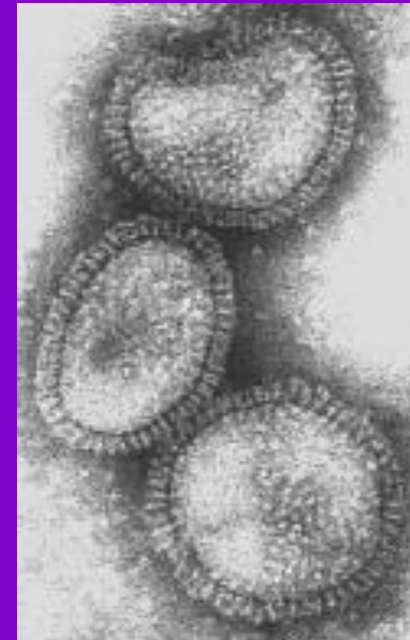
PHÂN LOẠI

RNA virus

Family (gia đình): **ORTHOMYXOVIRIDAE**

Genus (Chi): **Influenza virus** **Influenza C virus**

Types (típ): **Type A** **Type B** **Type C**



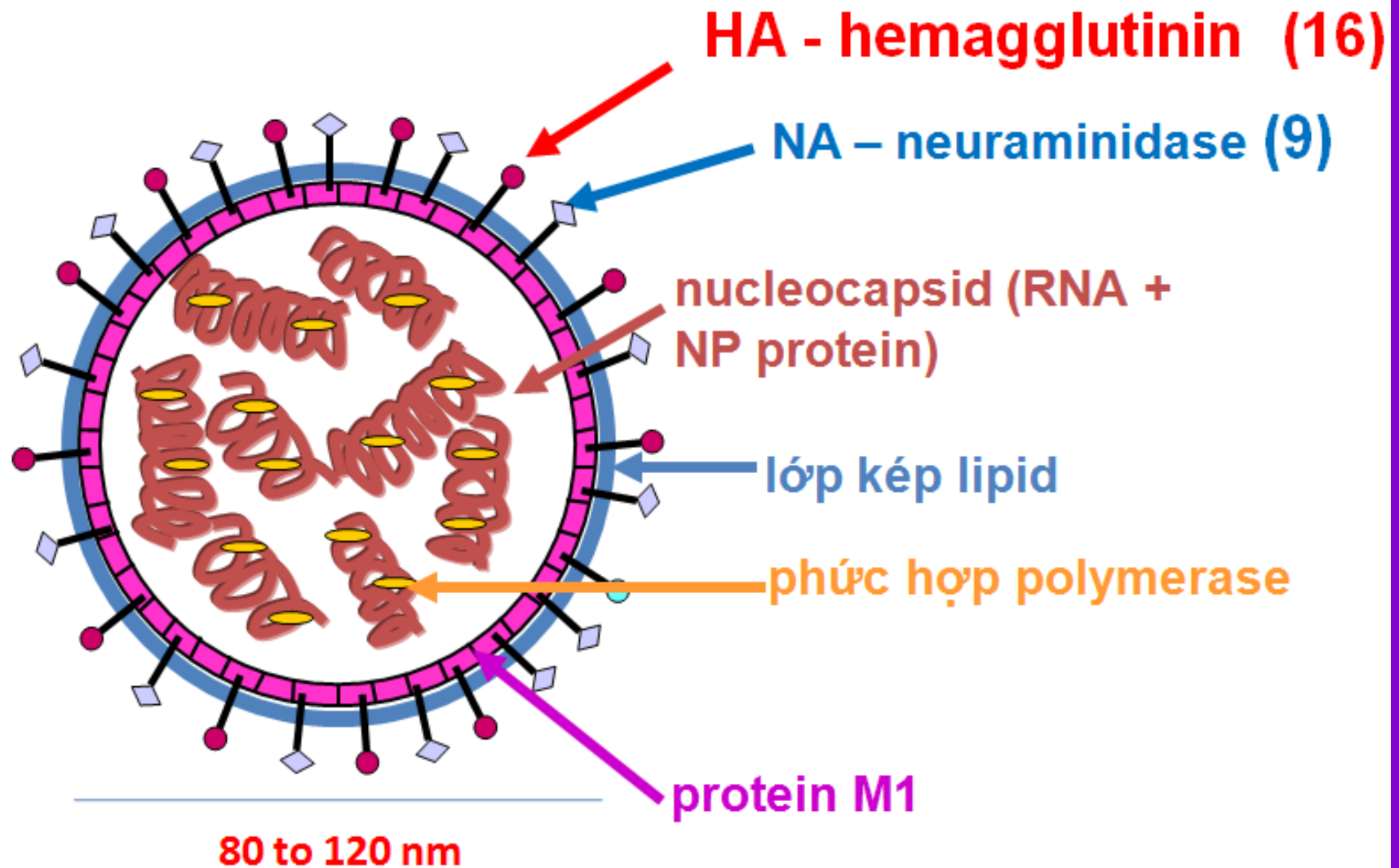
ĐẶC ĐIỂM THEO TYPE

	TYPE A	TYPE B	TYPE C
ĐỘ NẶNG	++++	++	+
NGUỒN BỆNH (SÚC VẬT, GIA CẦM)	Có	Không	Không
GÂY DỊCH	Lớn	Nhỏ	Không
CHUYỂN ĐỔI GEN	Drift, Shift**	Drift*	Drift
Amantadine, Rimantadine	+	-	-
Zanamivir, Oseltamivir	+	+	

*Drift: * chuyển đổi gen cùng subtype (H)*

*Shift **: chuyển đổi gen khác subtype*

CẤU TRÚC



KHÁNG NGUYÊN BỀ MẶT

- **Haemagglutinin (H, HA)**
 - Quyết định khả năng gây bệnh của virus
 - Giúp virus gắn vào TB nội mạc đường hô hấp
 - Yếu tố tạo miễn dịch
- **Neuraminidase (N, NA)**
 - Giúp sao chép virus trong ký chủ
 - Yếu tố quyết định độ nặng của bệnh

DANH PHÁP

Phân loại các virus cúm ở người

Ví dụ : A / Beijing / 32 / 92 (H3N2)

A	típ virus
Beijing	địa điểm được phân lập
32	Số chủng (strain)
92	Năm được phân lập
H3N2	phân típ (subtype)

ĐẠI DỊCH CÚM 1918



6,000,000 DEATHS FROM INFLUENZA

This Is Estimate For World, For Past 12 Weeks:

RECALLS BLACK DEATH

'Flu' Five Times Deadlier Than World War.

LONDON, Dec. 19.—Canadian Press, via Reuter's.)—The Times' medical correspondent says that it seems reasonable to believe that about 6,000,000 persons perished from influenza pneumonia during the past 12 weeks. It has been estimated that the war caused the death of 20,000,000 persons in four and a half years.

Thus, the correspondent points out, influenza has proved itself five times deadlier than war, because, in the same

INFLUENZA DEATH RATE IN ONTARIO

London's Fatality List 326 per 100,000 of Population.

Statistics compiled by Dr. J. W. R. MacCallough, chief officer of health for Ontario, indicate that in none of the cities in this province was the death rate from Spanish influenza and complications as great as in the United States centers. Toronto's death rate is given as 327 per 100,000. Kingston was the hardest hit in Ontario, the rate being 443 per 100,000. Winnipeg suffered the most of any Canadian city, according to the figures now available. The death rate in that city was 744 per 100,000.

Camp Sheridan, Ohio, where 32,000 soldiers were encamped, had the heaviest death rate of all, it being 2,551 to 100,000 of population.

The figures, which cover an approximate period of six weeks, are:

Cities	Deaths from Influenza and Complications, chiefly Pneumonia	Death Rate per 100,000 Population
Port William	45	338
Sault Ste. Marie	41	319
Ottawa	370	548
Port Arthur	30	181
Windsor	33	106
Kingston	148	543
London	187	356
Toronto	1,500	327
St. John, N.B.	136	396
Winnipeg	968	744
Montreal	2,335	489
Halifax	153	273
Hamilton	344	338
United States Figures		
Boston	3,364	871
Pittsburg	3,394	721
Philadelphia	12,587	819
Washington	1,564	501
Camp Sheridan, O.	842	2,551
New York	22,950	400

ĐẠI DỊCH CÚM THẾ KỶ 20



Credit: US National Museum of Health and Medicine



1918: “Spanish Flu”
A(H1N1)

20-40 m deaths

675,000 US deaths

1957: “Asian Flu”
A(H2N2)

1-4 m deaths

70,000 US deaths

1968: “Hong Kong Flu”
A(H3N2)

1-4 m deaths

34,000 US deaths

DHS

LỊCH SỬ ĐẠI DỊCH CÚM

TÊN ĐẠI DỊCH	THỜI ĐIỂM	SỐ NGƯỜI CHẾT	SUBTYPE
Châu Á (Nga)	1889-1890	1 triệu	H2N2?
Tây Ban Nha	1918-1920	40 -100 triệu	H1N1
Châu Á (TQ, Sing, HK, USA)	1957-1958	1 - 1.5 triệu	H2N2
Hong Kong	1968-1969	0.75 – 1 triệu	H3N2
Cúm heo (Swine flu)	2009-2010 (mắc 482.300)	6071 người	H1N1 mới

TỔNG QUAN DỊCH CÚM 2009

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine



Review

The 2009 A (H1N1) influenza virus pandemic: A review[☆]

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Influenza vaccines

Viral gene reassortment

ABSTRACT

In March and early April 2009 a new swine-origin influenza virus (S-OIV), A (H1N1), emerged in Mexico and the USA. The virus quickly spread worldwide through human-to-human transmission. In view of the number of countries and communities which were reporting human cases, the World Health Organization raised the influenza pandemic alert to the highest level (level 6) on June 11, 2009. The propensity of the virus to primarily affect children, young adults and pregnant women, especially those with an underlying lung or cardiac disease condition, and the substantial increase in rate of hospitalizations, prompted the efforts of the pharmaceutical industry, including new manufacturers from China, Thailand, India and South America, to develop pandemic H1N1 influenza vaccines. All currently registered vaccines were tested for safety and immunogenicity in clinical trials on human volunteers. All were found to be safe and to elicit potentially protective antibody responses after the administration of a single dose of vaccine, including split inactivated vaccines with or without adjuvant, whole-virion vaccines and live-attenuated vaccines. The need for an increased surveillance of influenza virus circulation in swine is outlined.

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TỔNG QUAN DỊCH CÚM 2009

- Khởi phát ở Mexico, USA (3-4/2009)
- Chủng H1N1 mới (tái hợp từ: người-heo-gia cầm)
(chủng châu Á + Bắc Mỹ...) H1N1+H1N2+H3N2
- Báo động cấp 6 (WHO 6/2009)
- Triệu chứng nhẹ, tử vong thấp
- Đối tượng nguy cơ: trẻ em, người trẻ, phụ nữ có thai, mắc bệnh tim-phổi mạn.
-

DỊCH CÚM A H1N1 2009 VIỆT NAM

OPEN ACCESS Freely available online

PLOS MEDICINE

Early Pandemic Influenza (2009 H1N1) in Ho Chi Minh City, Vietnam: A Clinical Virological and Epidemiological Analysis

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1 Oxford University Clinical Research Unit, Wellcome Trust Major Overseas Program, Hospital for Tropical Diseases, Ho Chi Minh City, Vietnam, **2** Hospital for Tropical Diseases, Ho Chi Minh City, Vietnam, **3** Southeast Asian Infectious Diseases Clinical Research Network (SEACRN), Jakarta, Indonesia, **4** MRC Centre for Genomics and Global Health, University of Oxford, Oxford, United Kingdom, **5** Centre for Tropical Medicine, Nuffield Department of Clinical Medicine, University of Oxford, Centre for Clinical Vaccinology and Tropical Medicine, Oxford, United Kingdom

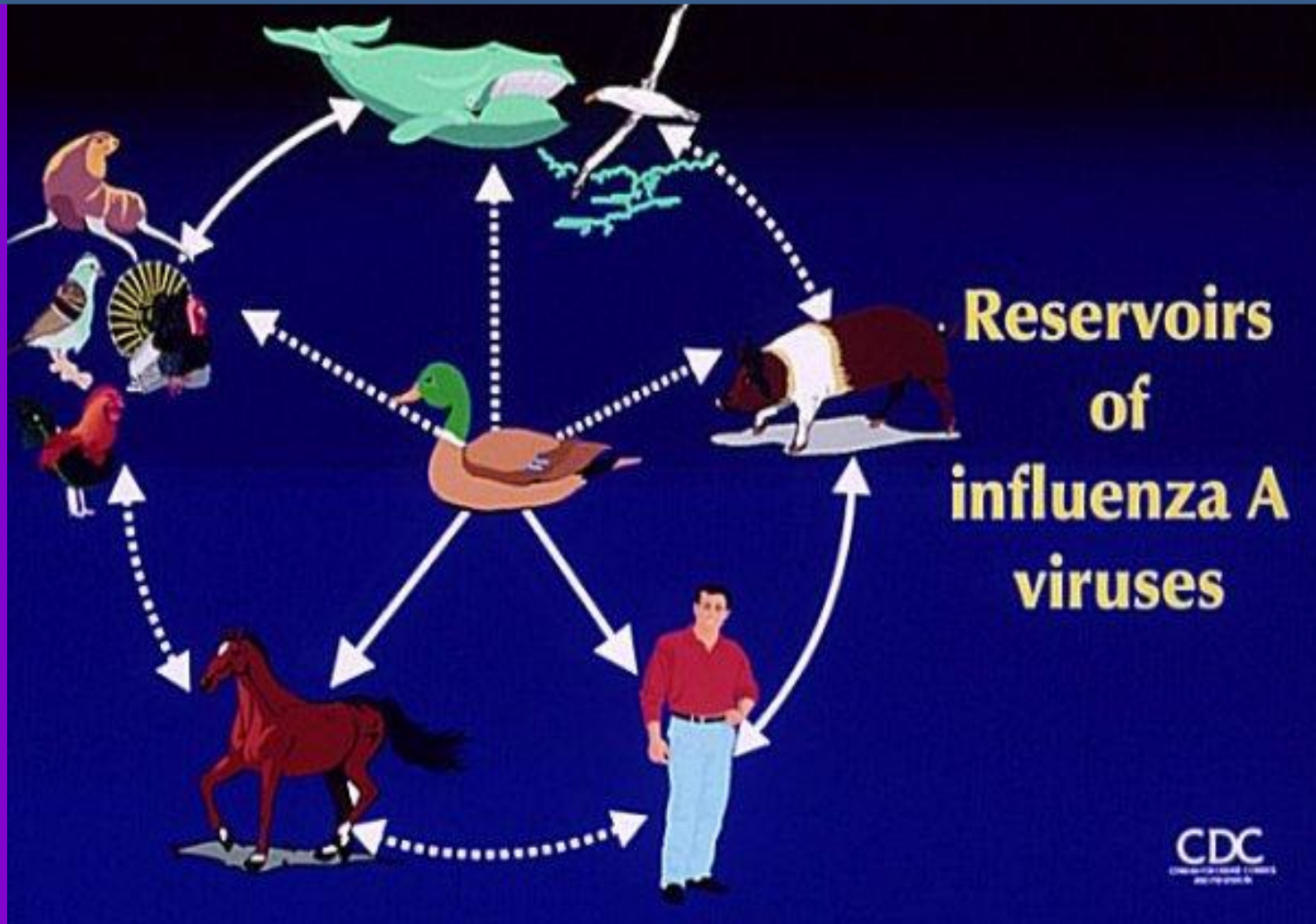
Abstract

Background: To date, little is known about the initial spread and response to the 2009 pandemic of novel influenza A ("2009 H1N1") in tropical countries. Here, we analyse the early progression of the epidemic from 26 May 2009 until the establishment of community transmission in the second half of July 2009 in Ho Chi Minh City (HCMC), Vietnam. In addition, we present detailed systematic viral clearance data on 292 isolated and treated patients and the first three cases of selection of resistant virus during treatment in Vietnam.

- + *Ca đầu tiên: 31/5/2009: 1 SV Việt nam từ Mỹ về phi trường TSN*
- + *12 ngày sau: Hà Nội phát hiện ca đầu tiên*
- + *TC đến tháng 12/2009: 11.104 ca (53 chết)*

Wild aquatic birds are the main reservoir of influenza A viruses. Virus transmission has been reported from wild waterfowl to poultry, sea mammals, pigs, horses, and humans. Viruses are also transmitted between pigs and humans, and from poultry to humans. Equine influenza viruses have recently been transmitted to dogs. (From Fields Virology (2007) 5th edition, Knipe, DM & Howley, PM, eds, Wolters Kluwer/Lippincott Williams & Wilkins, Philadelphia, Fig 48.1)

NGUỒN BỆNH CÚM A



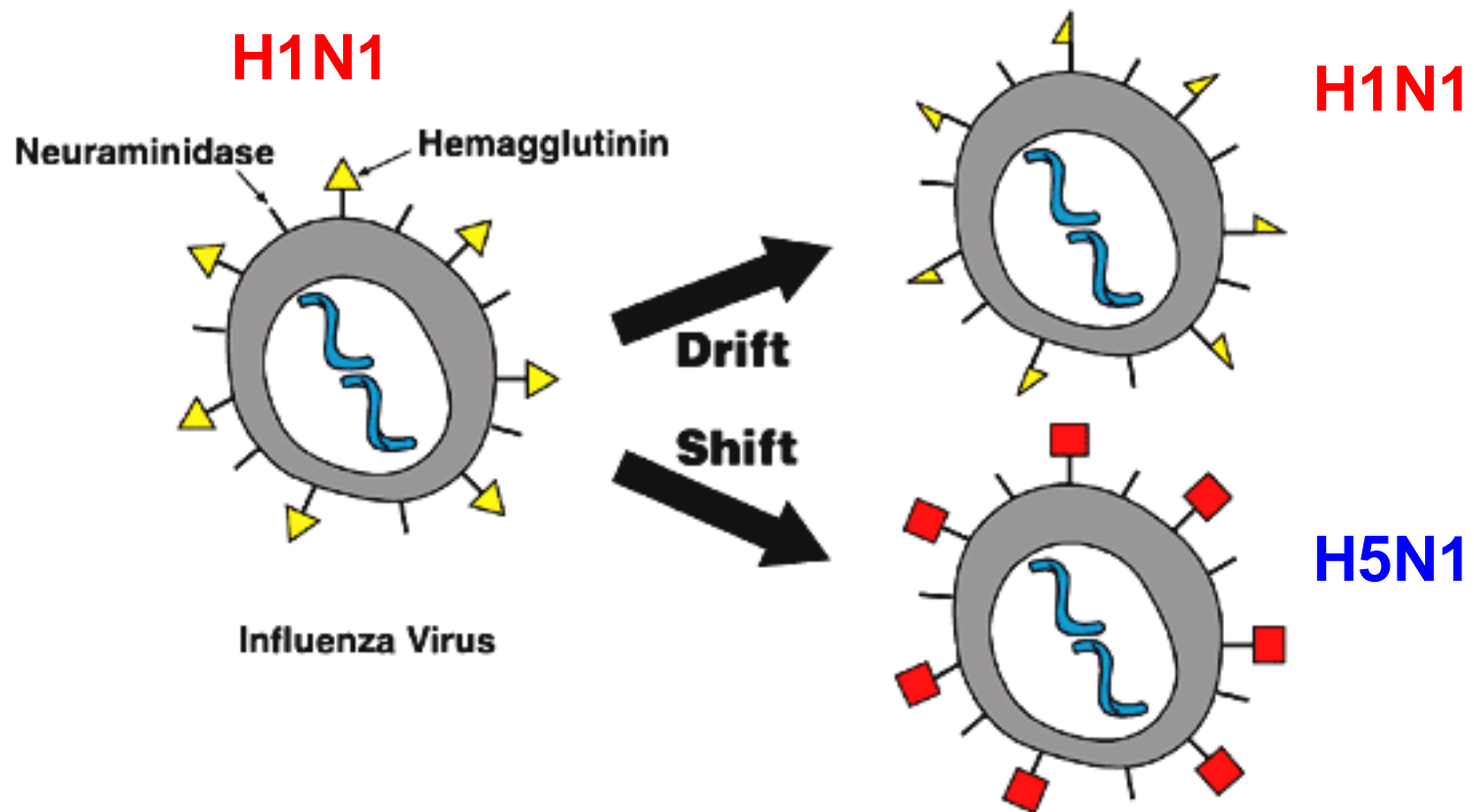
Các phân típ H, N ở các loài

Subtypes	Species of origin ^a			
	Humans	Swine	Horses	Birds
Hemagglutinin				
H1 ^b	PR/8/34	Sw/Ia/15/30	—	Dk/Alb/35/76
H2	Sing/1/57	—	—	Dk/Ger/1215/73
H3	HK/1/68	Sw/Taiwan/70	Eq/Miami/1/63	Dk/Ukr/1/63
H4	—	—	—	Dk/Cz/56
H5	—	—	—	Tern/S.A./61
H6	—	—	—	Ty/Mass/3740/65
H7	—	—	Eq/Prague/1/56	FPV/Dutch/27
H8	—	—	—	Ty/Ont/6118/68
H9	—	—	—	Ty/Wis/1/66
H10	—	—	—	Ck/Ger/N/49
H11	—	—	—	Dk/Eng/56
H12	—	—	—	Dk/Alb/60/76
H13	—	—	—	Gull/MD/704/77
H14	—	—	—	Dk/Gurjev/263/82
H15	—	—	—	Dk/Austral/341/83
Neuraminidase				
N1	PR/8/34	Sw/Ia/15/30	—	Ck/Scot/59
N2	Sing/1/57	Sw/Taiwan/70	—	Ty/Mass/3740/65
N3	—	—	—	Tern/S.A./61
N4	—	—	—	Ty/Ont/6118/68
N5	—	—	—	Sh/Austral/1/72
N6	—	—	—	Dk/Cz/56
N7	—	—	Eq/Prague/1/56	FPV/Dutch/27
N8	—	—	Eq/Miami/1/63	Dk/Ukr/1/63
N9	—	—	—	Dk/Mem/546/74

^aThe reference strains of influenza viruses, or the first isolates from that species, are presented.

^bCurrent subtype designation.

CHUYỂN ĐỔI KHÁNG NGUYÊN

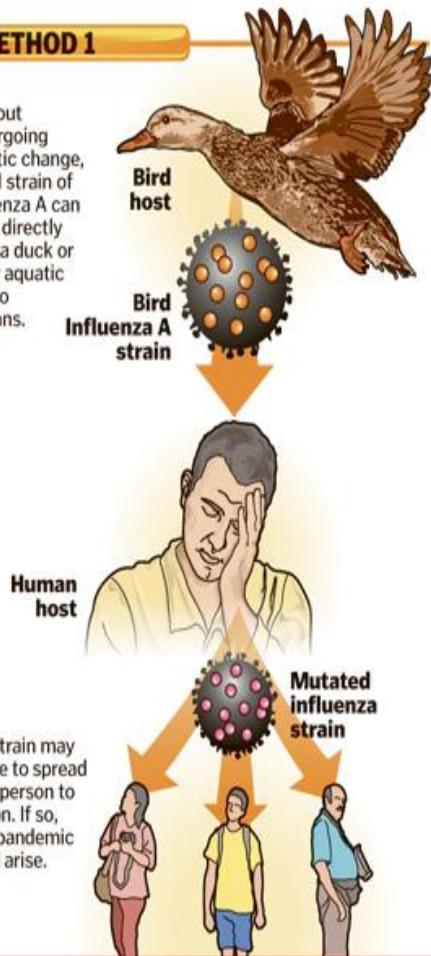


CHUYỂN ĐỔI KHÁNG NGUYÊN

Killer flu MUTANT

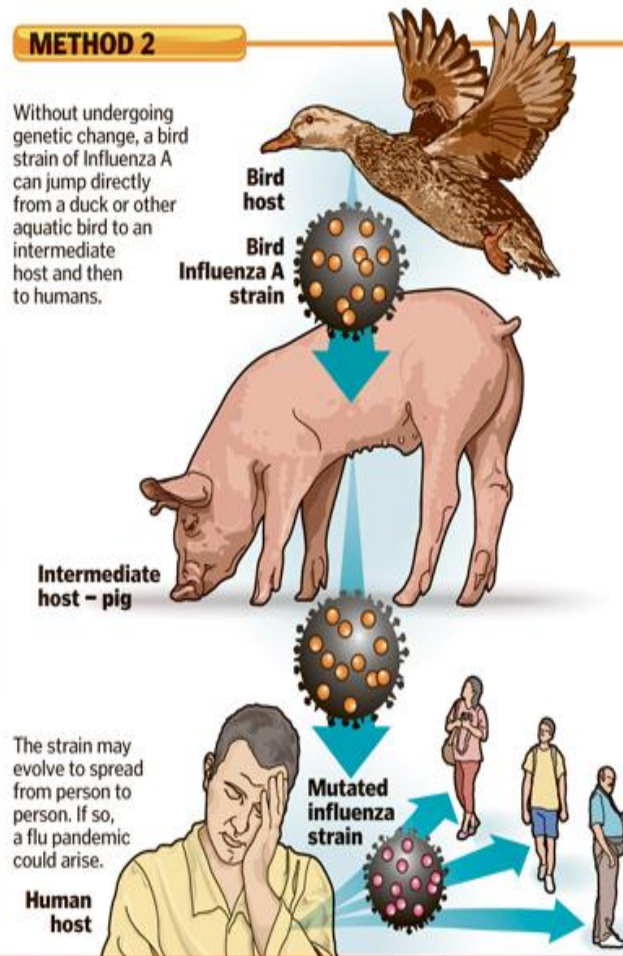
METHOD 1

Without undergoing genetic change, a bird strain of Influenza A can jump directly from a duck or other aquatic bird to humans.



METHOD 2

Without undergoing genetic change, a bird strain of Influenza A can jump directly from a duck or other aquatic bird to an intermediate host and then to humans.



METHOD 3

Bird host

A duck or other aquatic bird passes a bird strain of Influenza A to an immediate host such as chicken or pig.

Human host

A person passes a human strain of Influenza A to the same chicken or pig.

Bird influenza A strain

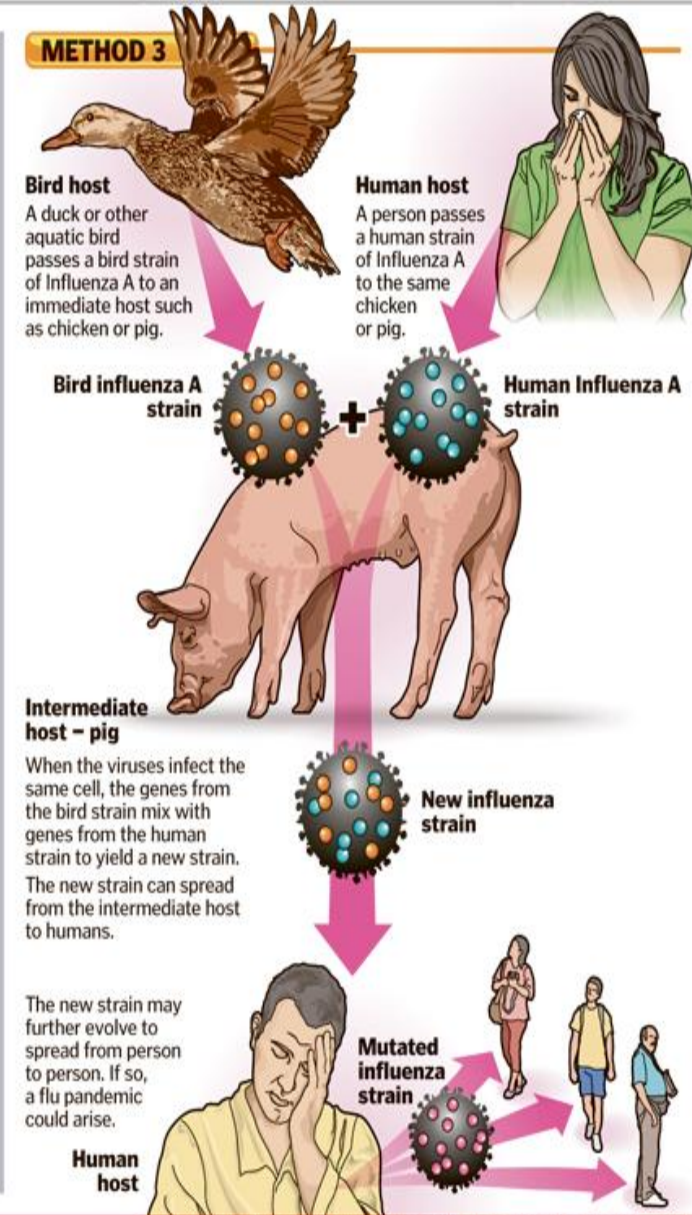
Human Influenza A strain

Intermediate host - pig

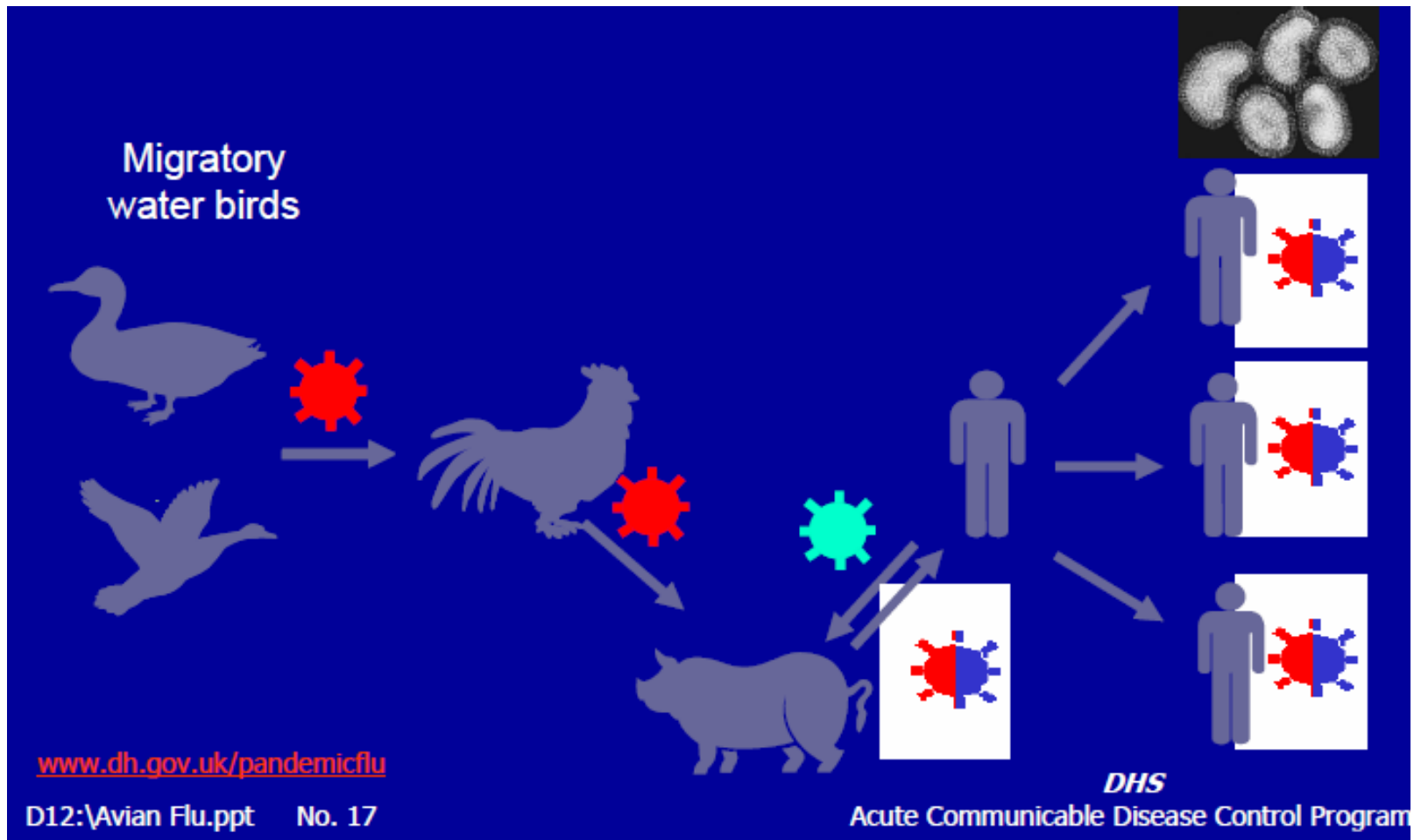
When the viruses infect the same cell, the genes from the bird strain mix with genes from the human strain to yield a new strain. The new strain can spread from the intermediate host to humans.

The new strain may further evolve to spread from person to person. If so, a flu pandemic could arise.

Human host



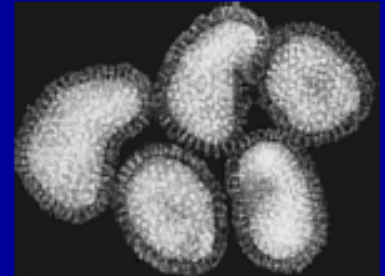
CHUYỂN ĐỔI KHÁNG NGUYÊN



CHUYỂN ĐỔI KHÁNG NGUYÊN

Migratory
water birds

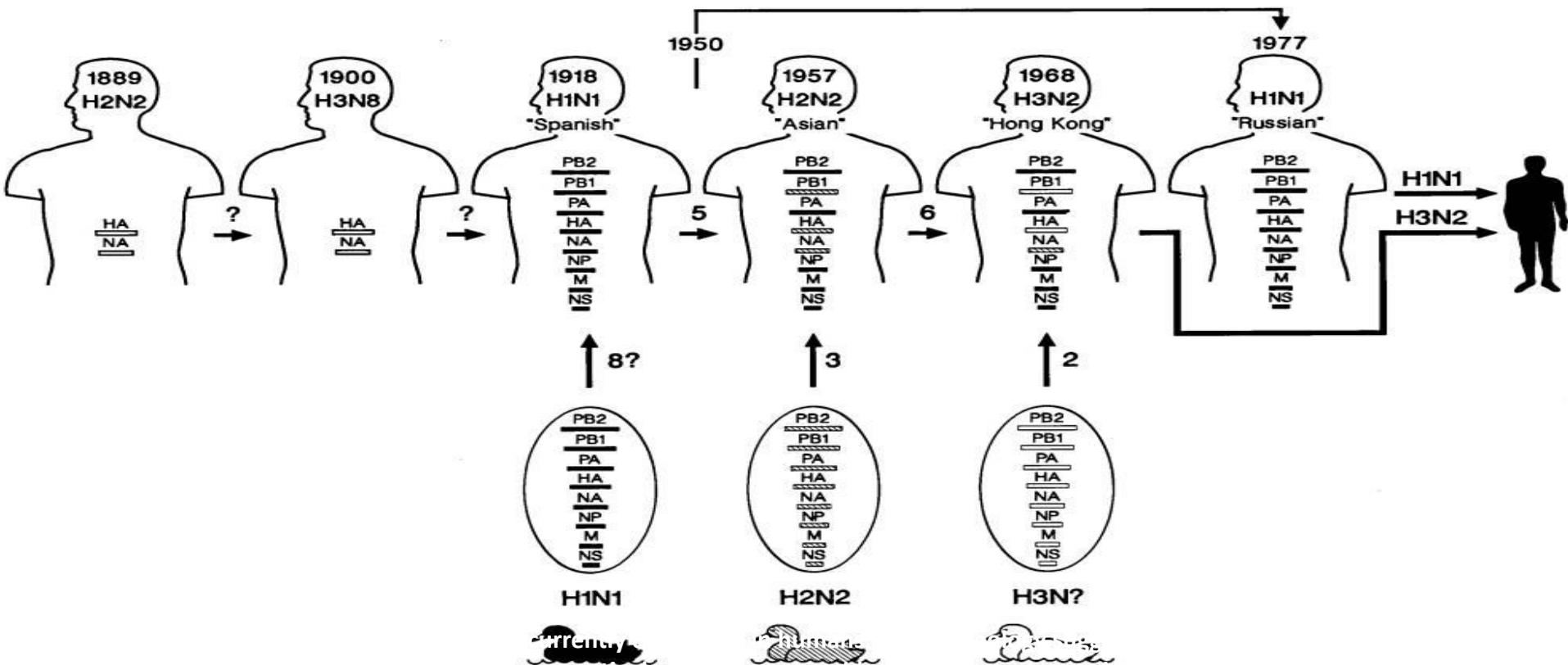
Domestic birds



- Hong Kong 1997, H5N1
- HK, China 1999, H9N2
- Netherlands 2003, H7N7
- Hong Kong 2003, H5N1
- Viet Nam and Thailand, 2004 H5N1

www.dh.gov.uk/pandemicflu

QUÁ TRÌNH CHUYỂN ĐỔI KHÁNG NGUYÊN



segments from avian influenza reservoirs was transmitted to humans and pigs before 1918 and replaced the 1900 strain. This virus was probably carried from North America to Europe by American troops and caused the catastrophic Spanish influenza pandemic of 1918. In 1957 the Asian pandemic virus acquired three genes (PB1, HA, and NA) from the avian influenza gene pool in wild ducks by genetic reassortment and kept five other genes from the circulating human strain. After the Asian strain appeared, the H1N1 strains disappeared from humans. In 1968 the Hong Kong pandemic virus acquired two genes (PB1 and HA) from the duck reservoir by reassortment and kept six genes from the virus circulating in humans. After the appearance of the Hong Kong strain, the H2N2 Asian strains were no longer detectable in humans. In 1977 the Russian H1N1 influenza virus that had circulated in humans in 1950 reappeared and spread in children and young adults. This virus probably escaped from a laboratory and has continued to cocirculate with the H3N2 influenza viruses in the human population. (From Fields Virology, 4th ed, Knipe & Howley, eds, Lippincott Williams & Wilkins, 2001, Fig. 47-1.)

NGUỒN GỐC CHỦNG H5N1 Ở HONGKONG

Goose/Guangdong/1/96 H5N1

H6N1

Quail/Hong Kong/G1/97 H9N2

H5

N1

NP, MA, NS, PB1, PB2, PA



????????

CK/Hong Kong/220/97

Hong Kong/156/97

CÚM GIA CẦM H5N1

- 1996: Chủng H5N1 phát hiện đầu tiên ở ngỗng, Quảng Đông Trung Quốc vào năm
- 1997 (Hong Kong) H5N1 ở gia cầm và người (cùng gen H nhưng khác gen bên trong)
- 1999 (Hong Kong): virus ở ngỗng tương tự chủng virus Guangdong/96
- 2001 (Hàn quốc): Trạm kiểm dịch phân lập 4 gen giống Guangdong/96.
- 2001 (Hong Kong) H5N1 tổng hợp từ 5 gen khác nhau (cùng HA)

CHỦNG ĐỘC LỰC MẠNH (HPAI)



**CĐLY(LPAI) H5 hoặc H7
truyền bệnh cho gia
cầmpoultry**



**CĐLY lưu hành gây
bệnh nhẹ**



**CĐLY đột biến thành
CĐLM (HPAI)
gây bệnh nặng**



NHIỄM CÚM GIA CẦM VỚI CHỦNG ĐỘC LỰC MẠNH (HPAI= High Pathogenic Avian Influenza)

- ➡ **H9N2 (1999 và 2003) : 3 ca Hồng Kông, 6 ca ở Trung quốc, không tử vong**
- ➡ **H7N7 (2003) : 89 ca ở Hà Lan, 1 ca tử vong**
- ➡ **H7N2 (2003) : 2 ca ở USA (Virginia, Newyork), không tử vong**
- ➡ **H7N3 (2004) : 2 ca ở Canada, không tử vong bị viêm kết mạc mắt và nhức đầu**

TRUYỀN BỆNH

- KHÍ DUNG

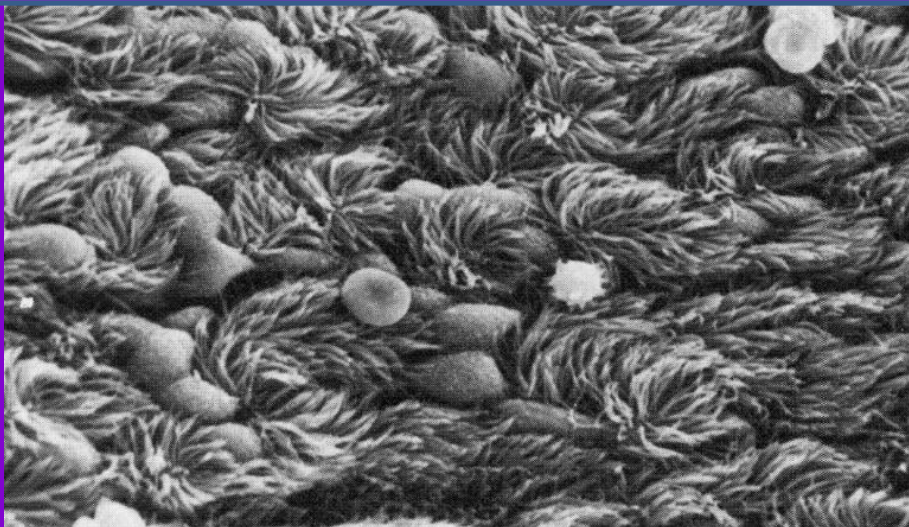
1 GIỌT NƯỚC BỌT
CHỨA 10^5 - 10^6 VIRIONS

- Ủ BỆNH: 18-72 GIỜ

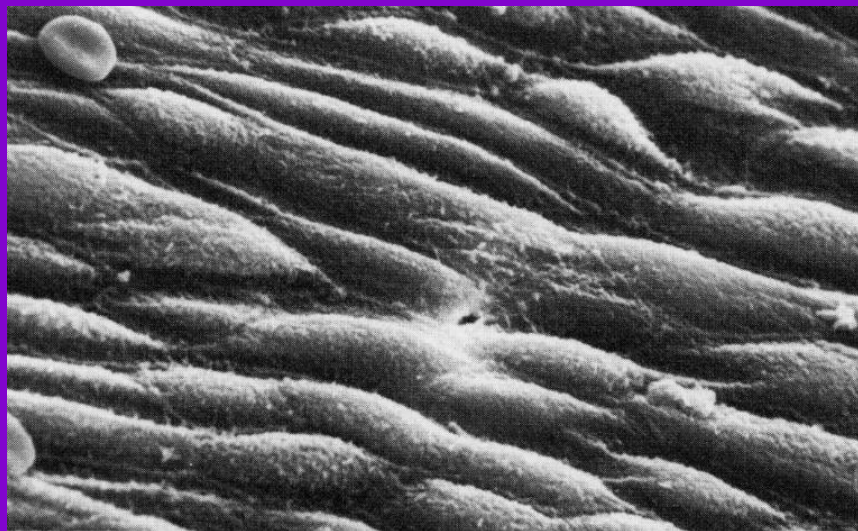
- LAN TRUYỀN



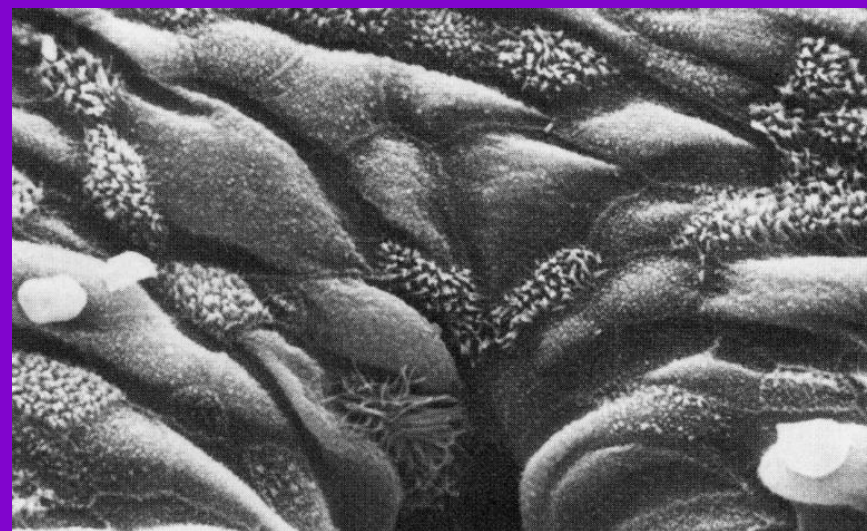
BỆNH SINH



NIÊM MẠC
ĐƯỜNG HÔ HẤP
BÌNH THƯỜNG

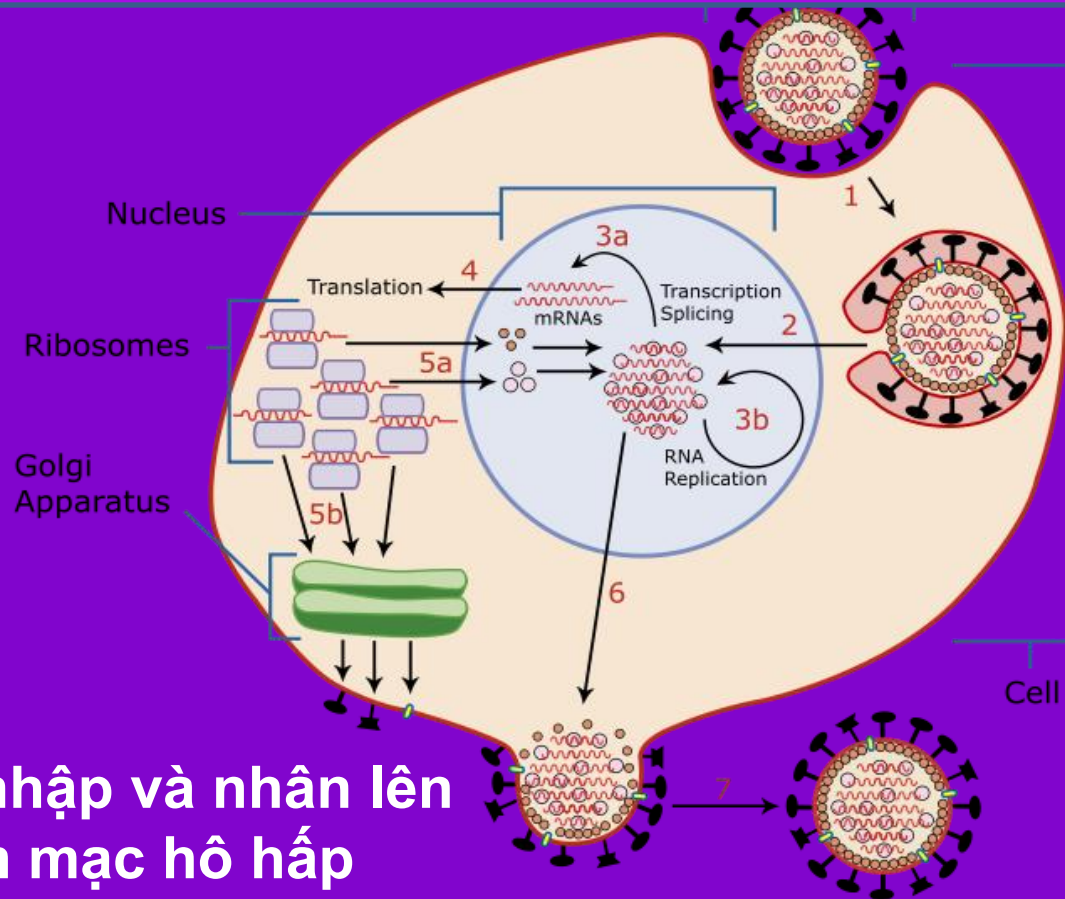


SAU 3 NGÀY NHIỄM



SAU 7 NGÀY NHIỄM 26

BỆNH SINH



+ Virus xâm nhập và nhân lên ở tế bào niêm mạc hô hấp

+ Không tìm thấy virus ở máu và cơ quan ngoài phổi

TRIỆU CHỨNG

- SỐT
- NHỨC ĐẦU
- ĐAU CƠ
- HO
- SỔ MŨI
- TC Ở MẮT



BIẾN CHỨNG TẠI PHỔI

- CROUP (NHŨ NHI)
- TIỀN PHÁT DO VIRUS CÚM
- THỨ PHÁT DO VI TRÙNG
 - *Streptococcus pneumoniae*
 - *Staphylococcus aureus*
 - *Hemophilus influenzae*

BIẾN CHỨNG NGOÀI PHỔI

- VIÊM CƠ
- BIẾN CHỨNG TIM
- BỆNH LÝ NÃO (encephalopathy)
- GAN VÀ HỆ THỐNG TK TRUNG ƯƠNG
 - Hội chứng Reye
- HỆ THỐNG TK NGOẠI BIÊN
 - HC Guillian-Barré

ĐỐI TƯỢNG NGUY CƠ

- TRẺ NHỎ
- CÓ THAI
- > 65 TUỔI (tử vong cao)
- BỆNH MẠN (TIM-PHỔI, THẬN, ĐTĐ...)
- GIẢM MIỄN DỊCH

CÚM GIA CẦM VN



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Spatio-temporal epidemiology of highly pathogenic avian influenza outbreaks in the two deltas of Vietnam during 2003–2007

Phan Q. Minh^{a,b,*}, Roger S. Morris^a, Birgit Schauer^a, Mark Stevenson^a, Jackie Benschop^a, Hoang V. Nam^b, Ron Jackson^a

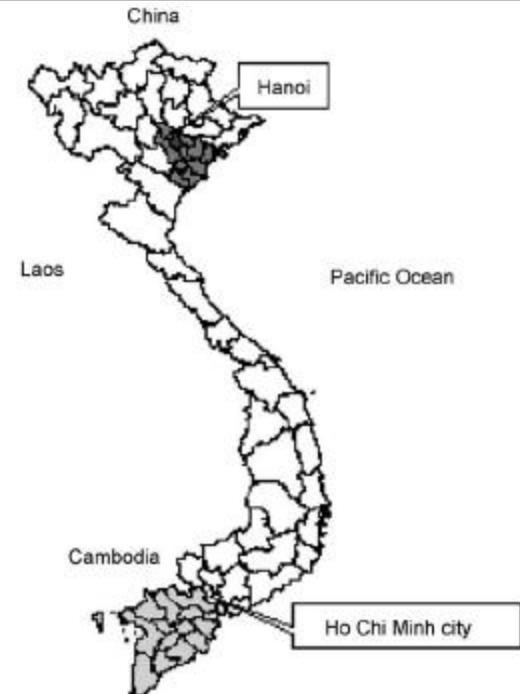
^aEpiCentre, Massey University, Private Bag 11222, Palmerston North, New Zealand

^bDepartment of Animal Health, 15/78, Giai Phong road, Phuong Mai, Dong Da, Hanoi, Viet Nam

Dịch 2003/2004: tiêu hủy 40 triệu gia cầm

Năm 2005: tất cả vịt, gà > 14 ngày tuổi phải tiêm ngừa H5N1

Dịch 2006/2007: Khảo sát 785 ổ dịch tại 606 xã
Đồng bằng sông Hồng (miền Bắc) và 1313 ổ dịch/
873 xã ở Đồng bằng sông Cửu Long (Nam bộ)
76% vịt và 19-42% gà bị nhiễm H5N1



CÚM GIA CẦM H5N1

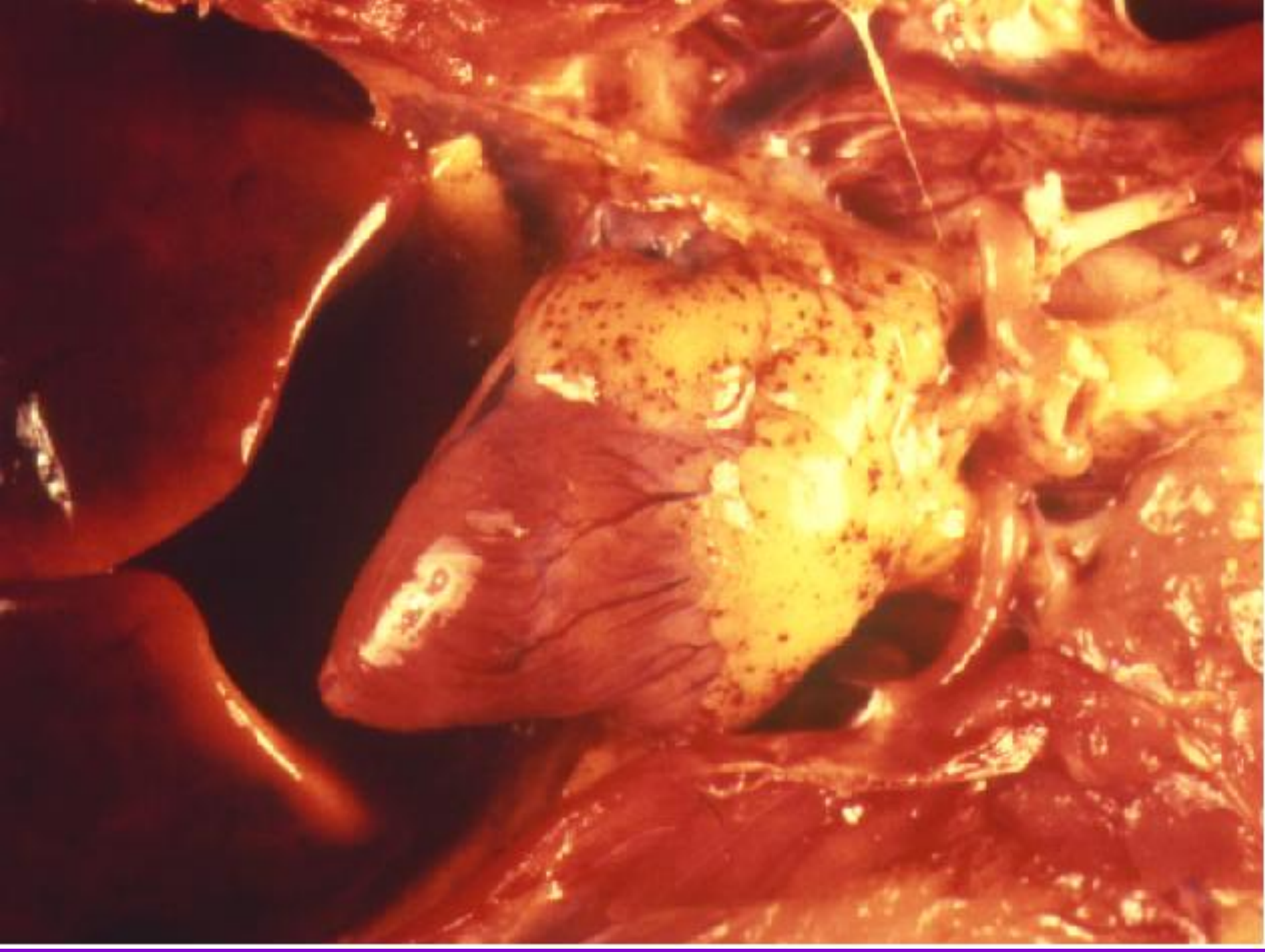
NHIỆM ĐƯỜNG HÔ HẤP VÀ TIÊU HÓA CỦA CHIM

- Thường không gây bệnh ở thủy cầm hoang dã
- Khả năng gây bệnh và tử vong cho gia cầm (gà, vịt...)
- Tái hợp gen (re-assort) thường xảy ra
-





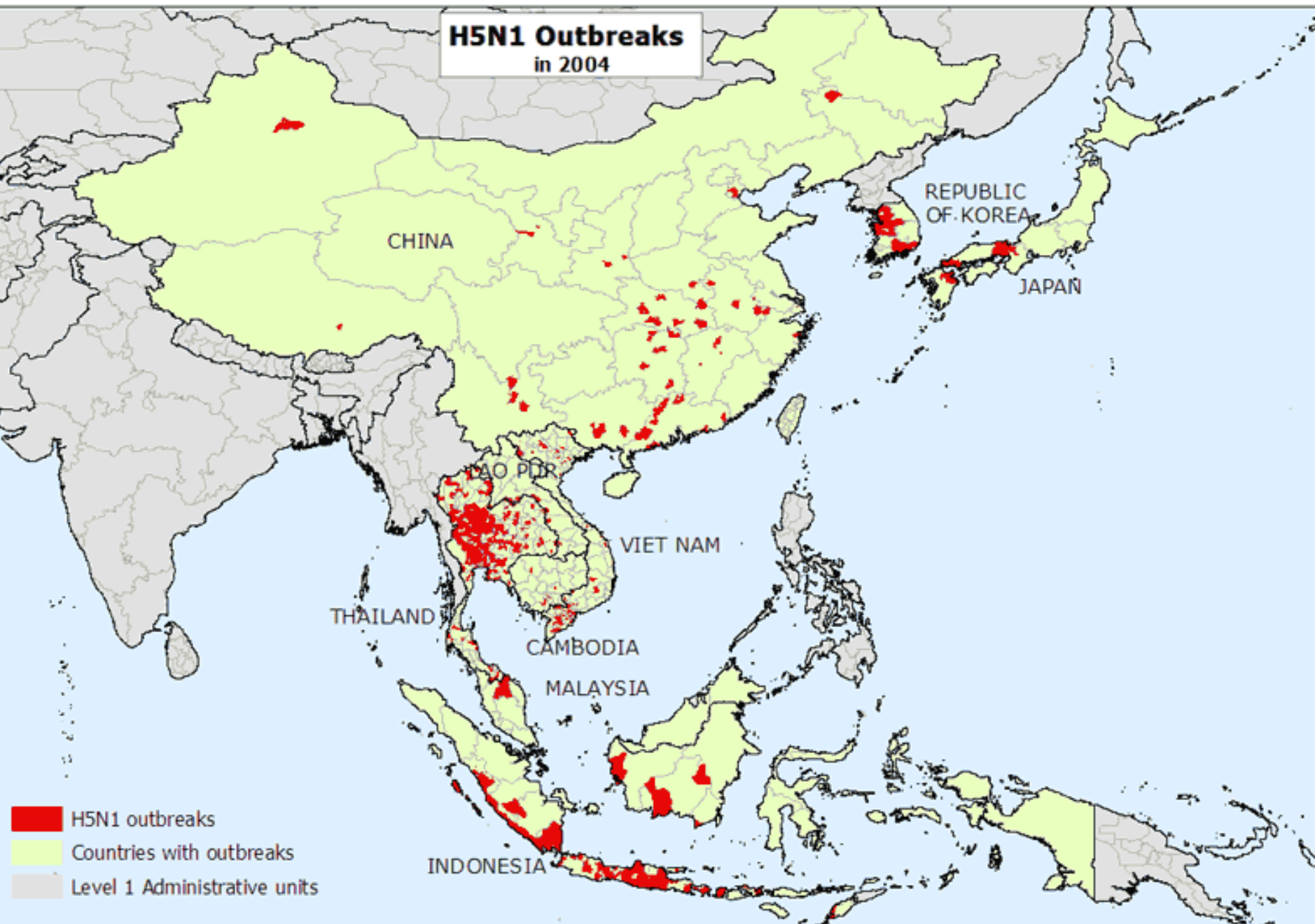




DỊCH CÚM GIA CẦM 2003

- Xảy ra vào cuối năm 2003
- Lan ra hơn 40 quốc gia kể cả châu Âu và châu Phi
- Chủng H5N1 thay đổi với nhiều đặc điểm khác nhau
- Có khả năng gây bệnh ở vịt và chim hoang dã

H5N1 Outbreaks in 2004



This map represents the districts or provinces that experienced outbreaks of H5N1 type of Avian Influenza between January and December 2004. The original data have been collected and aggregated at the most detailed administrative level and for the units available for each country.

Data source: OIE, FAO and Government sources

RUSSIAN FEDERATION

H5N1 Outbreaks

between January and August 2005

KAZAKHSTAN

MONGOLIA




CHINA

VIET NAM

THAILAND

CAMBODIA

INDONESIA

-  H5N1 Outbreaks
-  Countries with outbreaks
-  Level 1 Administrative units



This map represents the districts or provinces that experienced outbreaks of H5N1 type of Avian Influenza since January 2005 (map updated to 31 August 2005). The original data have been collected and aggregated at the most detailed administrative level and for the units available for each country.

Data source: OIE, FAO and Government sources



Human Spread, a First, Is Suspected in Bird Flu in Vietnam

By LAWRENCE K. ALTMAN

New York Times (1923-Current file); Feb 2, 2004;

ProQuest Historical Newspapers: The New York Times (1851-2009)

pg. A4 By LAWRENCE K. ALTMAN

Human Spread, a First, Is Suspected in Bird Flu in Vietnam

ĐẶC ĐIỂM LÂM SÀNG CÚM A (H5N1)

Clinical Features of Human Influenza A (H5N1) Infection in Vietnam: 2004–2006

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(See the editorial commentary by Beigel on pages 1647–8)

Background. The first cases of avian influenza A (H5N1) in humans in Vietnam were detected in early 2004, and Vietnam has reported the second highest number of cases globally.

Methods. We obtained retrospective clinical data through review of medical records for laboratory confirmed cases of influenza A (H5N1) infection diagnosed in Vietnam from January 2004 through December 2006. Standard data was abstracted regarding clinical and laboratory features, treatment, and outcome.

Results. Data were obtained for 67 (72%) of 93 cases diagnosed in Vietnam over the study period. Patients presented to the hospital after a median duration of illness of 6 days with fever (75%), cough (89%), and dyspnea (81%). Diarrhea and mucosal bleeding at presentation were more common in fatal than in nonfatal cases. Common findings were bilateral pulmonary infiltrates on chest radiograph (72%), lymphopenia (73%), and increased serum transaminase levels (aspartate aminotransferase, 69%; alanine aminotransferase, 61%). Twenty-six patients died (case fatality rate, 39%; 95% confidence interval, 27%–51%) and the most reliable predictor of a fatal outcome was the presence of both neutropenia and raised alanine aminotransferase level at admission, which correctly predicted 91% of deaths and 82% of survivals. The risk of death was higher among persons aged ≤ 16 years, compared with older persons ($P < .001$), and the risk of death was higher among patients who did not receive oseltamivir treatment ($P = .048$). The benefit of oseltamivir treatment remained after controlling for potential confounding by 1 measure of severity (odds ratio, 0.15; 95% confidence interval, 0.026–0.893; $P = .034$).

Conclusion. In cases of infection with Influenza A (H5N1), the presence of both neutropenia and raised serum transaminase levels predicts a poor outcome. Oseltamivir treatment shows benefit, but treatment with corticosteroids is associated with an increased risk of death.

H5N1 Ở NGƯỜI (2003-2006)

Country	Total cases	Deaths
Indonesia	33	25
Viet Nam	93	42
Thailand	22	14
Cambodia	6	6
China	18	12
Turkey	12	4
Iraq	2	2
Azerbaijan	8	5
Egypt	13	5
Total	207	115

• Theo website của WHO: www.who.int/crs/disease/avian_influenza/country

CÚM GIA CẦM H5N1



CÚM GIA CẦM H5N1

“There is no evidence that any human cases of avian influenza have been acquired by eating poultry products.” CDC, February 24, 2004

“To date there is no epidemiological information to suggest that the disease can be transmitted through contaminated food or that products shipped from affected areas have been the source of infection in humans.” WHO, January 24, 2004

- ***“Không có bằng chứng nào cho thấy mắc bệnh cúm do ăn sản phẩm từ gia cầm “***
- ***“ Hiện nay, về dịch tế gợi ý rằng bệnh không truyền qua thức ăn bị nhiễm hoặc các sản phẩm được chuyên chở từ vùng có dịch “***

TỔNG KẾT 67/93 CA

- Tuổi TB: 23 (TV: 25 tuổi)

TRIỆU CHỨNG:

- SỐT (75%)
- HO (89%)
- KHÓ THỞ (81%)
- THÂM NHIỄM 2 PHỔI (72%)
- GIẢM LYMPHO (73%)
- TĂNG MEN GAN (69%)

TỔNG KẾT 67/93 CA

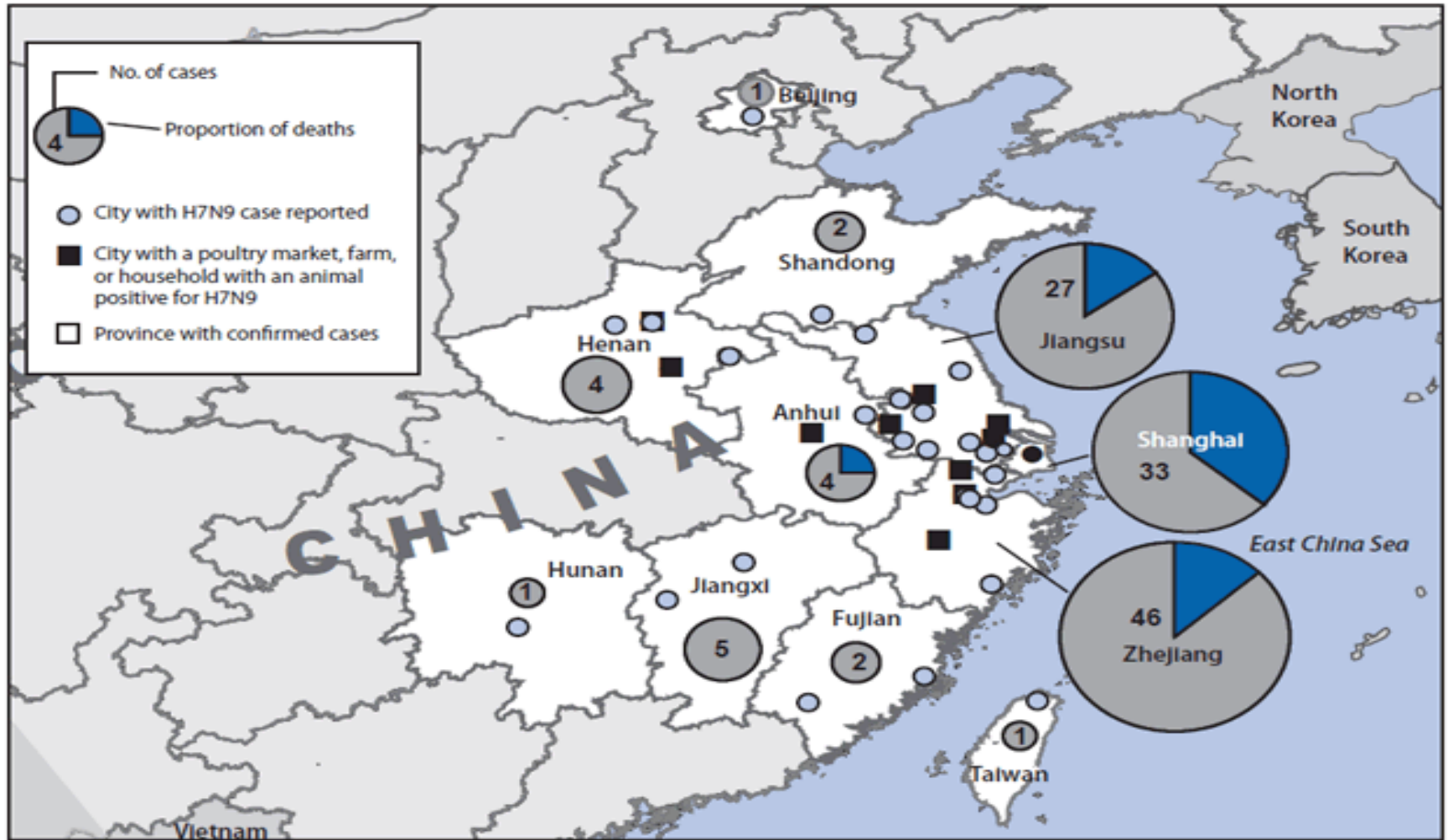
- Tử vong: 26 (39%)

YT NGUY CƠ TỬ VONG:

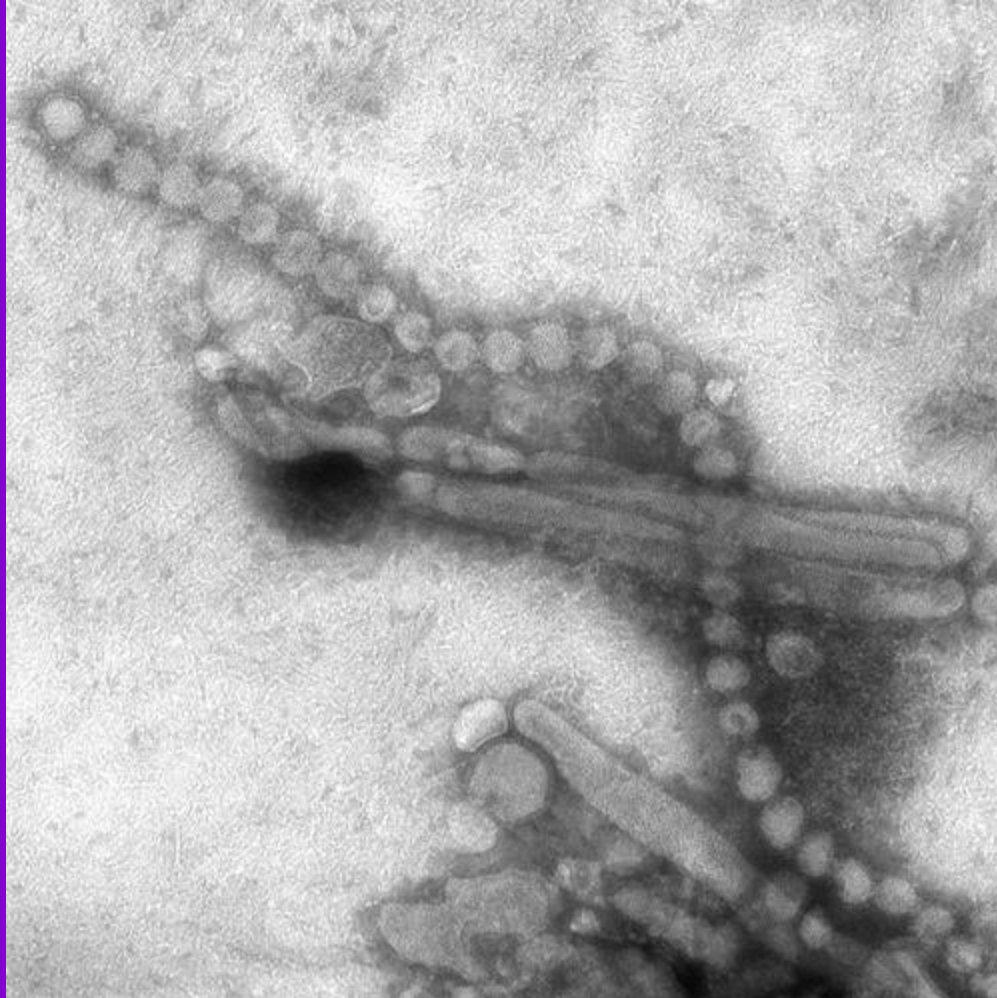
- GIẢM BC ĐA NHÂN TT
- TĂNG MEN GAN
- DƯỚI 16 TUỔI
- KHÔNG DÙNG OSELTAMIVIR
- DÙNG CORTICOID

CÚM A H7N9 (TRUNG QUỐC)

FIGURE 1. Location of confirmed cases of human infection (n = 126) with avian influenza A(H7N9) 19–April 29, 2013
deaths (n = 24)



HÌNH ẢNH H7N9 (KHV điện tử)



<http://www.cdc.gov/flu/avianflu/h7n9-images.htm>

ĐẶC ĐIỂM DỊCH H7N9

- Người lớn tuổi (TV: 61 tuổi) (cúm gà 26 tuổi)
- Nam (71%)
- Có bệnh nền
- Hầu hết có tiếp xúc gia cầm
- Tìm thấy H7N9 ở chim
- Triệu chứng nặng: ARDS, suy đa tạng
- Chưa có bằng chứng lây người-người

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm62e0501a1.htm?s_cid=mm62e0501a1_w#fig1

Báo cáo ca bệnh H7N9 (Đài loan)

The first case of H7N9 influenza in Taiwan

We report here the first case of H7N9 infection outside mainland China.

A 53-year-old male patient was admitted because of fever for 3 days after returning from Suchow, Jiangsu Province, China on April 9, 2013. He had been otherwise well except for a history of hypertension and chronic hepatitis B virus infection. The patient did not report a history of contact with sick persons or animals during the travel. He began to get fever and general malaise on April 12. He had no respiratory symptoms, gastrointestinal symptoms, or myalgias. The patient sought medical attention on April 16 when fevers continued. Two throat-swab specimens tested negative for

high H7N9 viral loads ($4.5\text{--}51.4 \times 10^7$ copies per mL) were found in the two sputum specimens and one throat-swab specimen (collected on April 20 and April 22, respectively) while the viral load was undetectable in the blood specimens collected daily between 20 and 23 April.

H7N9 might spread to other areas beyond Shanghai, China. Due to the rapidly progressing lower respiratory tract infections in infected individuals,^{1,2} extensive preventive efforts are needed to prevent further spreading of H7N9.

We declare that we have no conflicts of interest.

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Báo cáo ca bệnh H7N9 (Đài loan)

BN nam, 53t , nhập viện vì sốt 3 ngày

Trở về từ tỉnh Giang Tô TQ vào 9/4/03

TS: THA và viêm gan B

Không tiếp xúc người bệnh hoặc gia cầm

LS: Sốt, mệt

Không TC hô hấp, tiêu hóa và đau cơ

XQ phổi: BT

PCR (2lần H7N9 -)

Điều trị Tamiflu 75 mg x2 /N

N6: chụp XQ: thâm nhiễm mô kẽ đáy phổi P

Tx: Moxifloxacin

N7: khó thở, XQ: dấu đông đặc cả 2 đáy phổi

Tx: tăng liều Tamiflu 150 mgx2/N

Đặt nội KQ, thở máy- KS: Ceftazidim+ Lefloxacin

Thở NO -> không hiệu quả

SA, XQ: không tràn khí

Thở oxy ngoài cơ thể ECMO

PCR đàm H7N9 (+) virus máu 3 lần (-)

PHÒNG BỆNH CÁ NHÂN

Che mũi-miệng khi ho, nháy mũi bằng khăn giấy



Rửa tay bằng nước +xà phòng, nhất là sau khi ho



Tránh đụng chạm vào mắt, mũi, miệng

Tránh tiếp xúc người bệnh

Nghỉ học hoặc nghỉ đi làm khi bị bệnh



PHÒNG BỆNH CỘNG ĐỒNG

- Giảm đi lại
- Hạn chế, tránh chỗ đông người
- Tránh tiếp xúc người có triệu chứng cúm (khoảng cách > 1m)
- Mang mask (có thể không hiệu quả), bỏ ngay khi hết tiếp xúc.
- Không nên mua bán, vận chuyển gia cầm sống
Tránh tiếp xúc heo, gà, trại chăn nuôi..
- Tiêm chủng gia cầm

Thank you !

