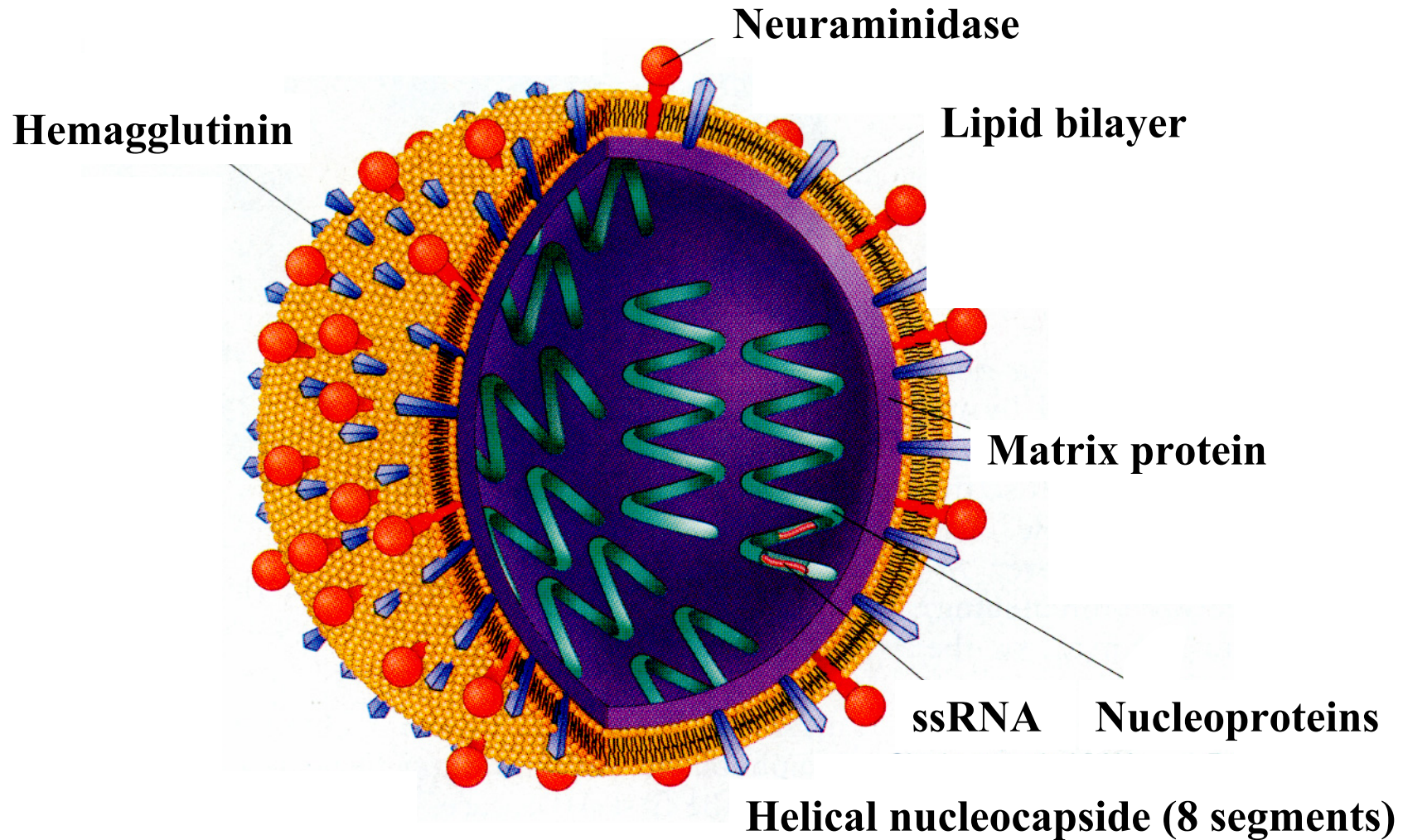





























INFLUENZA

A new pandemic ?

















INFLUENZA VIRUS STRUCTURE



HEMAGGLUTININ SUBTYPES

Subtype	Human	Pig	Horse	Birds
H1				
H2				
H3				
H4				
H5				
H6				
H7				
H8				
H9				
H10				
H11				
H12				
H13				
H14				
H15				

NEURAMINIDASE SUBTYPES

Subtype	Human	Pig	Horse	Birds
N1				
N2				
N3				
N4				
N5				
N6				
N7				
N8				
N9				

ANTIGENIC DRIFT

H3 → H3' → H3''

N2 → N2' → N2''

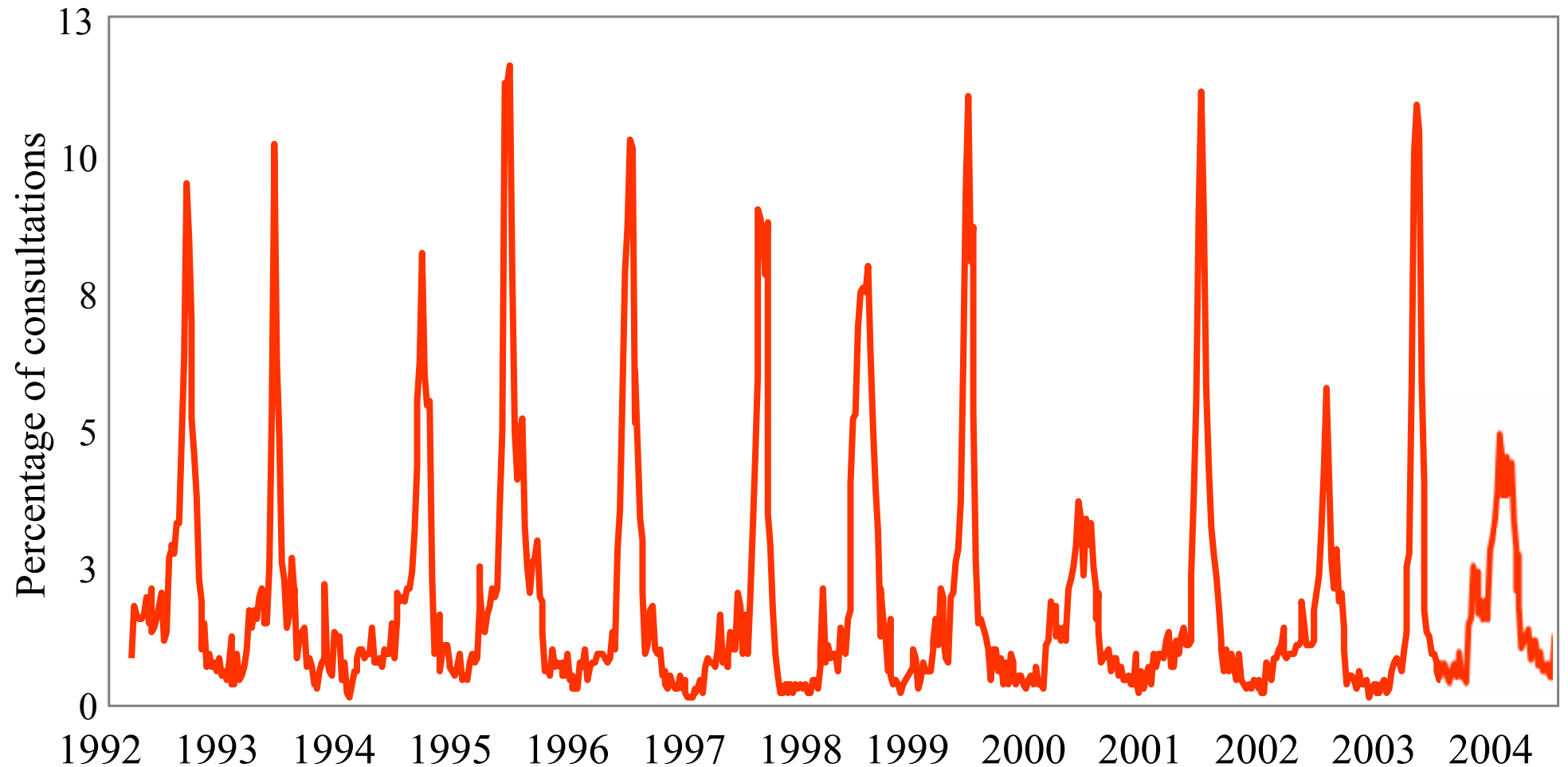


Year 1

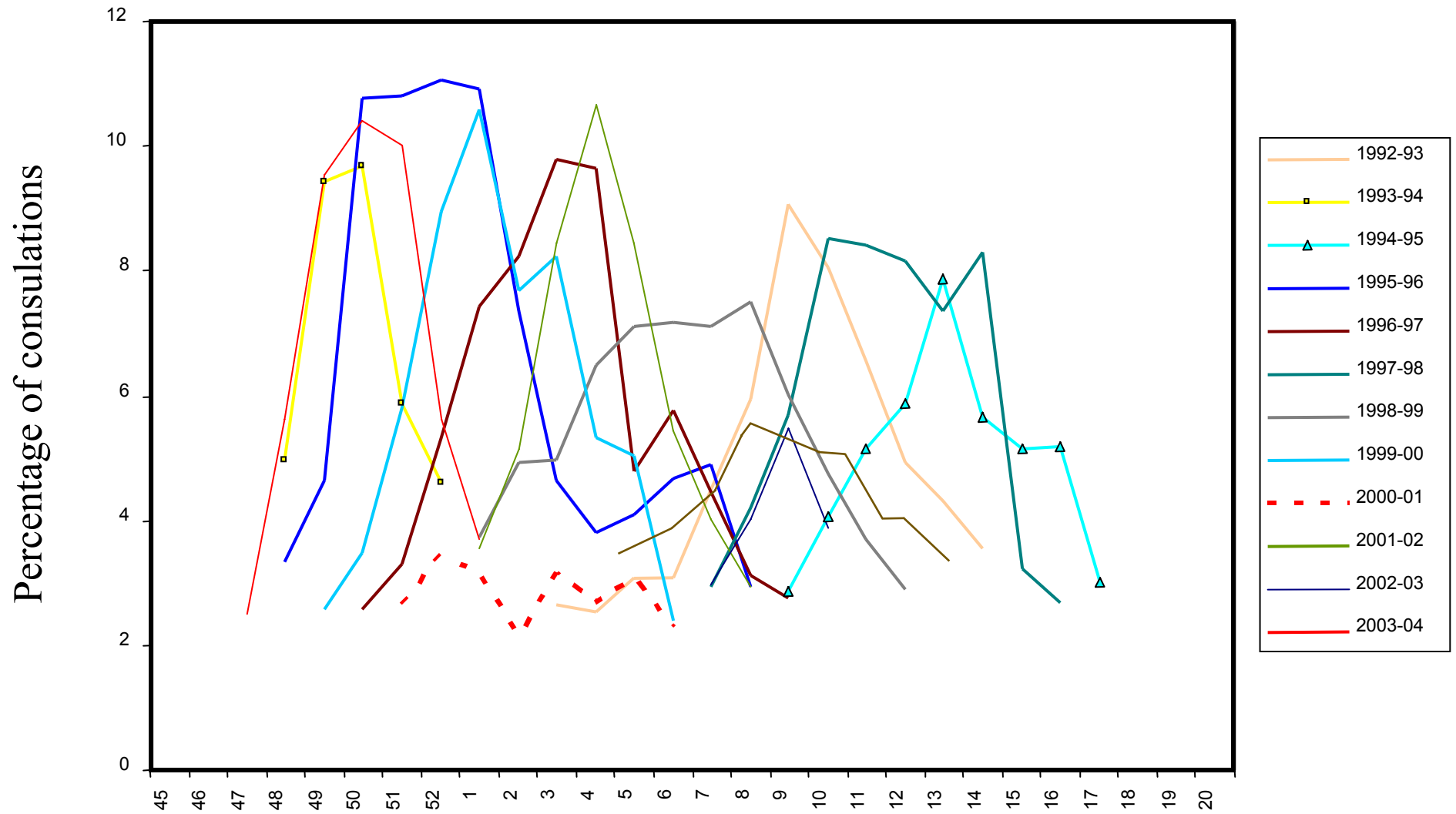
Year 2

Year 3

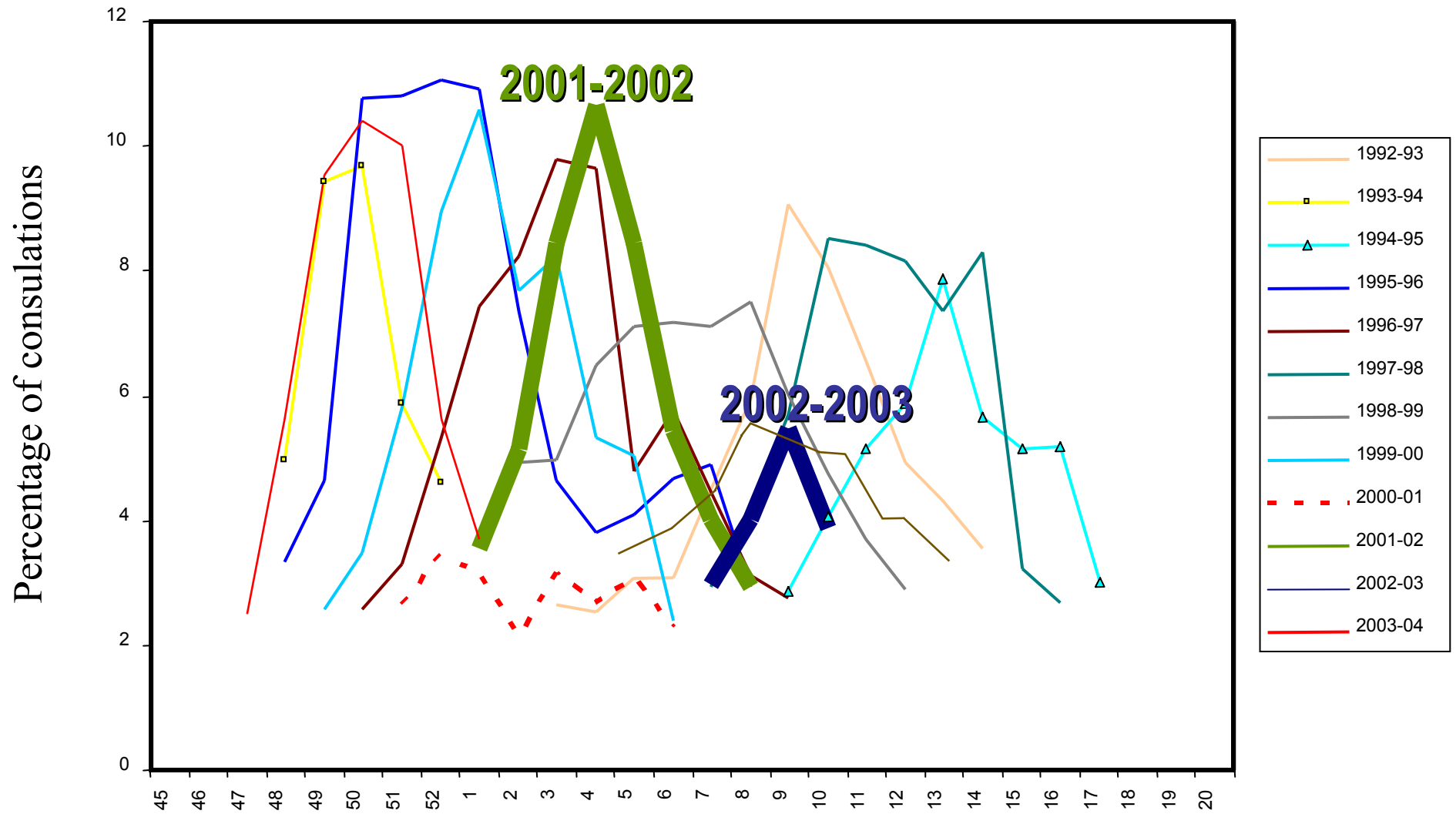
INFLUENZA SEASONALITY



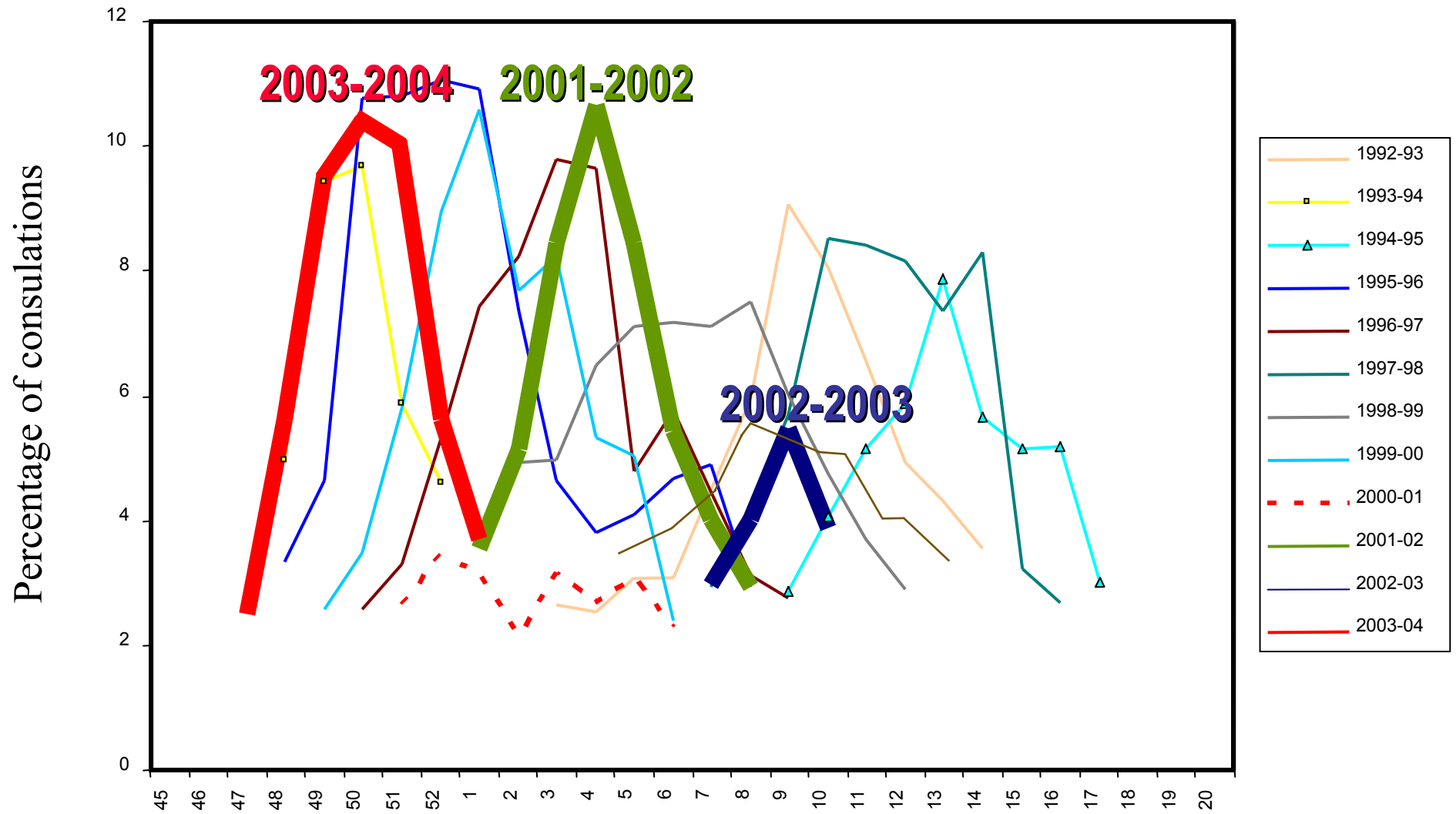
INFLUENZA 1992-2005



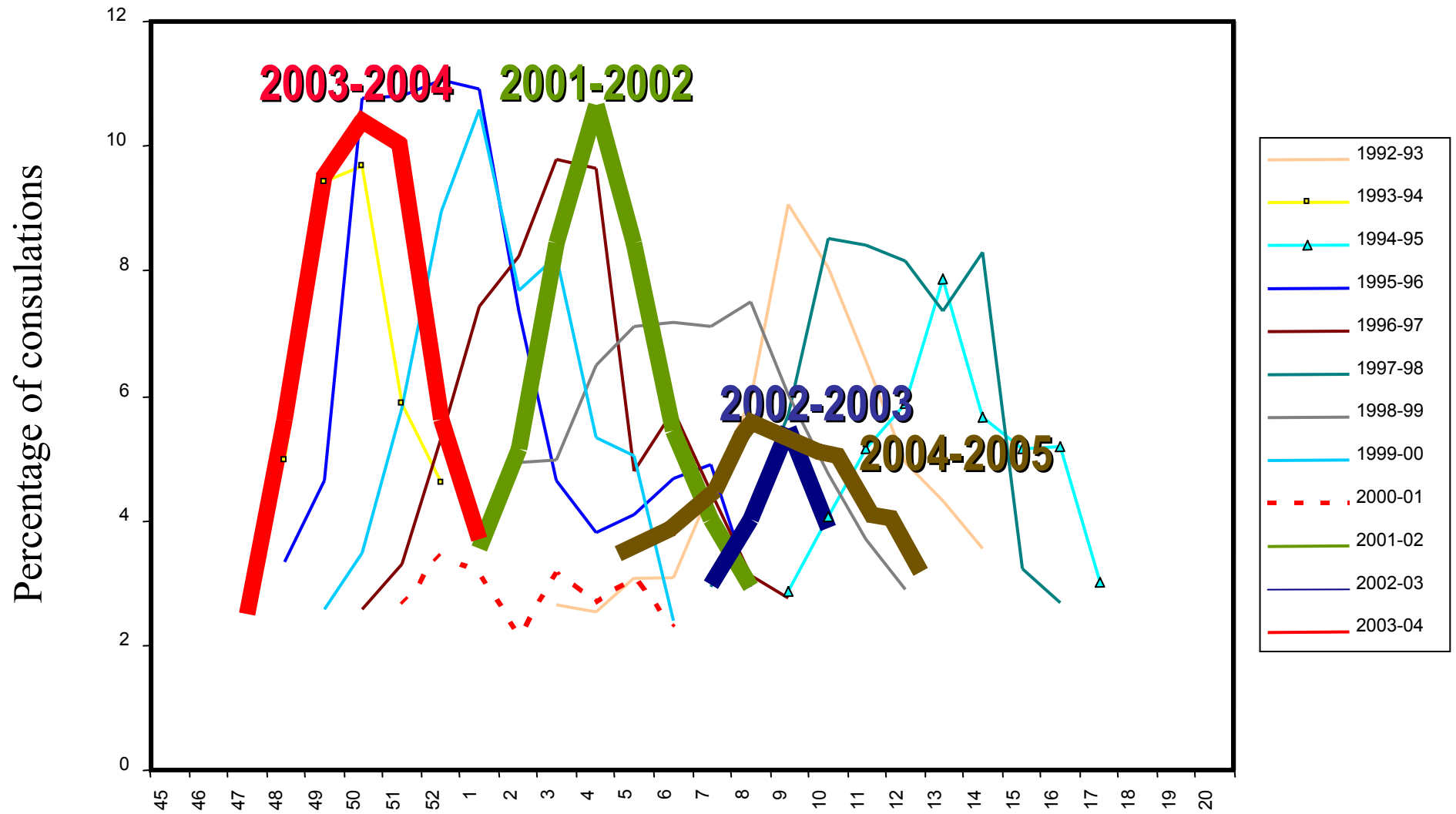
INFLUENZA 1992-2005



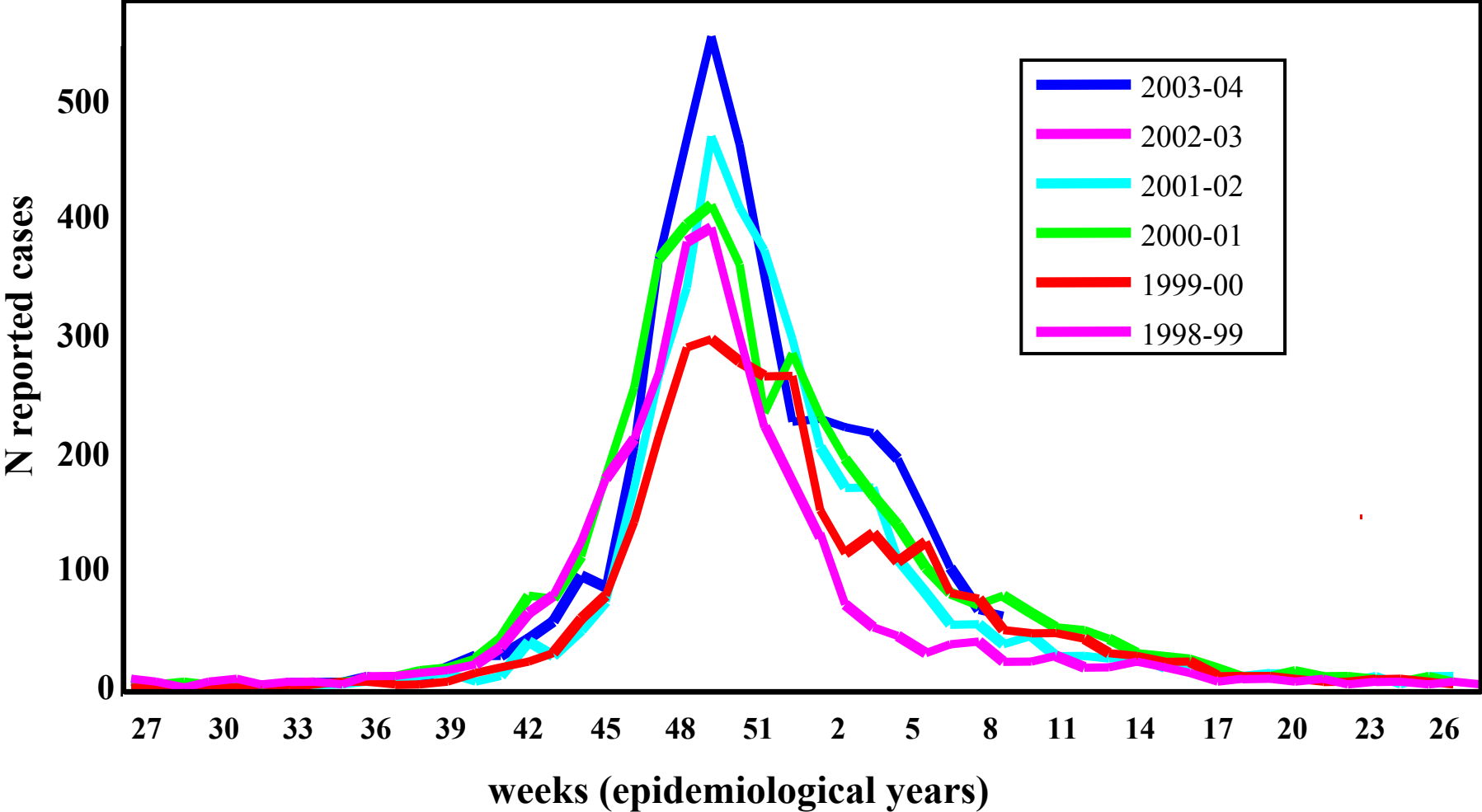
INFLUENZA 1992-2005



INFLUENZA 1992-2005

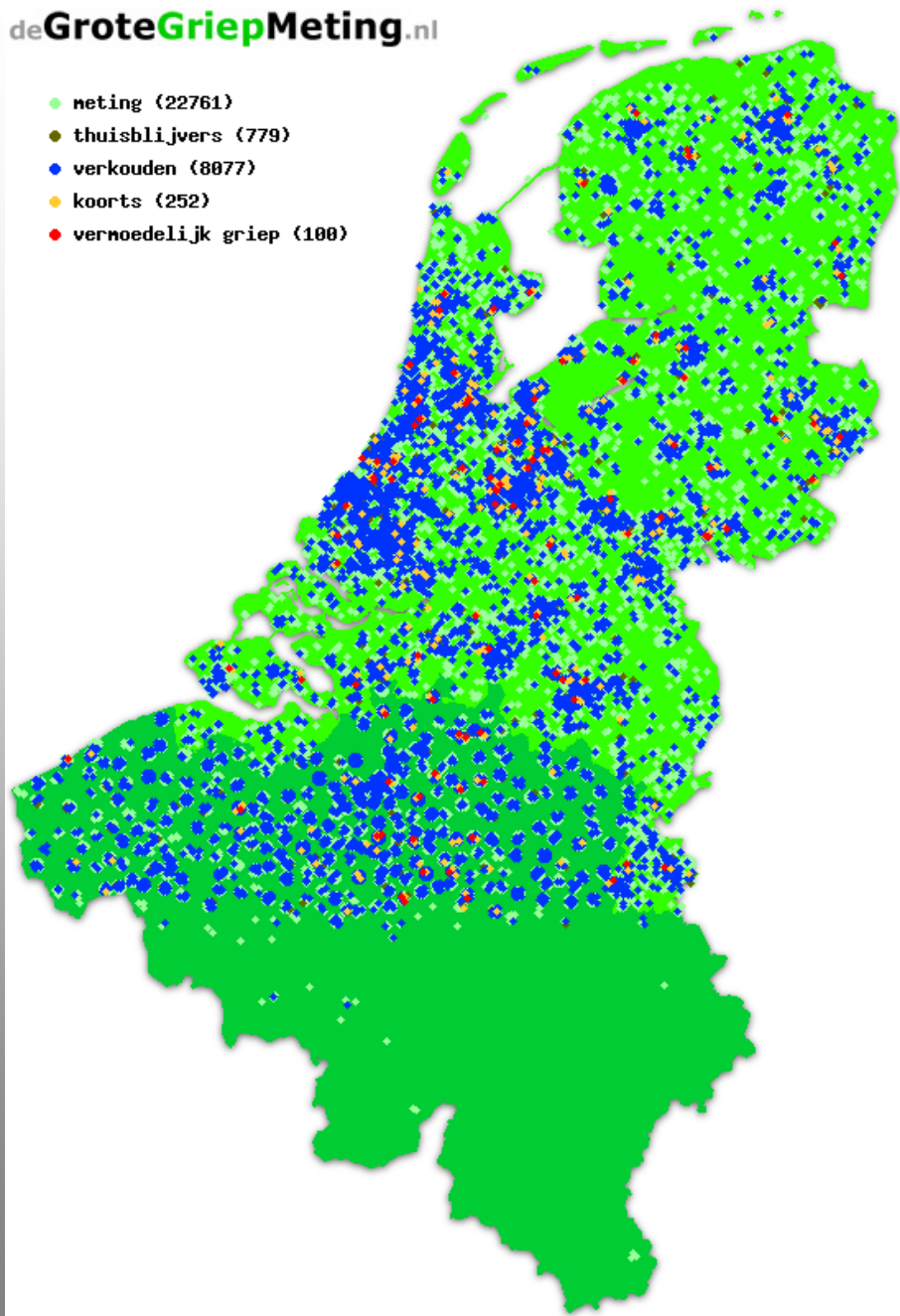


RSV INFECTIONS 1998-2004



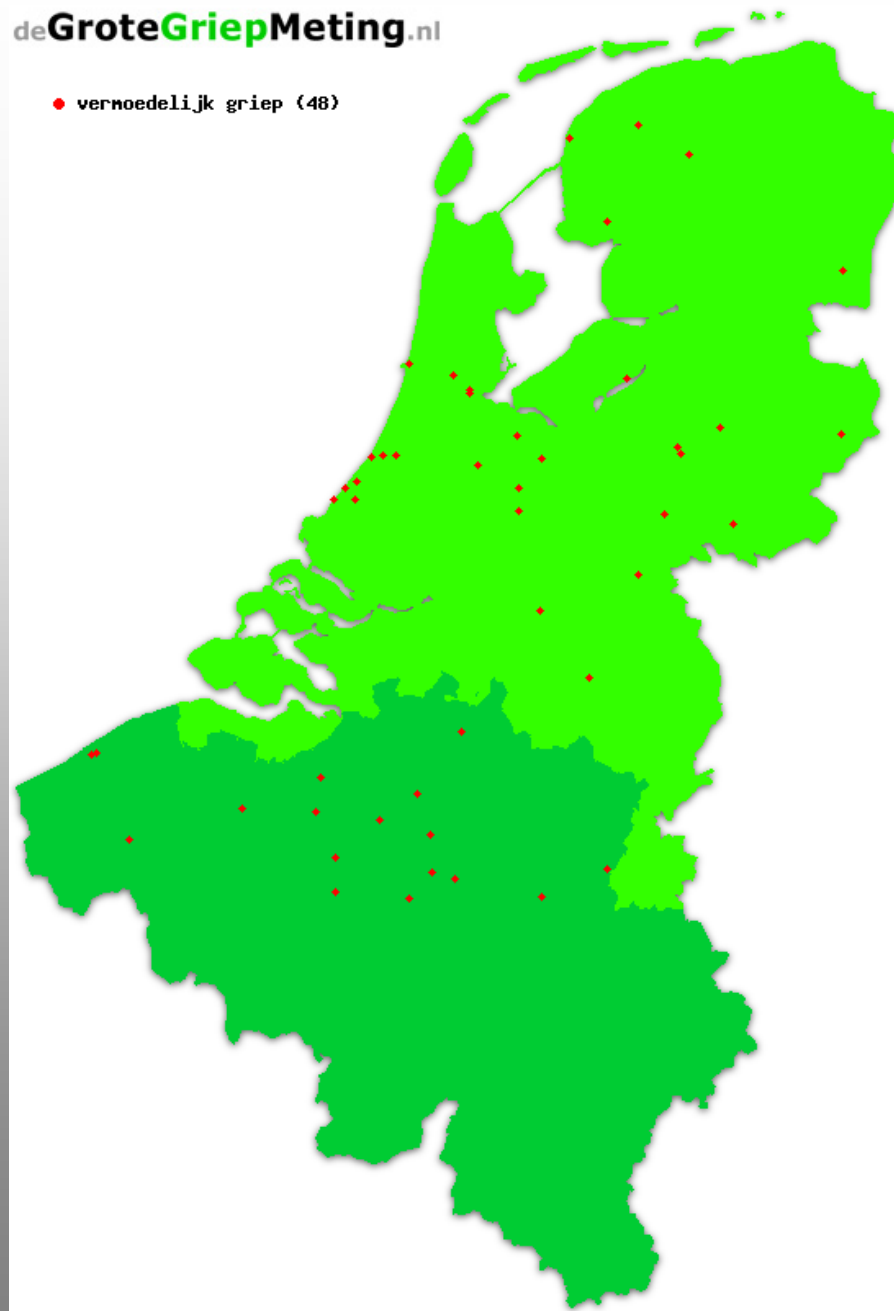
deGroteGriepMeting.nl

- meting (22761)
- thuisblijvers (779)
- verkouden (8077)
- koorts (252)
- vermoedelijk griep (100)



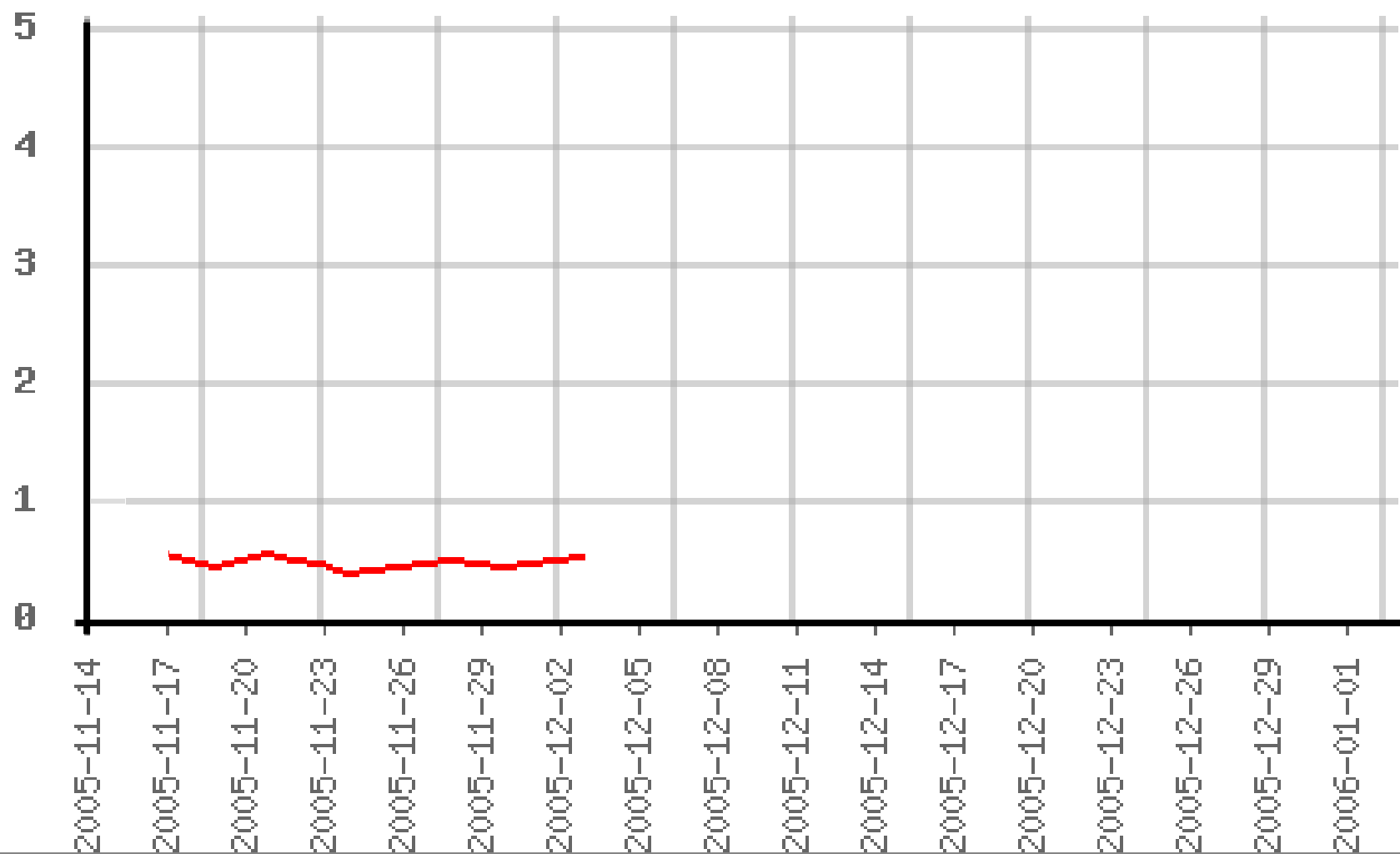
deGroteGriepMeting.nl

- vermoedelijk griep (48)



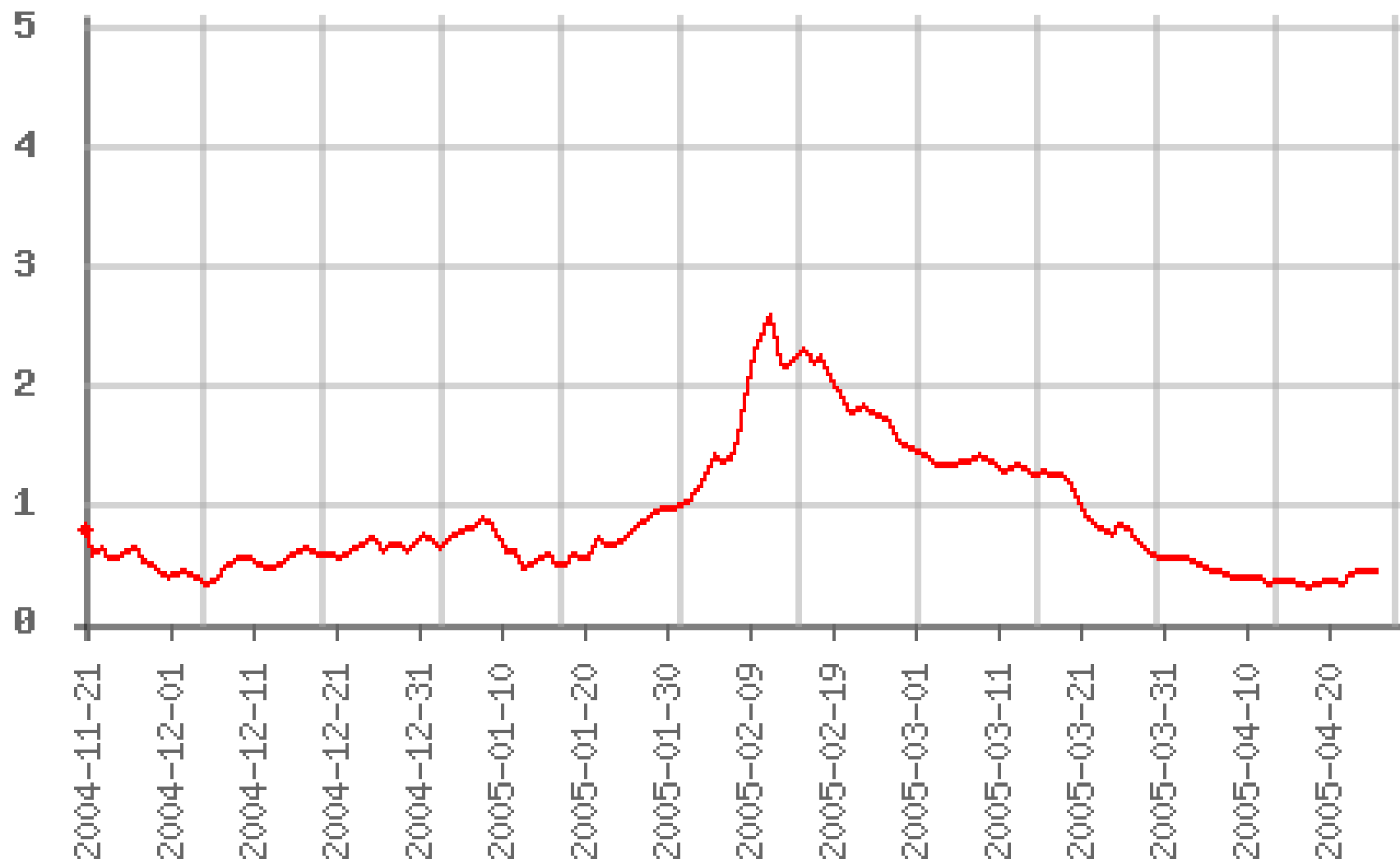
deGroteGriepMeting.nl

♦ percentage griep (gem. 0.53%)

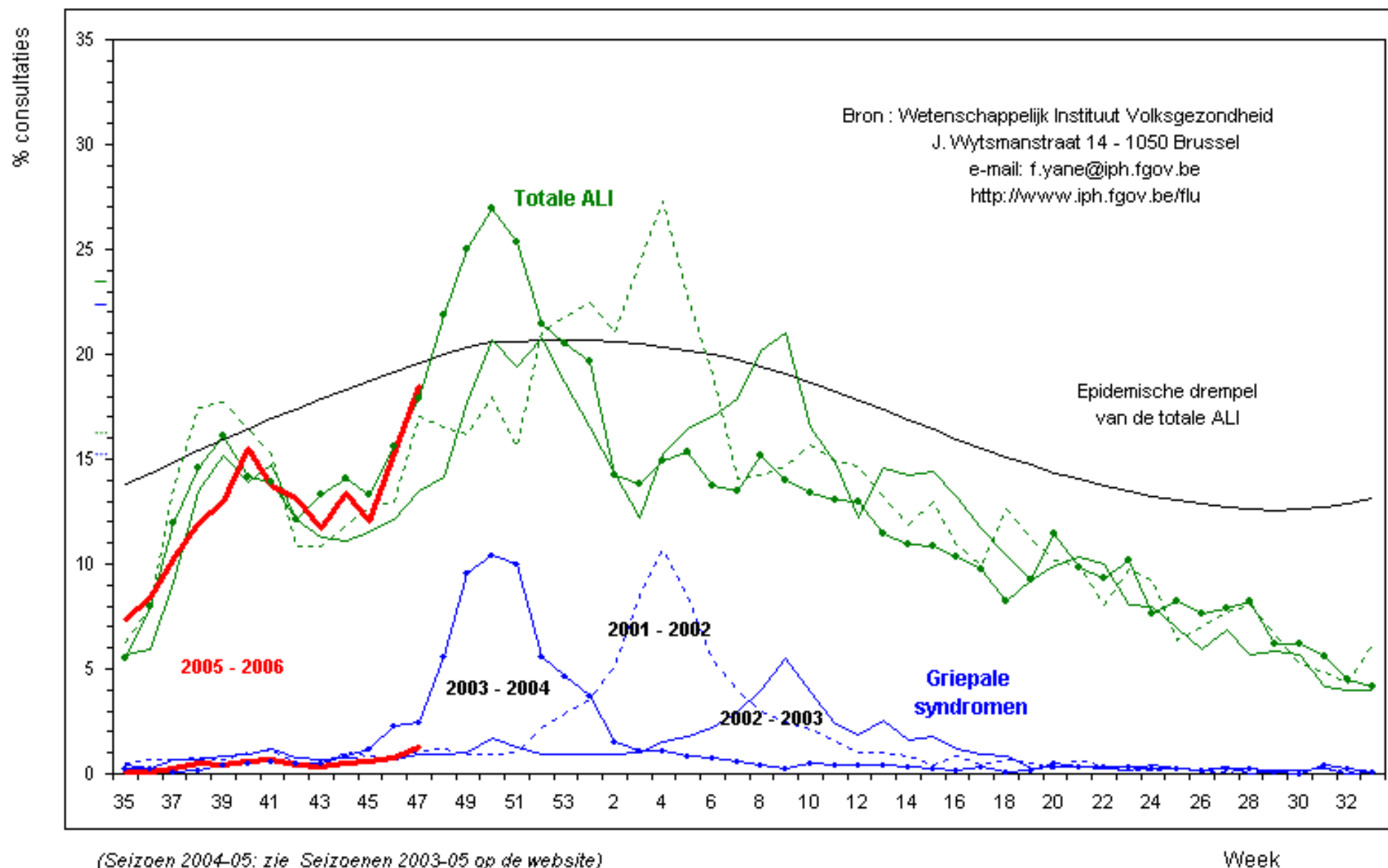


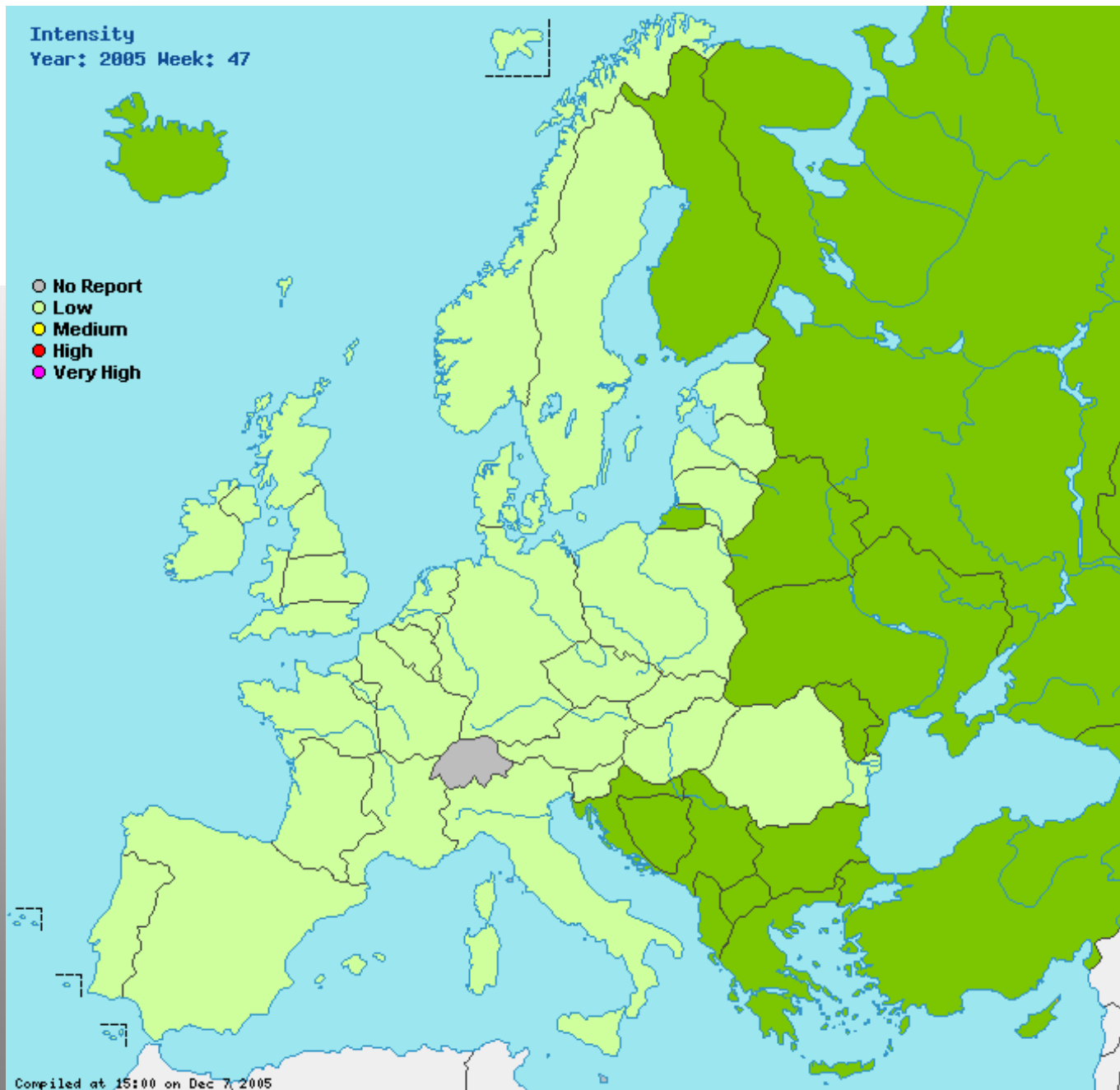
de **Grote Griep** Meting.nl

♦ percentage griep (gem. 0.88%)



Evolutie van het percentage griepgevallen en acute luchtwegeninfecties (ALI) bij patiënten geregistreerd door huisartspeilpraktijken



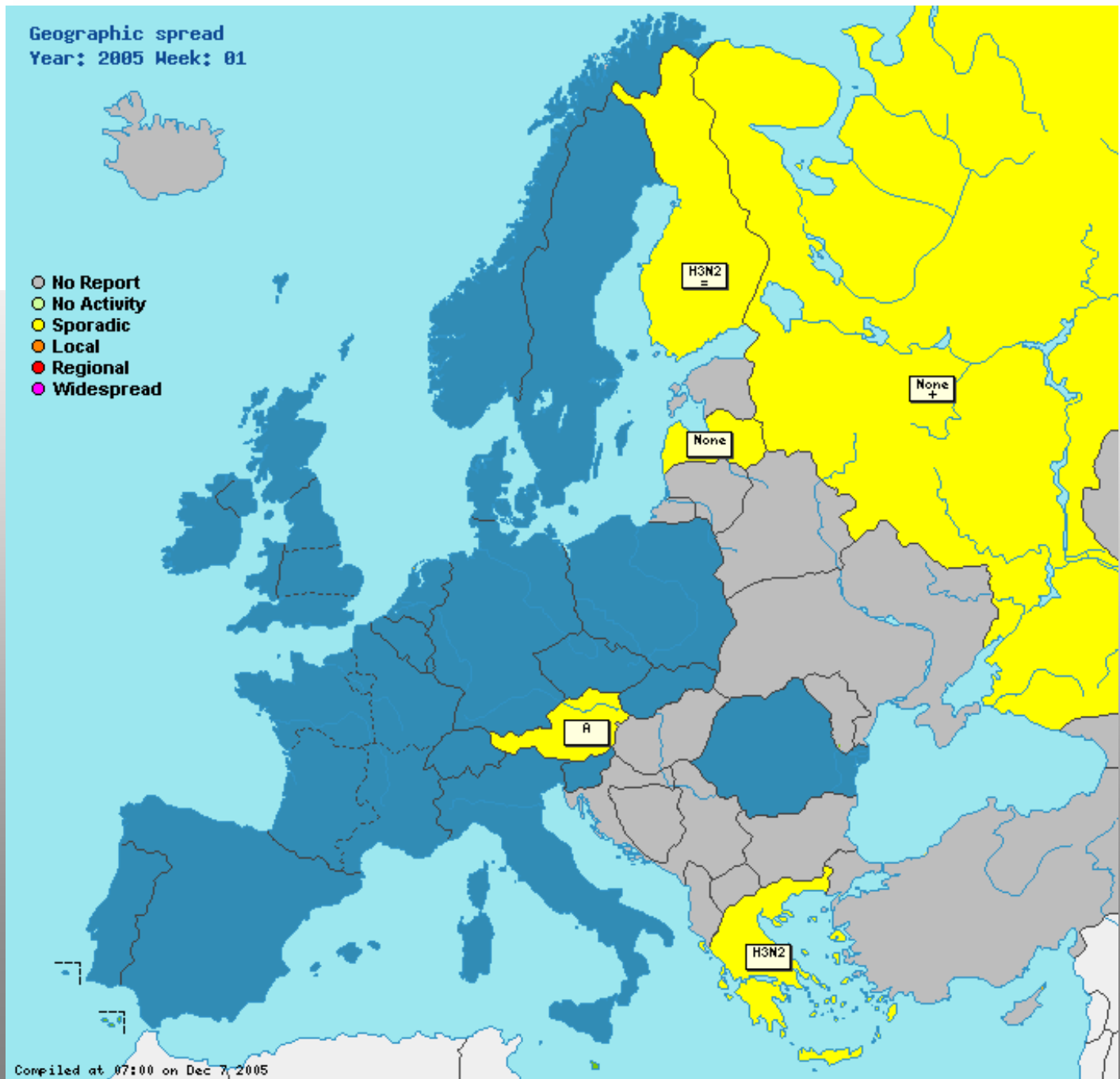


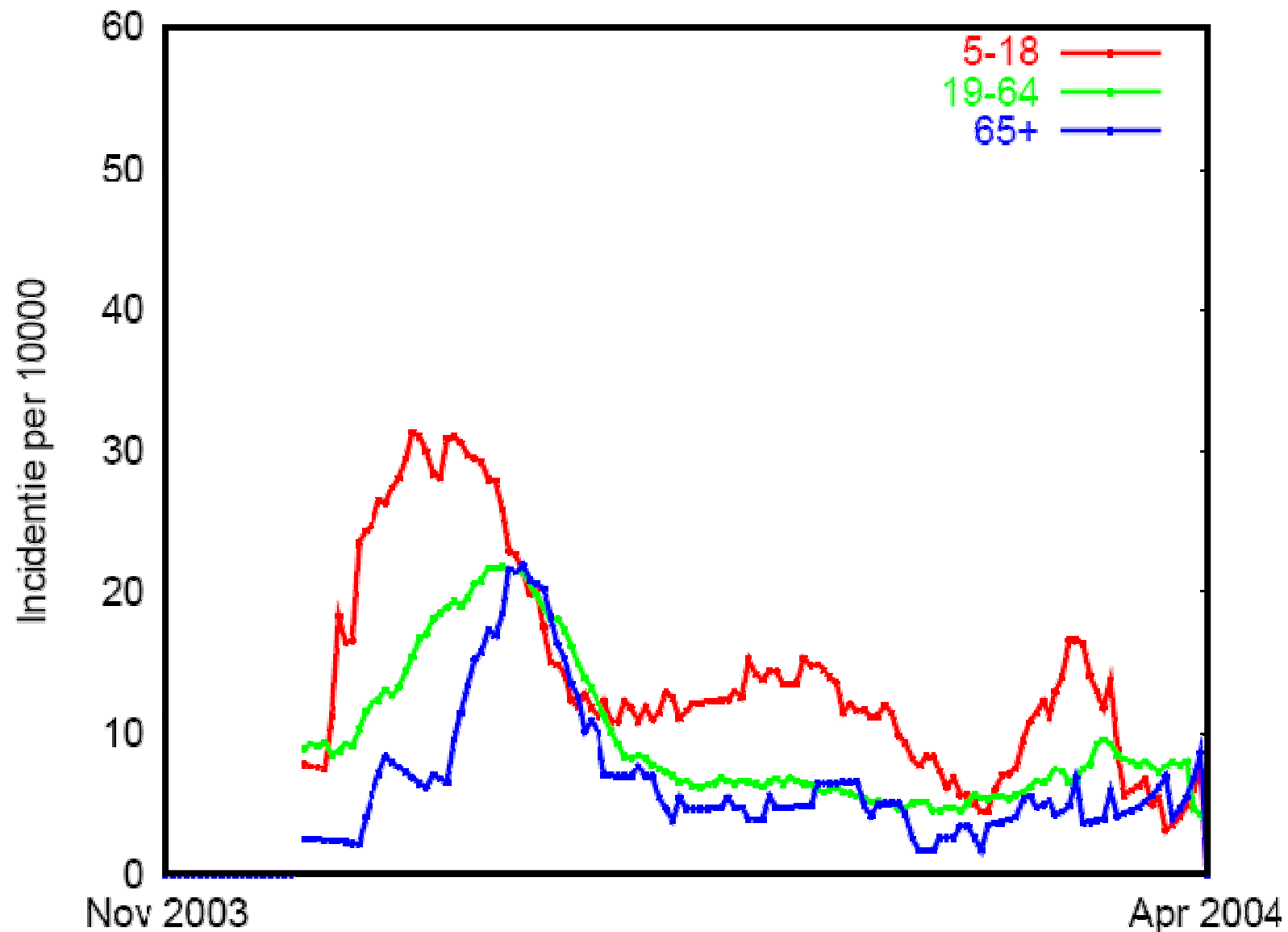


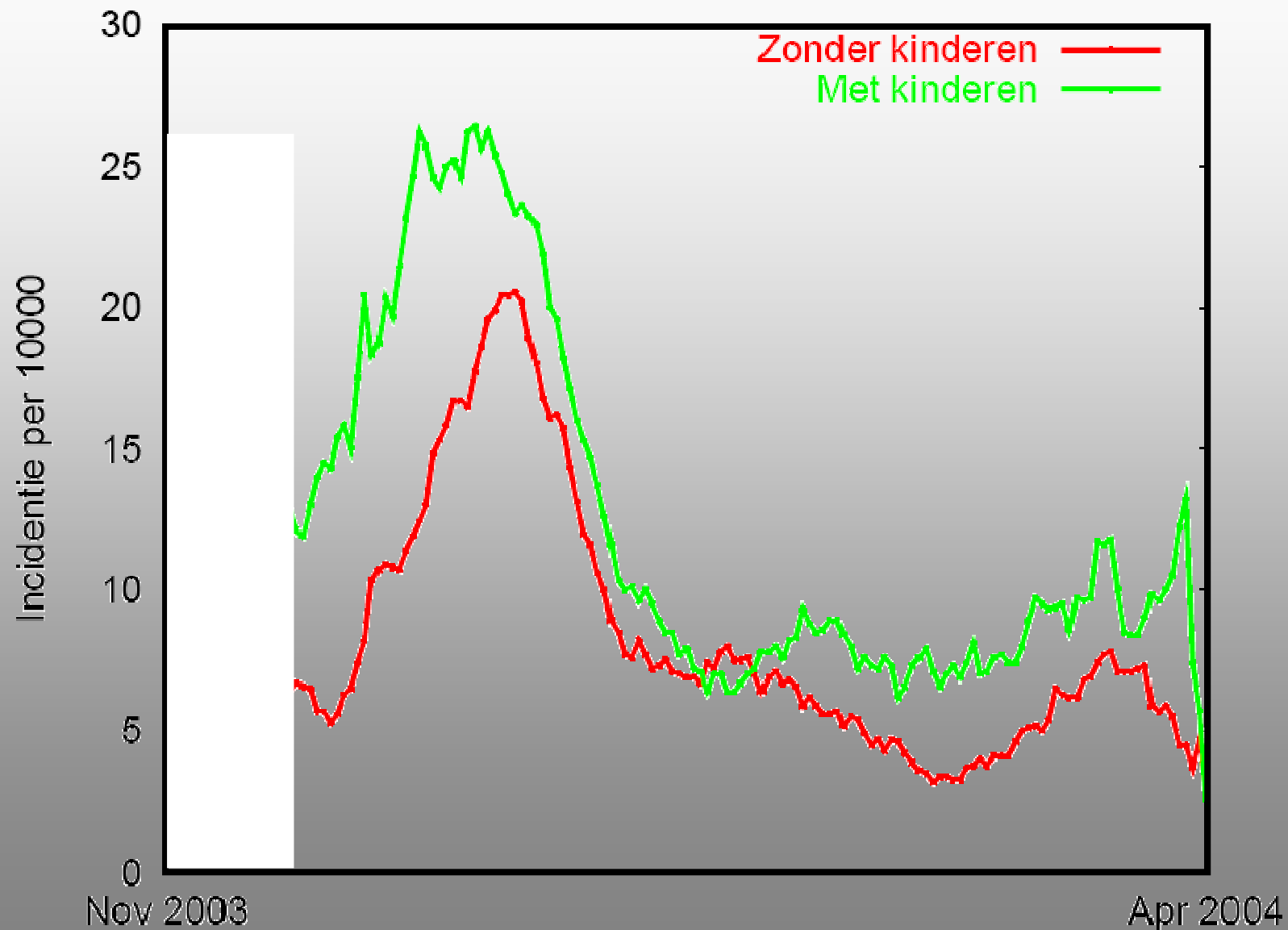
Geographic spread
Year: 2005 Week: 01



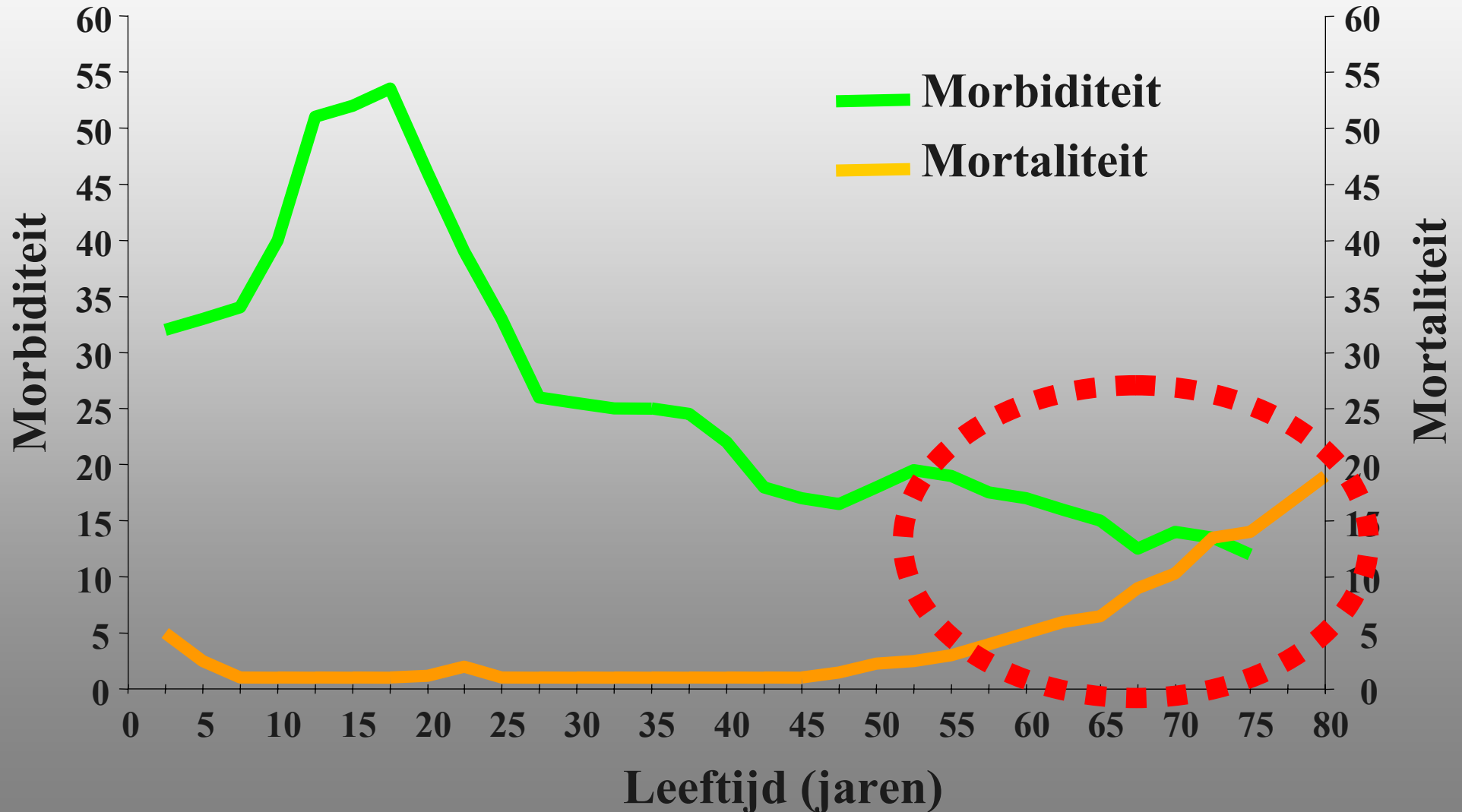
- No Report
- No Activity
- Sporadic
- Local
- Regional
- Widespread







INFLUENZA EPIDEMIOLOGIE





*Helping Families Honor the
Lives of Those They Love*



Hillebrand Industries, 1st Quarter Report, March 30, 2001

In the Funeral Services Group, Batesville Casket Company posted sales of \$163 million, a \$5 million decrease from the prior year. The company attributes the lower sales to a mild flu season resulting in a lower death rate and lower volume at Batesville Casket Company. Despite lower sales, gross margins increased to 50.9% in the current year, compared to 48.8% last year, primarily as a result of productivity improvements and improved product mix partially offset by lower volume.



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Vaccines, 'Wellcome' Brand—continued**'WELLCOME' BRAND—****„ Influenza Vaccine**

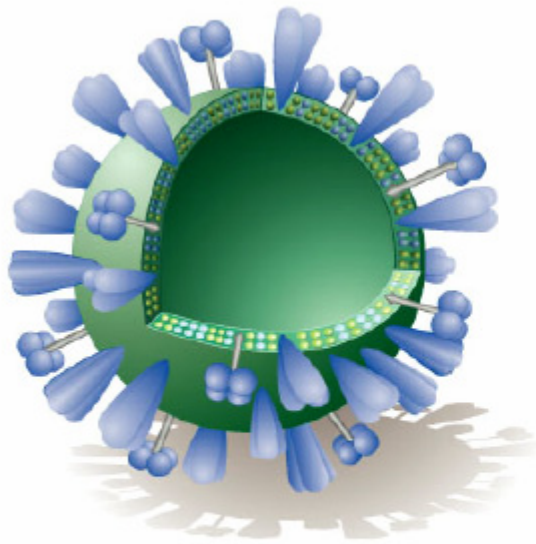
I c.c. containing 10 million *B. influenzae*

I c.c. „ 50 „ „ „





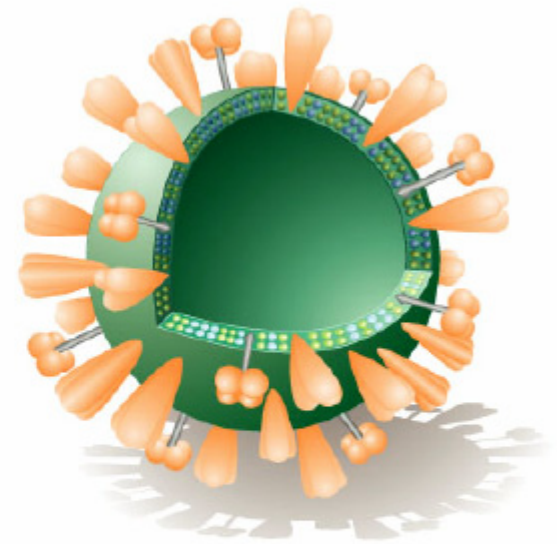
TRIVALENT INFLUENZA VACCINE



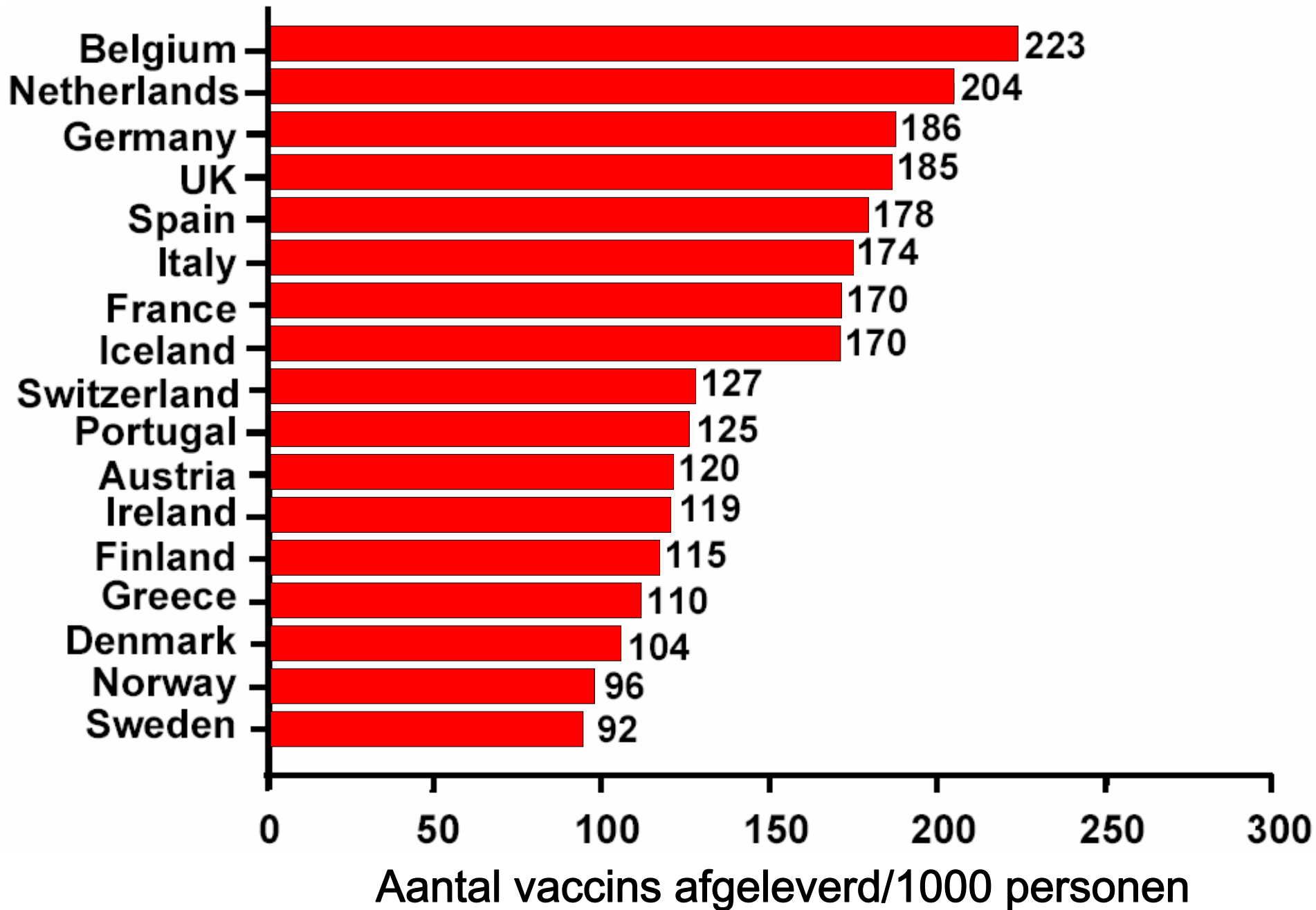
A/H1N1



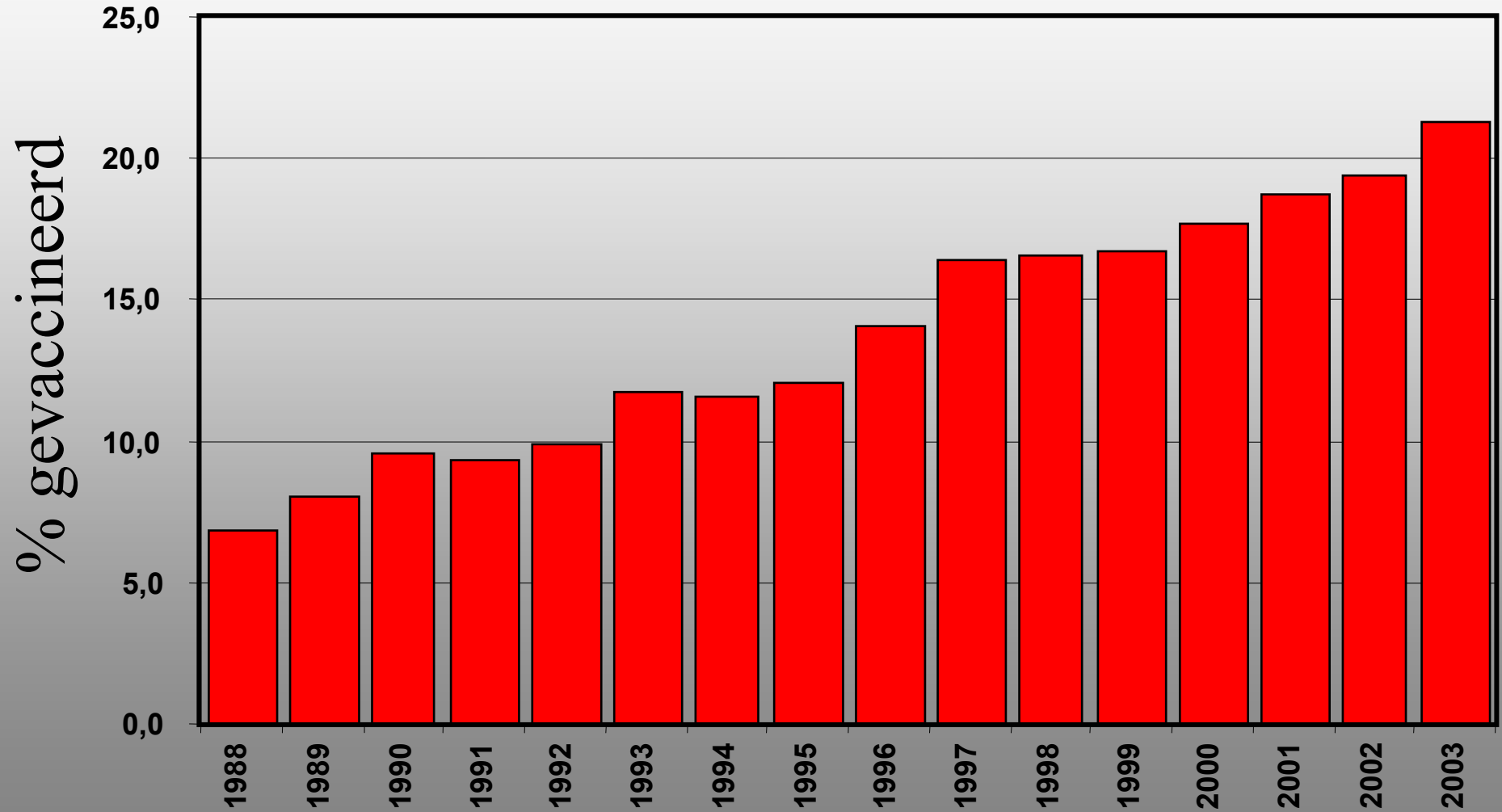
A/H3N2



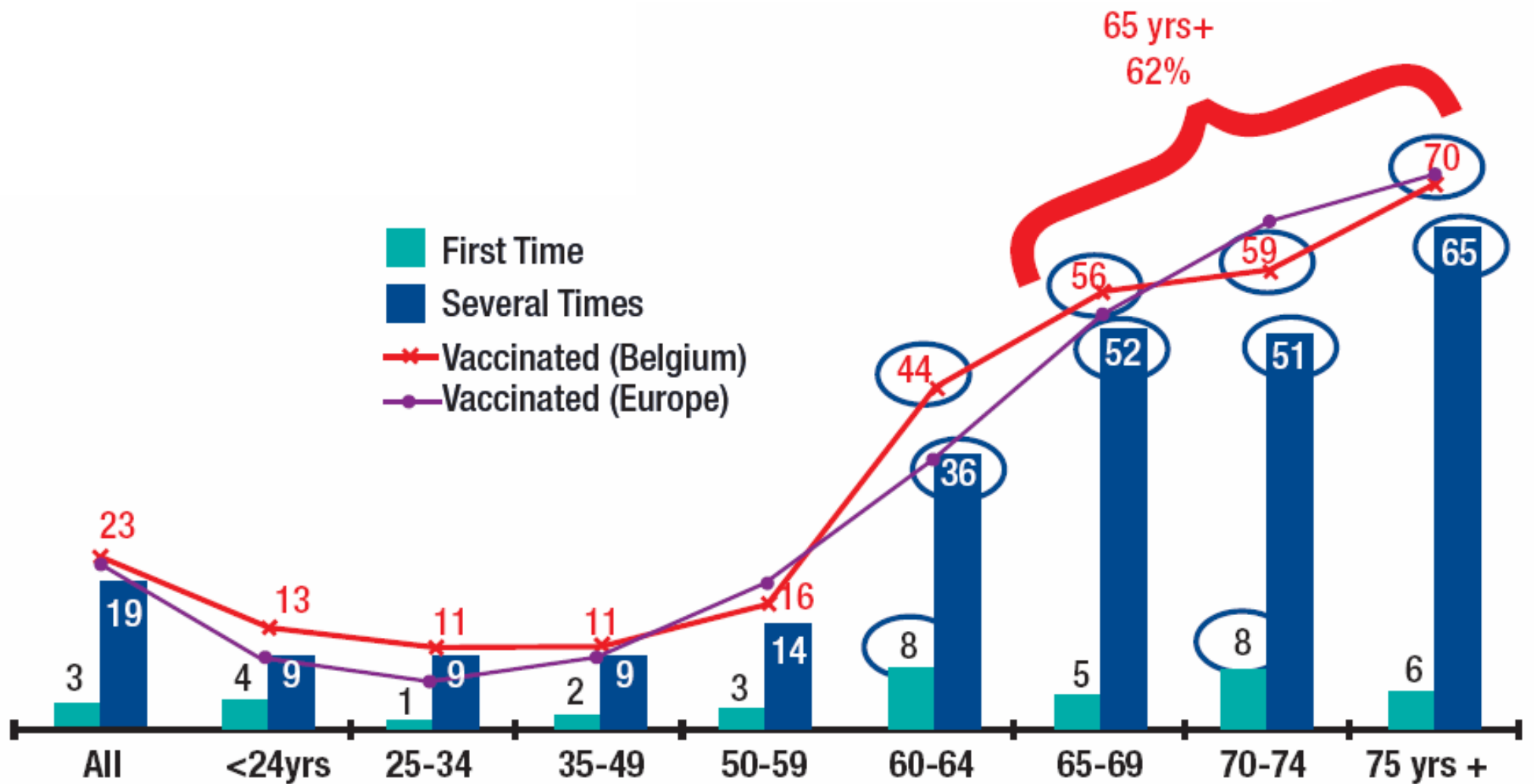
B



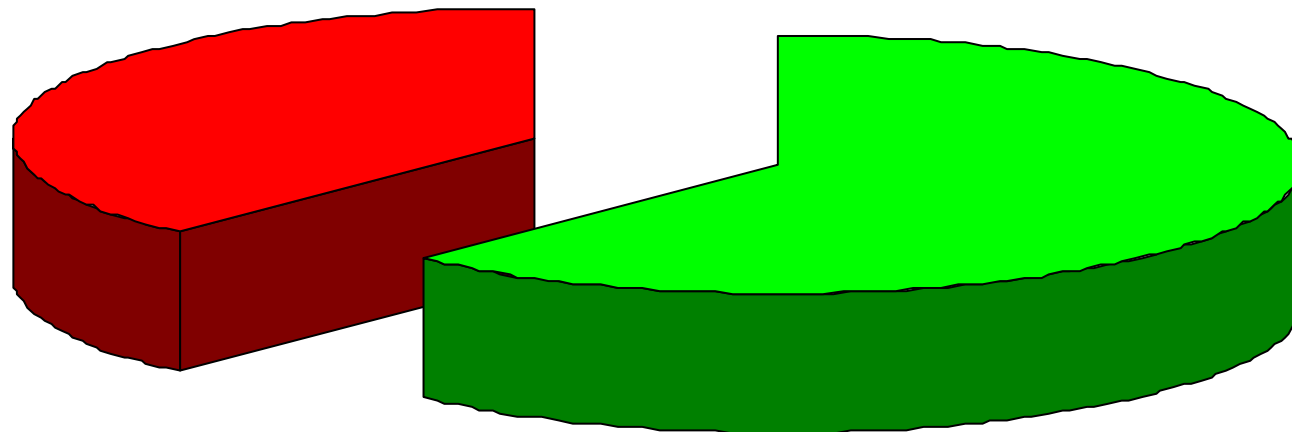
VACCINATION COVERAGE



VACCINATION COVERAGE



VACCINATION COVERAGE >65 year



Non-vaccinated

38%

700.000

Vaccinated

62%

1.140.000



**INFLUENZA PANDEMIC:
How real is the treath ?**

GENETIC SHIFT

H3 → H5

N2 → N1



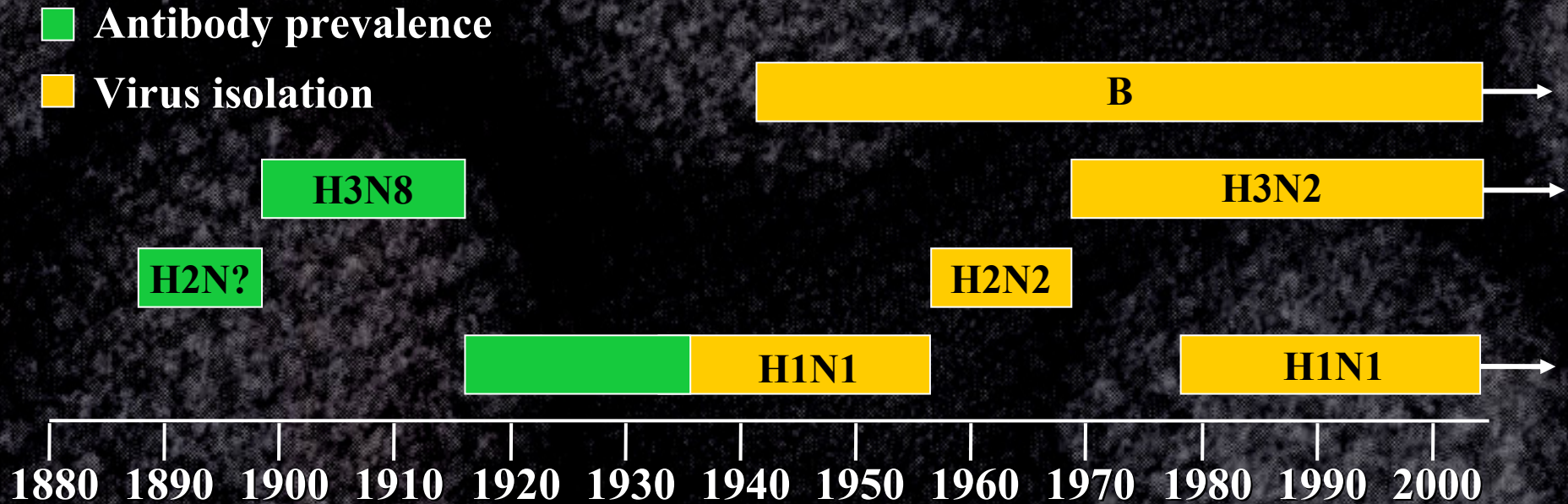
Year 1

Year 2

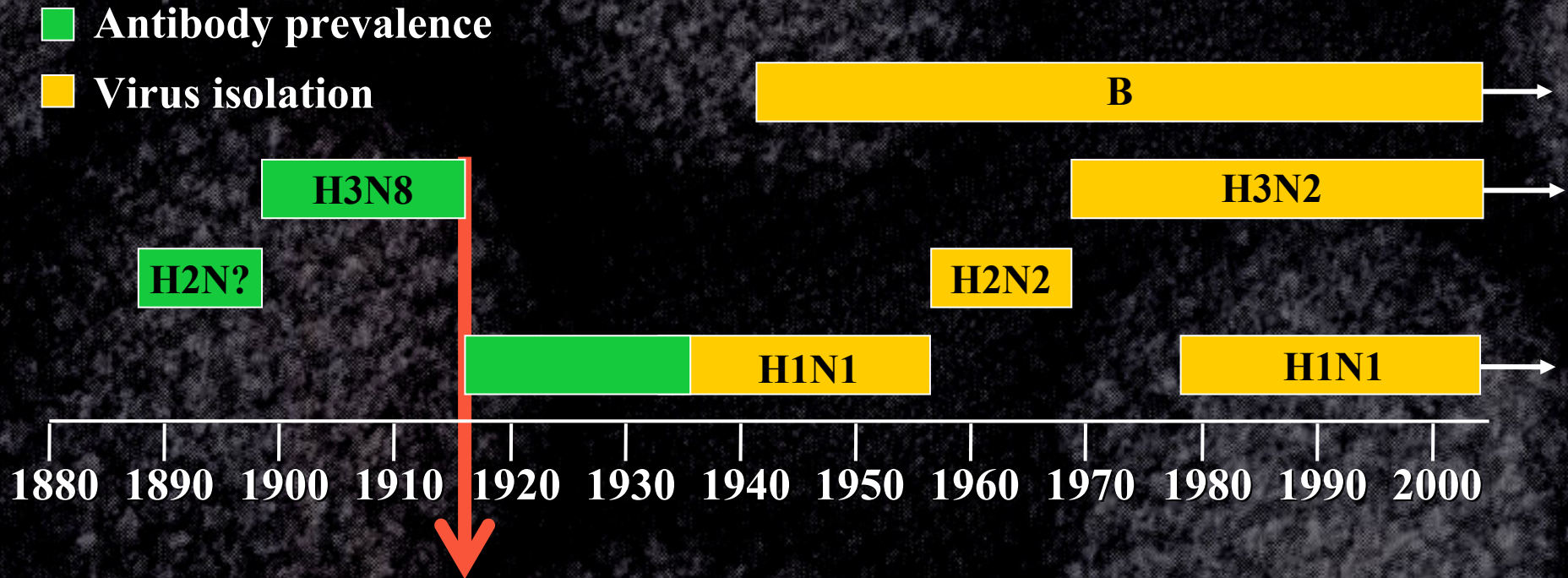


LA GRIPPE FAISANT LE TOUR DU MONDE.

INFLUENZA VIRUSES



INFLUENZA VIRUSES



**1918 H1N1:
Spanish Flu**



Kamp Funston, Kansas, 1918















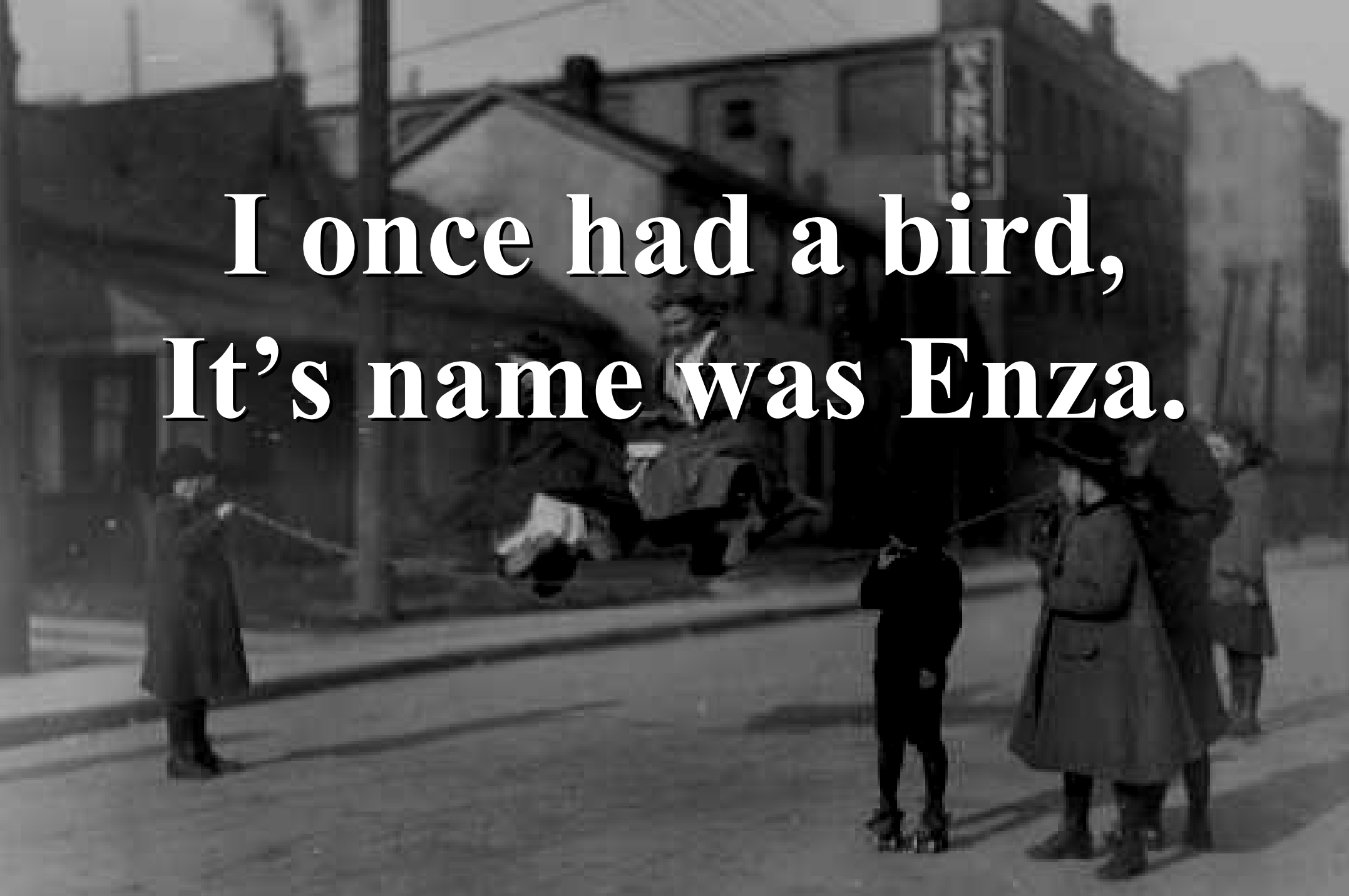
1918 SBIMC-BVIKM meeting



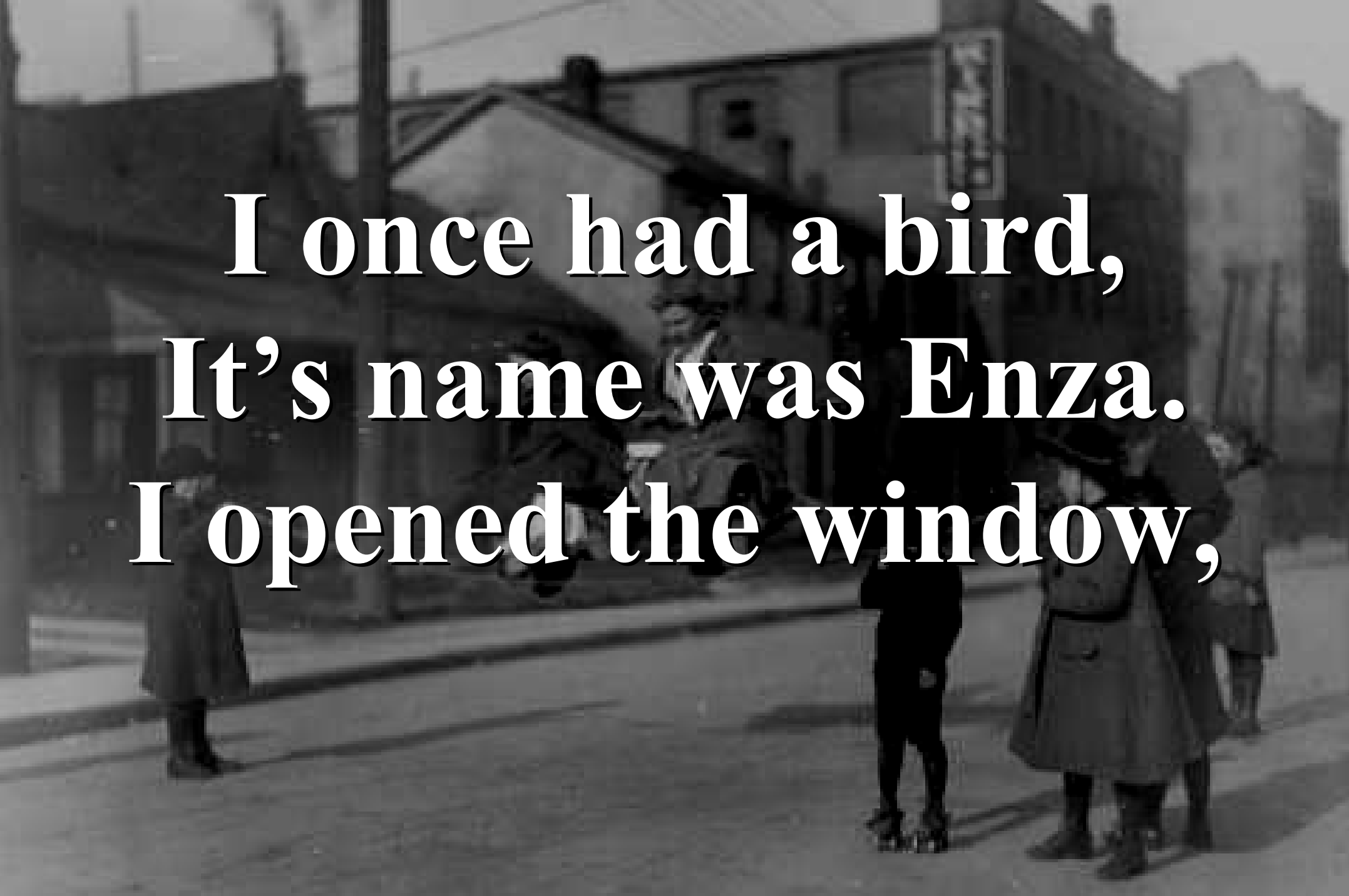


I once had a bird,

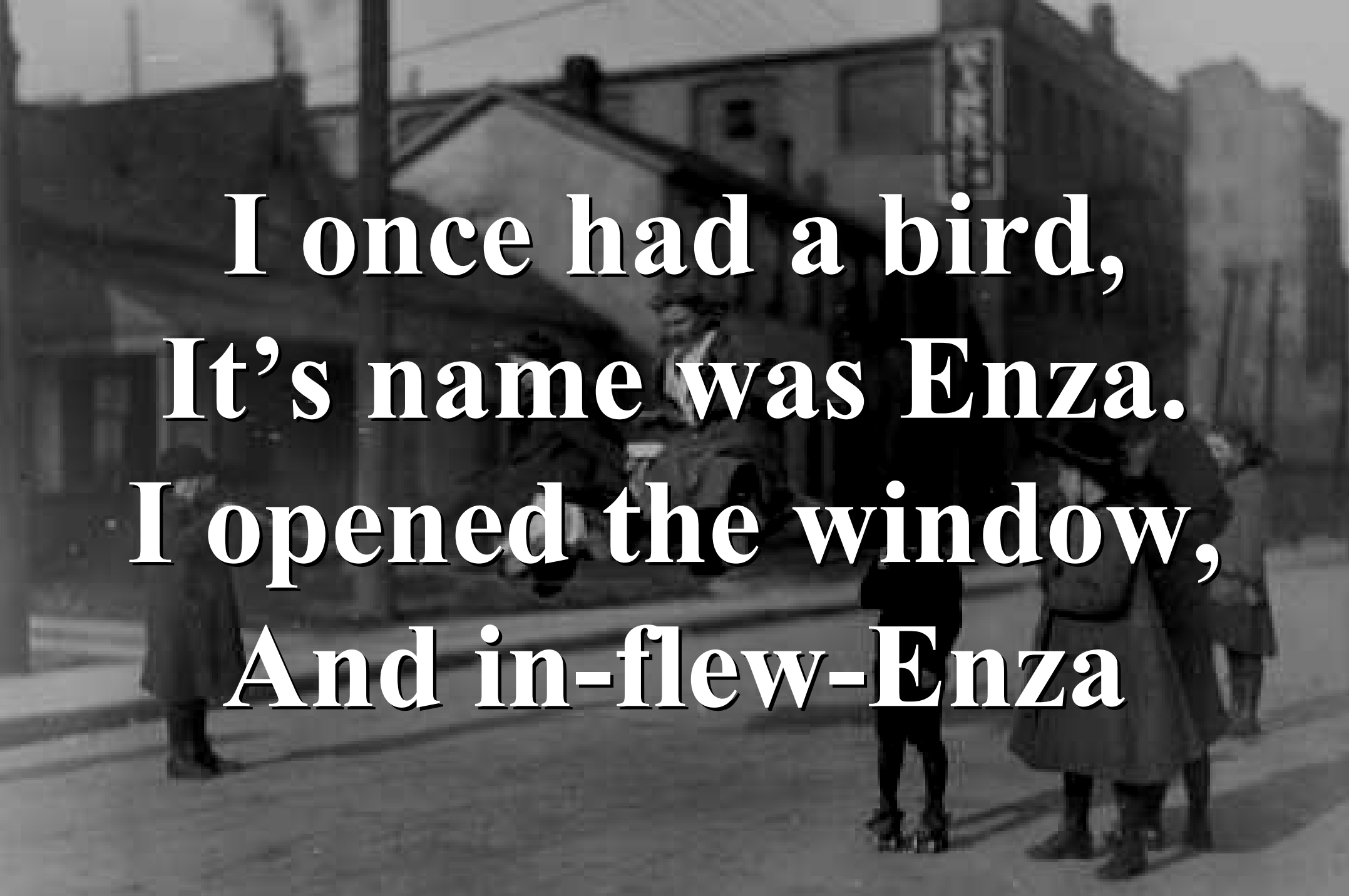


A black and white photograph of a street scene. In the foreground, several people are standing on the sidewalk. A woman on the left is wearing a long coat and a hat. In the center, a young child is standing. To the right, a woman is carrying a large bundle on her back. In the background, there are buildings, including one with a sign that says 'HOTEL'. The text 'I once had a bird, It's name was Enza.' is overlaid in white, bold, serif font across the middle of the image.

**I once had a bird,
It's name was Enza.**

A black and white photograph of a street scene. In the foreground, several people are standing on the sidewalk. In the background, there are buildings, including one with a sign that says "HOTEL". The text is overlaid on the image in a large, white, serif font.

**I once had a bird,
It's name was Enza.
I opened the window,**

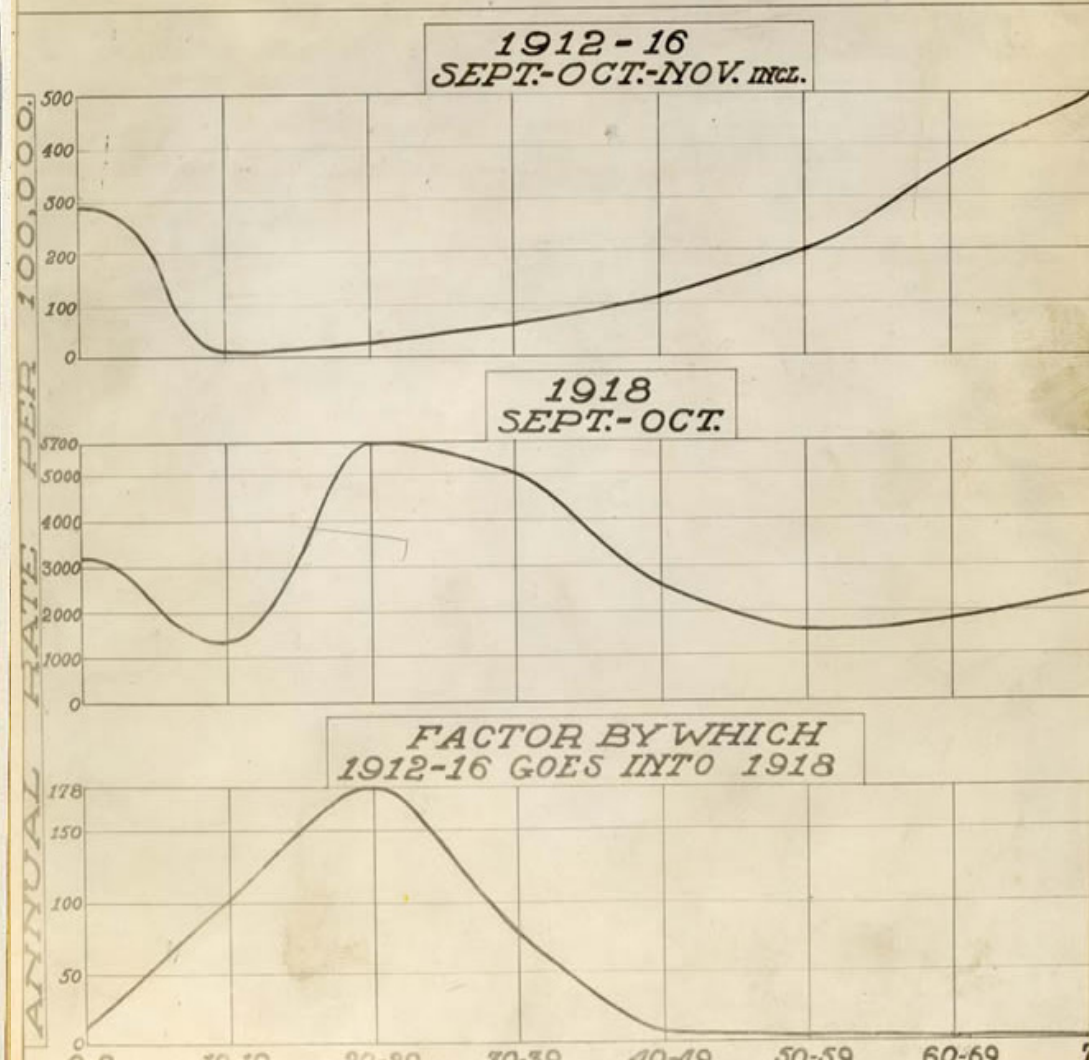
A black and white photograph of a busy street scene. In the foreground, several people are walking, including a man in a dark suit and a woman in a long coat. In the background, there are multi-story buildings with windows and a street sign. The overall atmosphere is that of a bustling urban environment.

**I once had a bird,
It's name was Enza.
I opened the window,
And in-flew-Enza**

EXCESS MORTALITY IN U.S. CITIES DURING INFLUENZA EPIDEMIC PERCENT OF POPULATION DYING

CITY	1918-1919			
	SEPT. 8-NOV. 23 10 WEEKS	NOV. 24-FEB. 1 10 WEEKS	FEB. 2-MAR. 29 8 WEEKS	TOTAL 28 WEEKS
	0 .2 .4 .6 .8	0 .2 .4 .6 .8	0 .2 .4 .6 .8	0 .2 .4 .6 .8
PHILADELPHIA	.69	.01	.03	.73
FALL RIVER	.59	.05	.04	.68
PITTSBURGH	.59	.12	.06	.77
BALTIMORE	.57	.03	.0	.60
SYRACUSE	.55	.02	.02	.58
NASHVILLE	.55	.16	.12	.83
BOSTON	.50	.12	.0	.62
NEW HAVEN	.49	.13	.0	.61
NEW ORLEANS	.49	.21	.0	.71
ALBANY	.48	.03	.02	.53
BUFFALO	.47	.10	.04	.61
WASHINGTON	.45	.12	.0	.57
LOWELL	.44	.10	.03	.56
SAN FRANCISCO	.42	.31	.02	.74
CAMBRIDGE	.39	.12	.0	.50
NEWARK	.38	.11	.04	.53
PROVIDENCE	.38	.13	.03	.53
RICHMOND	.35	.18	.02	.55
DAYTON	.33	.02	.03	.37
OAKLAND	.33	.22	.01	.56
CHICAGO	.32	.09	.04	.46
NEW YORK	.30	.09	.08	.47
CLEVELAND	.27	.11	.04	.42
LOS ANGELES	.27	.26	.01	.55
MEMPHIS	.25	.02	.09	.37
ROCHESTER	.25	.12	.03	.40
KANSAS CITY	.25	.27	.08	.60
DENVER	.24	.32	.07	.63
CINCINNATI	.22	.13	.11	.46
OMAHA	.22	.20	.0	.43
LOUISVILLE	.19	.04	.14	.37
ST. PAUL	.19	.13	.02	.34
COLUMBUS	.19	.15	.07	.41
PORTLAND	.18	.22	.03	.42
TOLEDO	.17	.02	.0	.17
MINNEAPOLIS	.17	.11	.07	.24
SEATTLE	.16	.18	.02	.36
INDIANAPOLIS	.15	.09	.08	.31
BIRMINGHAM	.15	.15	.0	.29
MILWAUKEE	.15	.18	.03	.37
ST. LOUIS	.12	.18	.04	.34
SPOKANE	.11	.13	.02	.25
ATLANTA	.07	.13	.0	.19
GRAND RAPIDS	.04	.12	.04	.19

AGE DISTRIBUTION OF DEATHS FROM INFLUENZA AND PNEUMONIA AT BOSTON



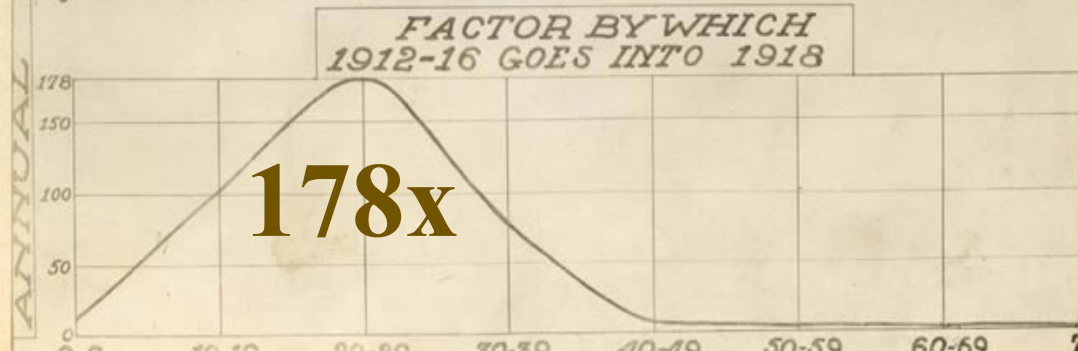
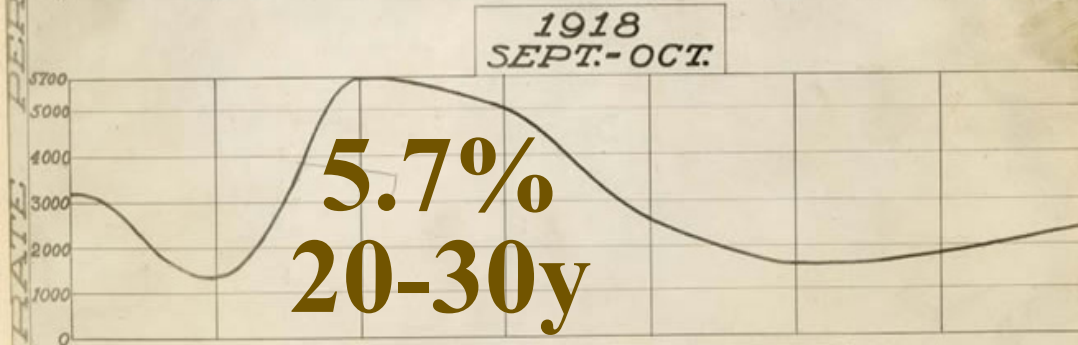
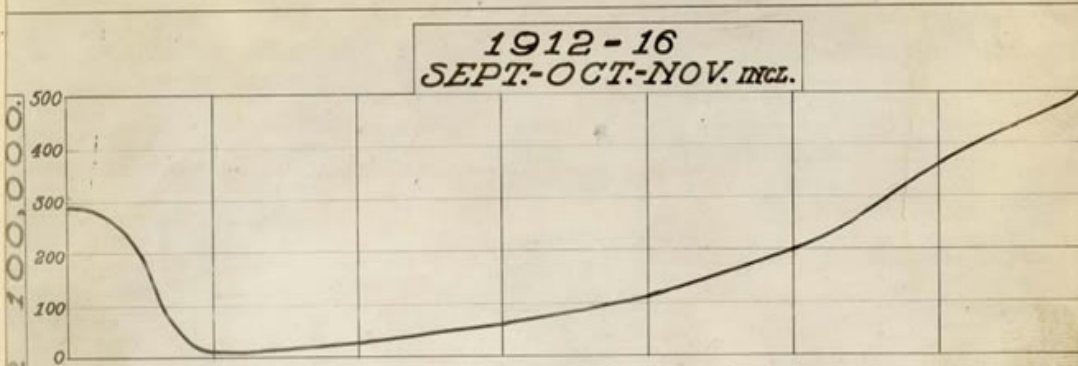
EXCESS MORTALITY IN U.S. CITIES DURING INFLUENZA EPIDEMIC PERCENT OF POPULATION DYING

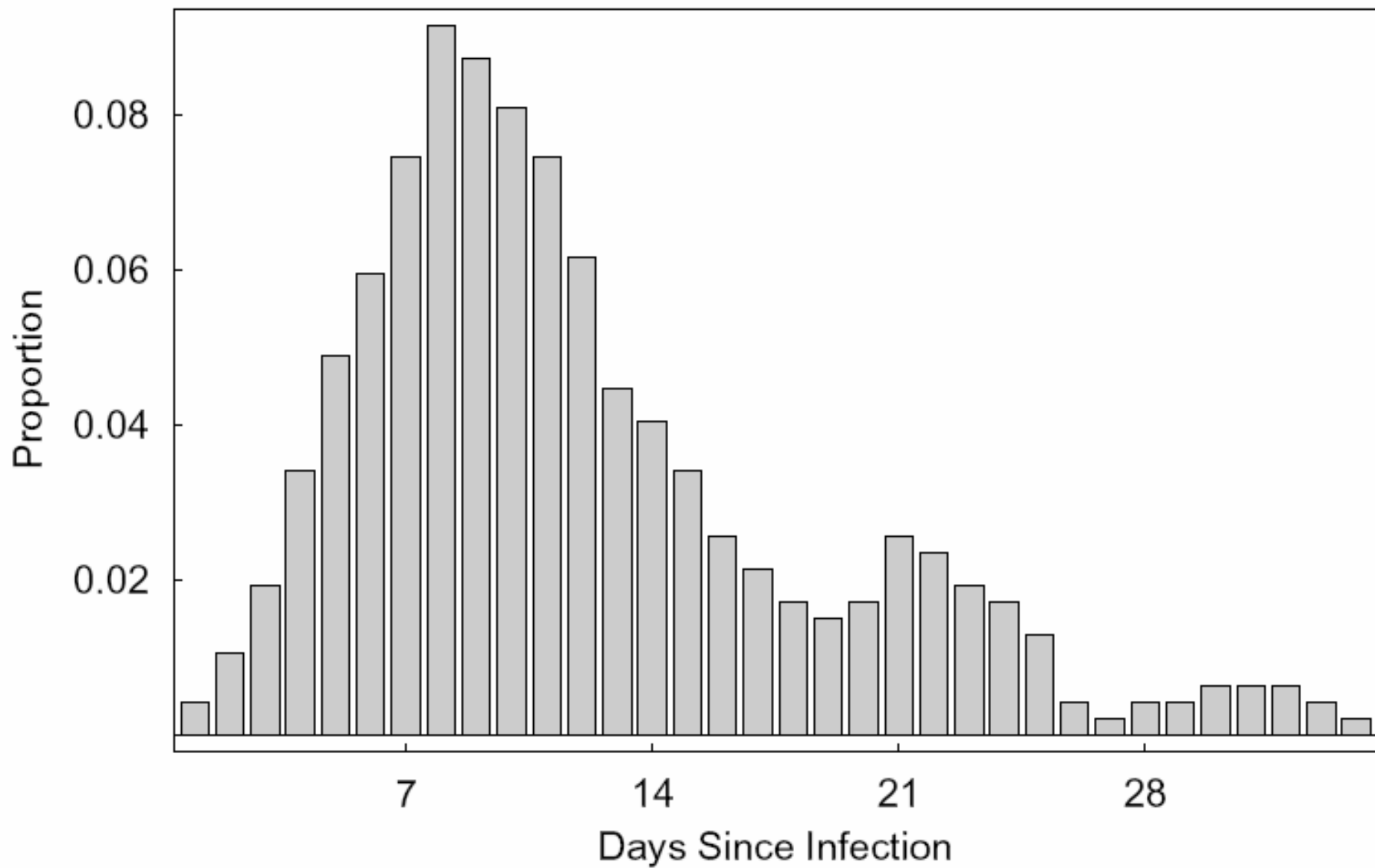
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FALL RIVER	.59	.05	.04	.68
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SYRACUSE	.55	.02	.02	.58
NASHVILLE	.55	.16	.12	.83
BOSTON	.50	.12	.0	.62
NEW H				
NEW O				
ALBAI				
BUFFA				
WASHI				
LOWEI				
SAN FR				
CAMBR				
NEWAI				
PROVID				
RICHM				
DAYTO				
OAKLA				
CHICAG				
NEW Y	.69			
CLEVEL				
LOS AN				
MEMPHIS	.25	.02	.09	.37
ROCHESTER	.25	.12	.03	.40
KANSAS CITY	.25	.27	.08	.60
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PORTLAND	.18	.22	.03	.42
TOLEDO	.17	.02	.0	.17
MINNEAPOLIS	.17	.11	.07	.24
SEATTLE	.16	.18	.02	.36
INDIANAPOLIS	.15	.09	.00	.31
BIRMINGHAM	.15	.15	.0	.29
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SPOKANE	.11	.13	.02	.25
ATLANTA	.07	.13	.0	.19
GRAND RAPIDS	.04	.12	.04	.19

SEPT. 8 - NOV. 23
10 WEEKS

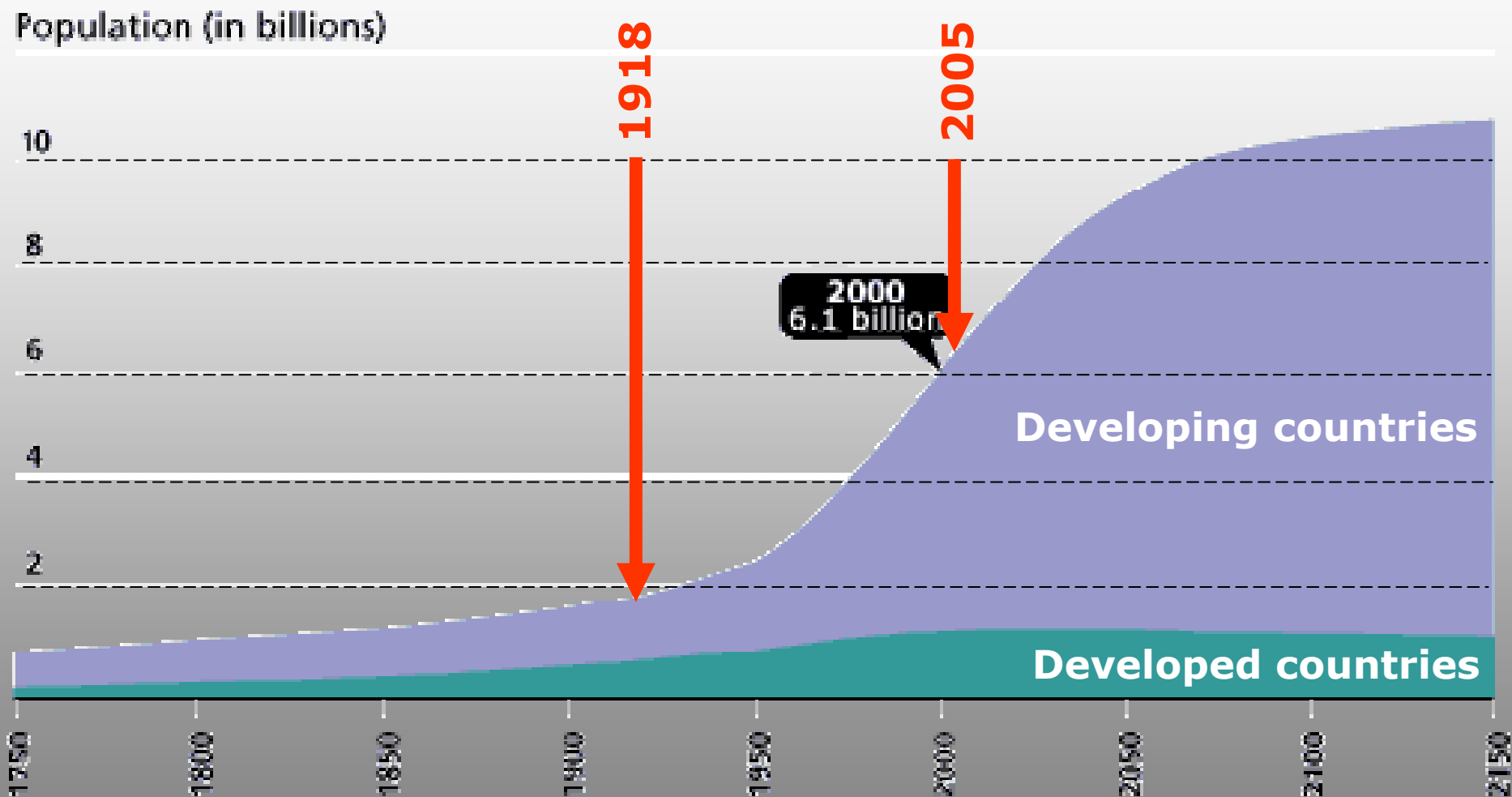
0 .2 .4 .6 .8

AGE DISTRIBUTION OF DEATHS FROM INFLUENZA AND PNEUMONIA AT BOSTON

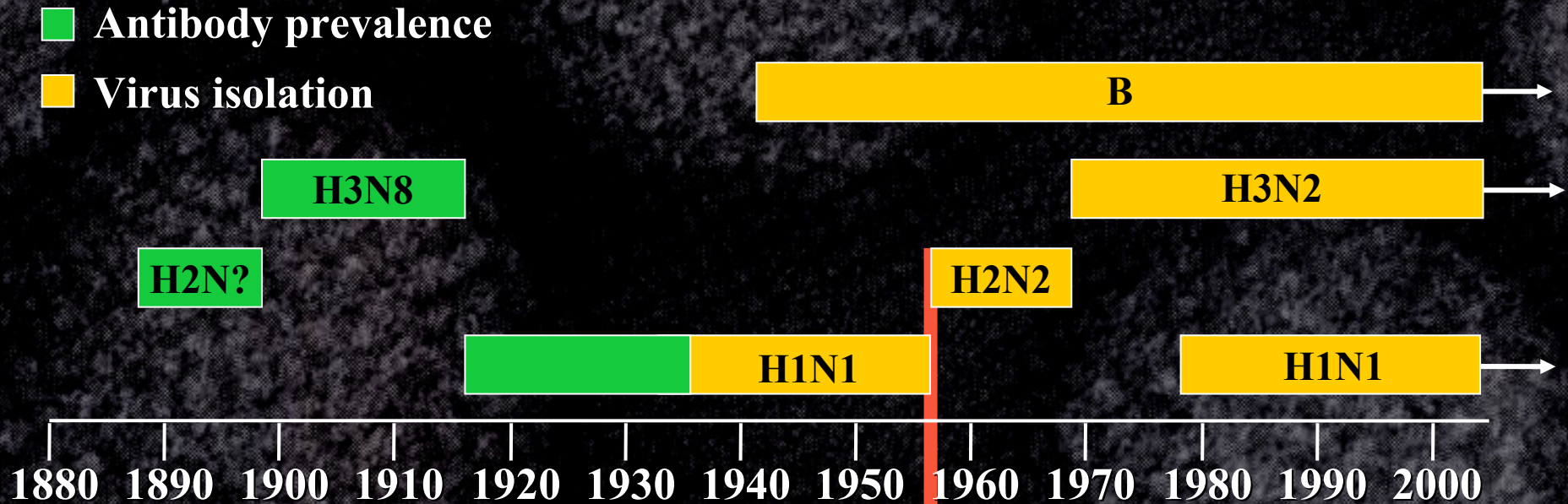




POPULATION GROWTH 1750-2150



INFLUENZA VIRUSES



1957 H2N2:
Asian flu

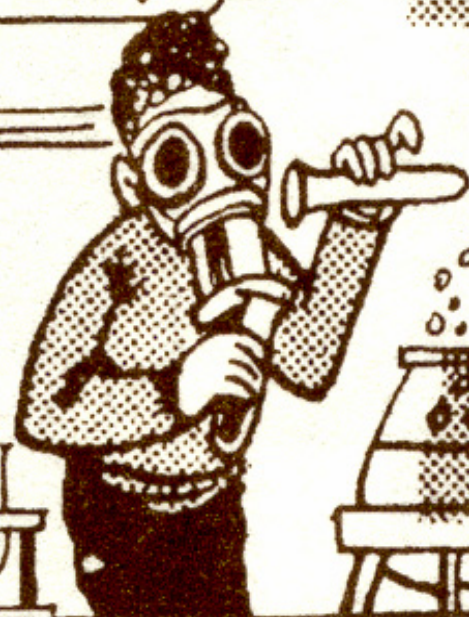
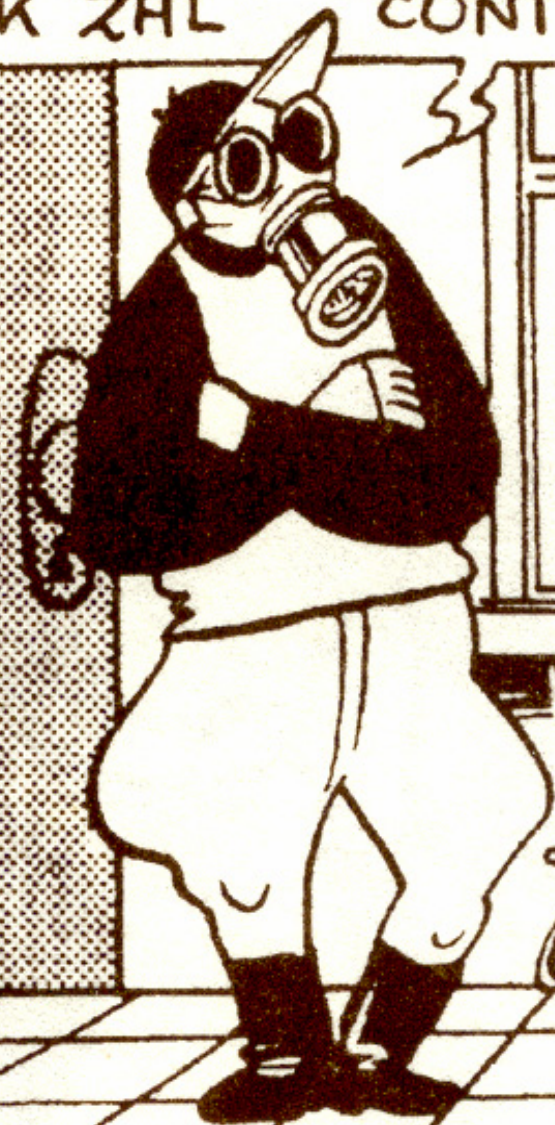
HET GEHEIM VAN BAKKENDOEN



JA, DE
AZIATISCHE
GRIEP
IS OP ONZE
HELDEN
NEERGESTORT.

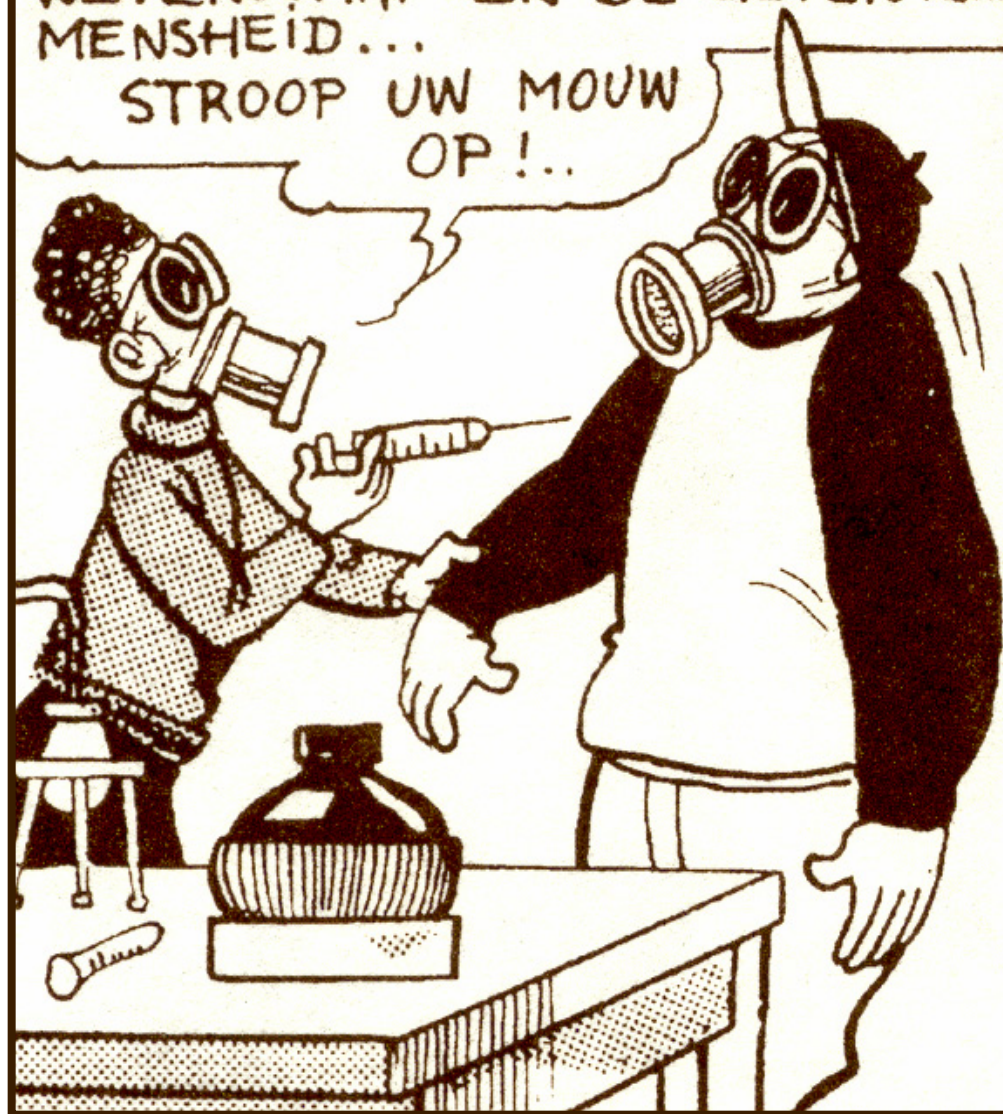
MENEER PHEIP
KWAM ER MEE
NAAR HUIS
VAN ZIJN,
STAMCAFÉ.
DAARNA KREEG
ZE MADAM
PHEIP TE
PAKKEN
EN NU...

PROBEER EEN ANTI-AZIATIEKER.
ISOLEER DE VIRUS. DOE IETS,
GE ZIJT GELEERD GENOEG.
IK ZAL CONTROLLEREN!

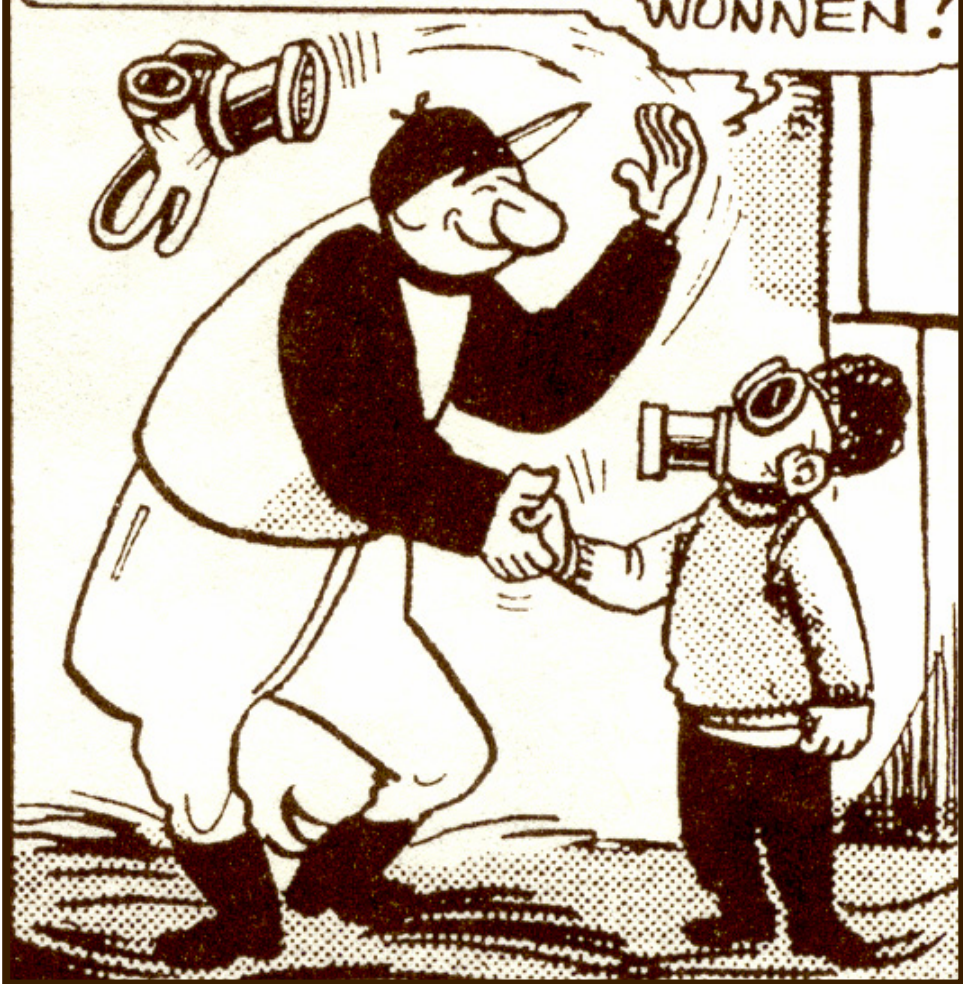


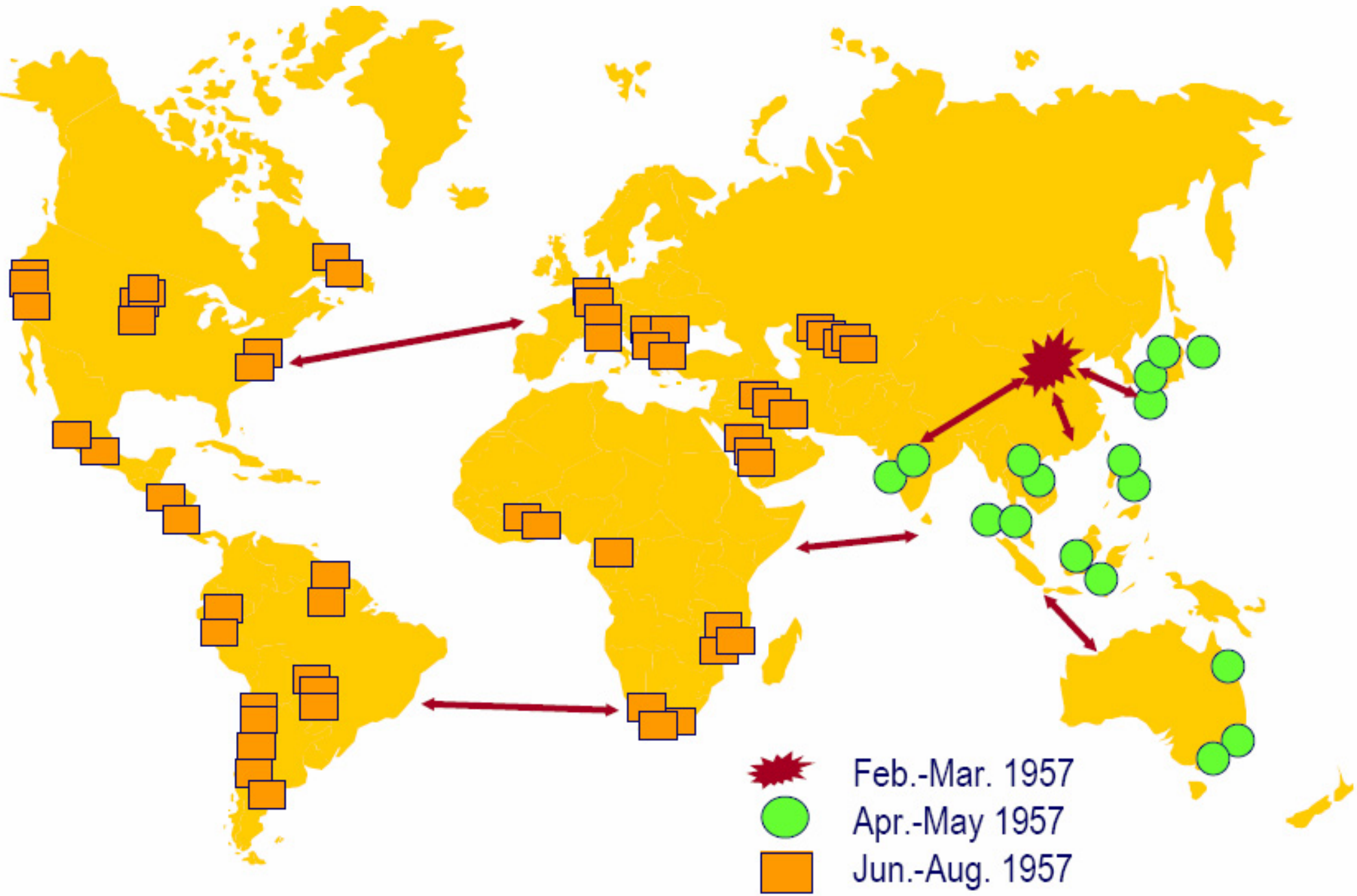
NONKEL, IN HET BELANG VAN DE
WETENSCHAP EN DE GETEISTERDE
MENSHEID...

STROOP UW MOUW
OP!...



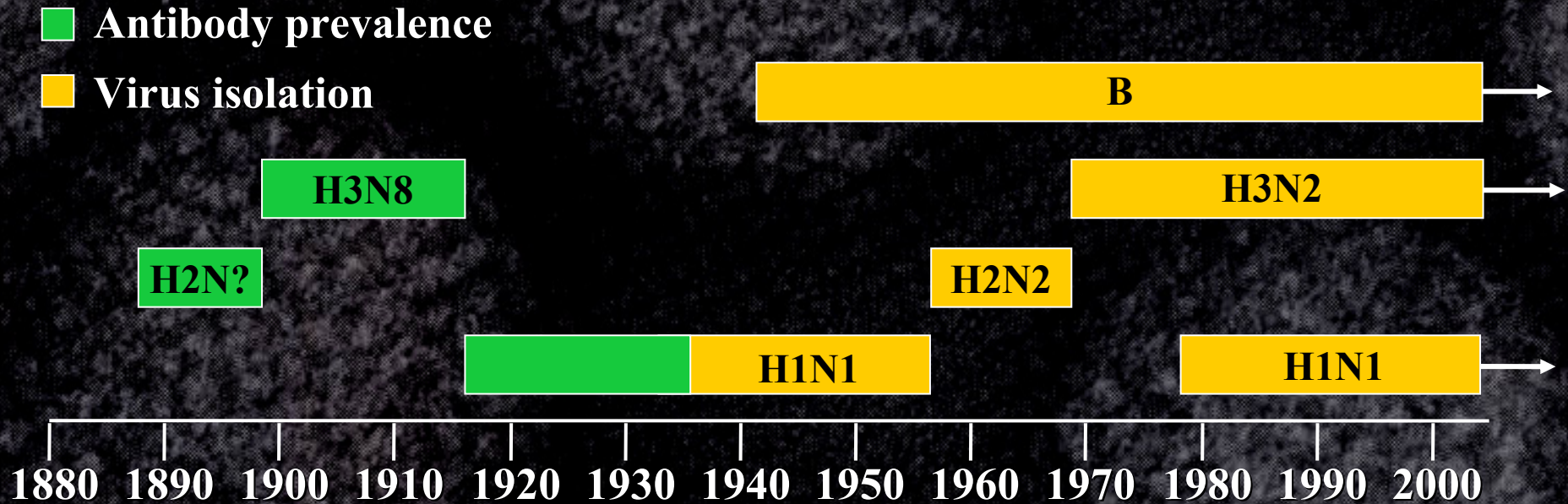
PROFICIAT PETOETJE, GE WORDT
NOG EEN GROOT GELEERDE.
DE MASKERS MOGEN WE WEG-
WERPEN, WE HEBBEN DE
AZIATISCHE GRIEP OVER-
WONNEN!



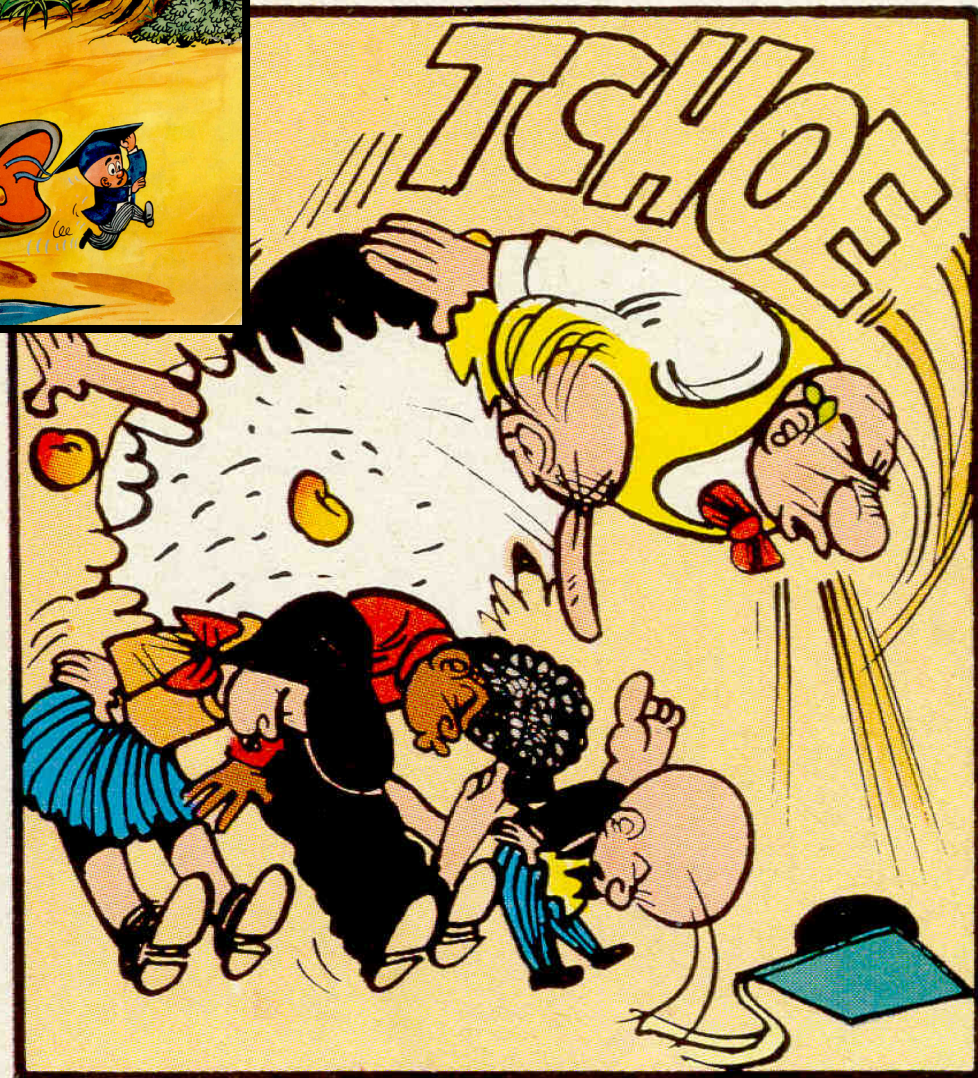


- Feb.-Mar. 1957
- Apr.-May 1957
- Jun.-Aug. 1957

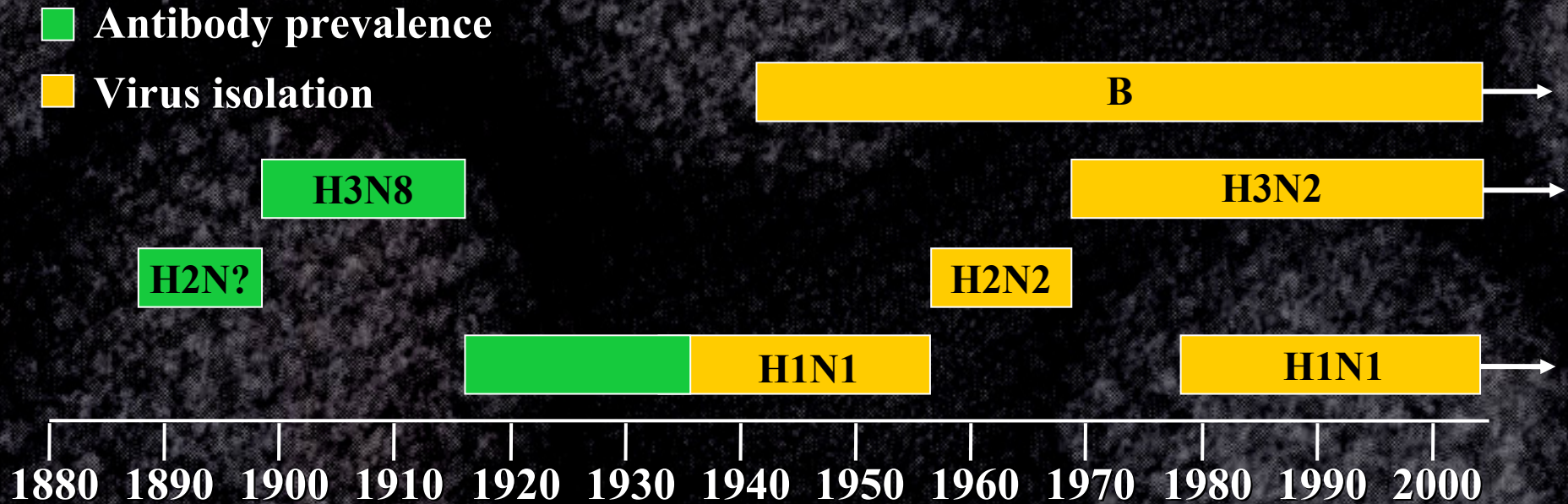
INFLUENZA VIRUSES



**1968 H3N2:
Hong Kong flu**



INFLUENZA VIRUSES



1977 H1N1:
Russian flu

MEDICAL ALERT!

BY JIMSON / Weekly World News

A new killer flu is poised to sweep America — and experts expect it to claim millions of victims from all walks of life!

The enormous fatality rate will come because of increases in world population, a larger — and poorer — world population, and the fact that most people no longer possess antibodies to deadly flu like the one that killed 100 million people around the world in 1918, scientists say.

"It's a major threat," says Dominick Larocca of the National Institute of Allergy and Infectious Diseases.

"It would wreak terrible damage on the U.S. around the world."

With a giant flu — called a pandemic — has historically only periodically attacked mankind in killer waves. The last major flu pandemic was the Hong Kong flu of 1968, which killed 78,000 people in the U.S. alone. The next one, scientists fear, could be far, far worse.

A new subtype of virus has potential to run through the population," warning that it would cause severe disease and widespread infection. "If no one would have any immunity to it."

Health authorities are especially concerned because pandemics like this can wipe out not only the young and the very old, but also healthy people in the prime of life. They are so virulent that many victims die within hours of infection.

Witnesses to the deadly 1918 pandemic included a healthy young man who died in a streetcar in Chicago and died because the trolley had gone six blocks. A girl of a woman who boarded a trolley in New York is seemingly perfectly healthy — and buried over dead in a half hour.

Though attempts have been made to control newly emerging flu viruses, experts believe susceptible populations are vast, experts say it's inevitable an unexpected and hitherto unknown virus will eventually develop and spread. When it does, it will be helpless.

To prevent all the inevitable breakthroughs, health officials think we could do something about it if a new virus came along.

Says virologist Dr. Robert H. Gilchrist of New York Medical College, "The development of a best-selling flu vaccine is a long process. We can never vaccinate the entire population all at once."

KILLER FLU ABOUT TO STRIKE

FLU ABOUT TO STRIKE AMERICA!



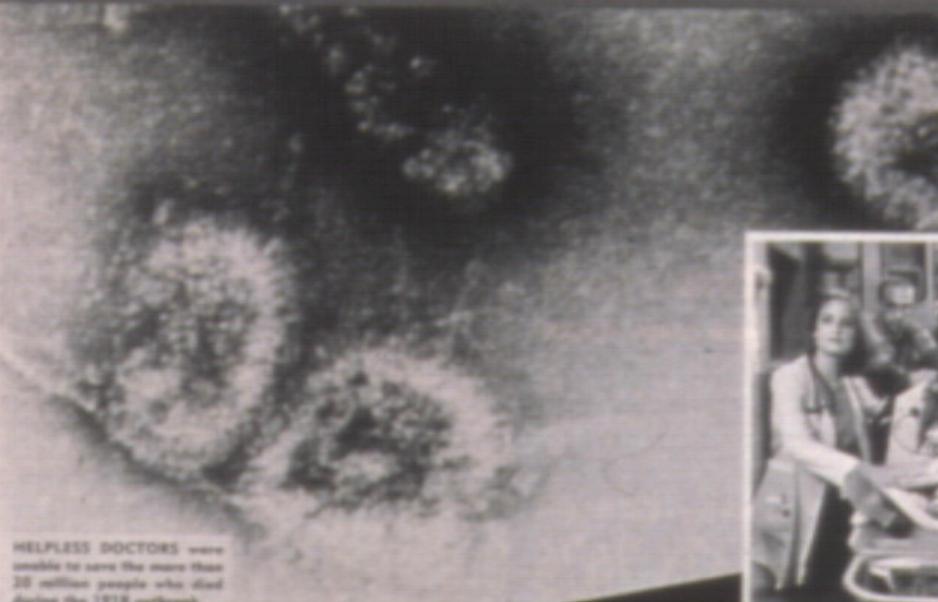
TEMP CITIES were built when hospitals couldn't handle the millions who were stricken during the 1918 pandemic.

SUPERBUG INNOCENT

WILL CLAIM THE LIVES OF MILLIONS OF VICTIMS, WARN WORRIED EXPERTS



INCREDIBLE PHOTO shows an influenza virus magnified 122,000 times. Experts believe a deadly new mutation could emerge any day, guaranteeing the worst epidemic ever.

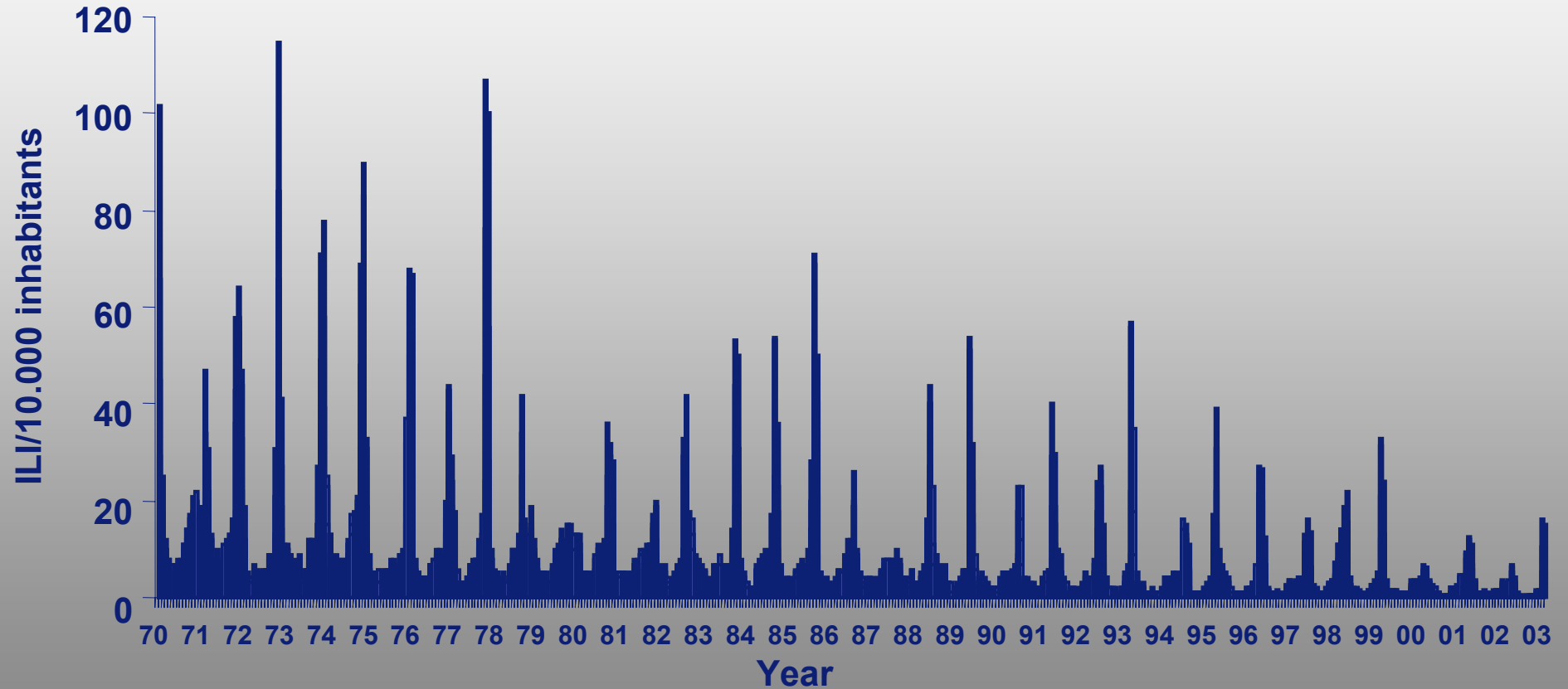


HELPLESS DOCTORS were unable to save the more than 20 million people who died during the 1918 outbreak.

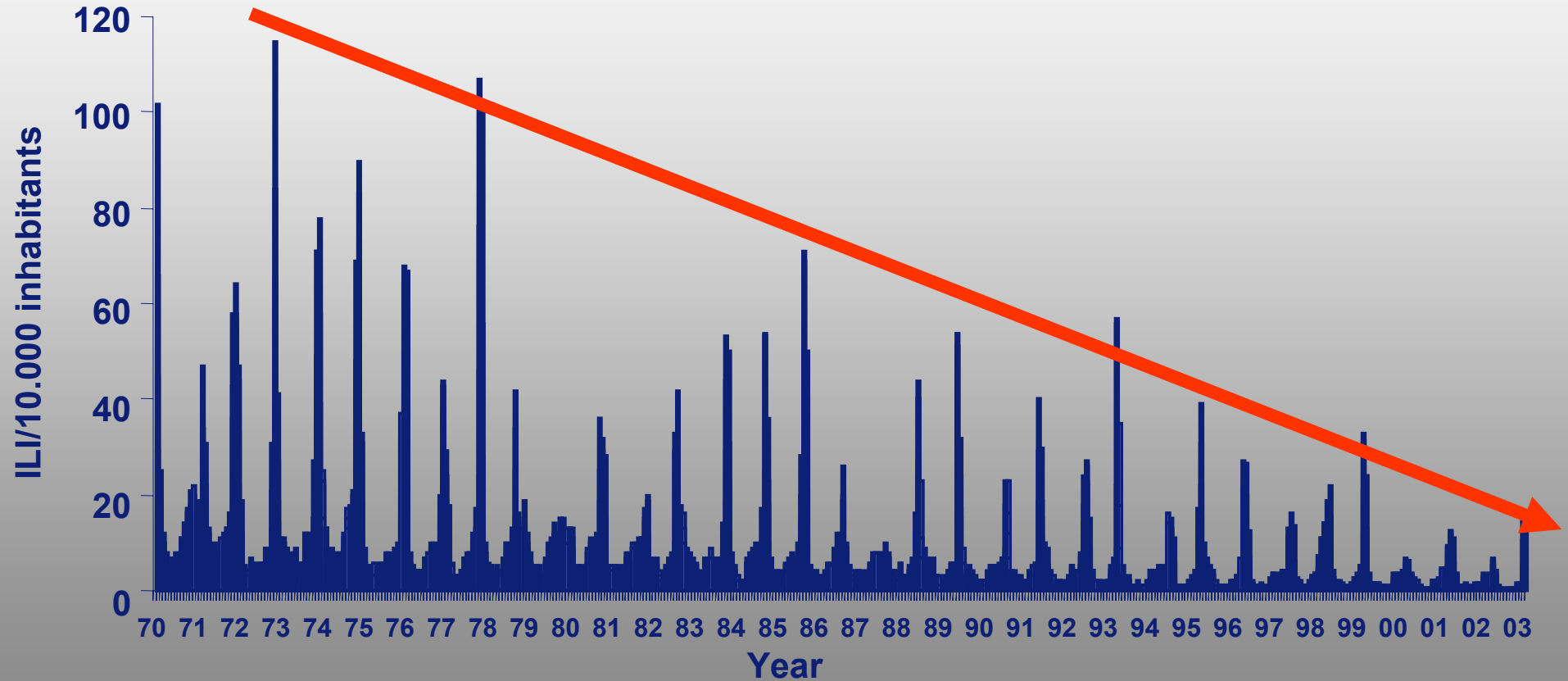


HOSPITALS ACROSS THE COUNTRY were overwhelmed by the 1918 flu pandemic.

Influenza-like illness in the Netherlands per week per 10.000 inhabitants



Influenza-like illness in the Netherlands per week per 10.000 inhabitants

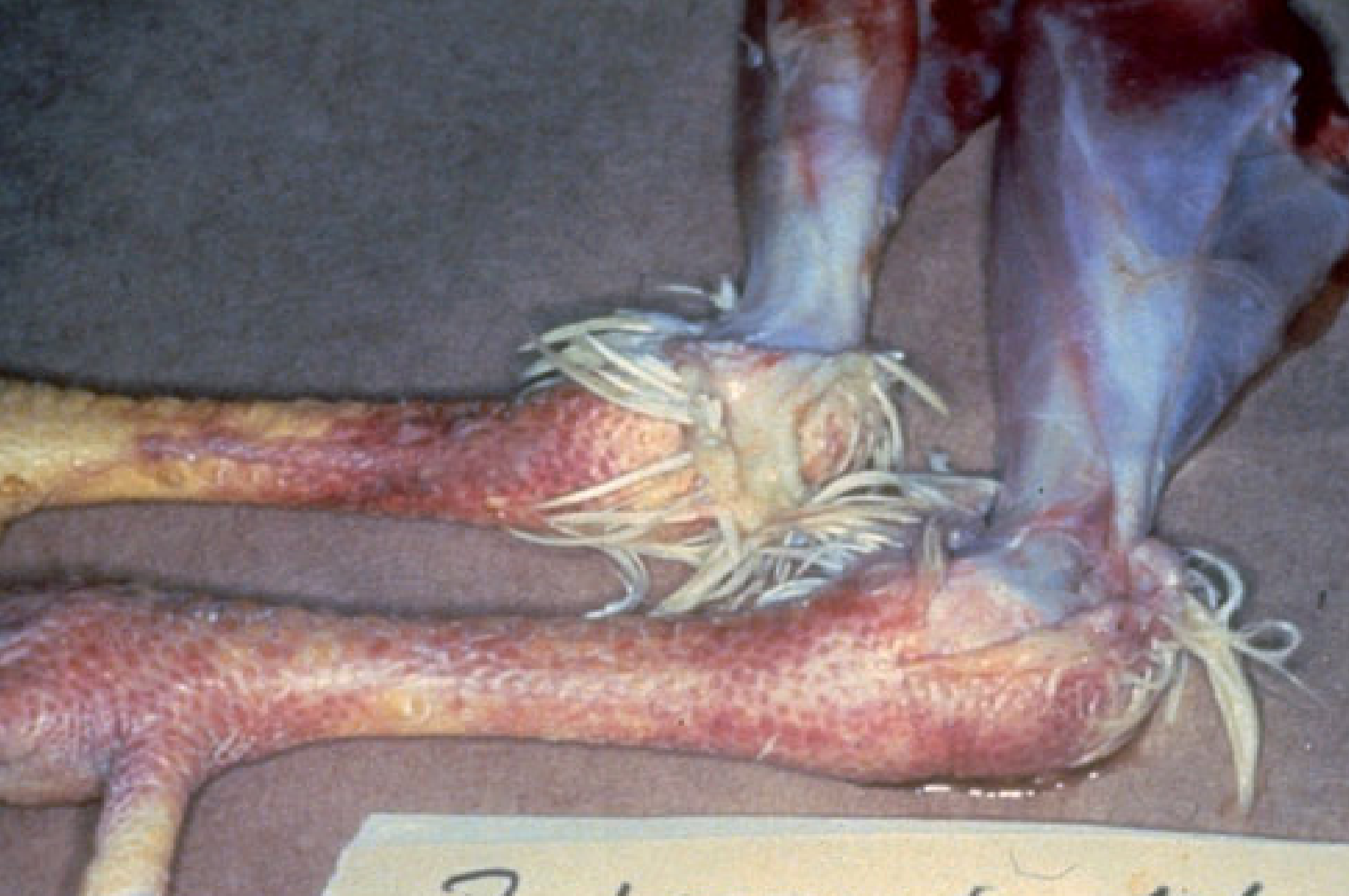
















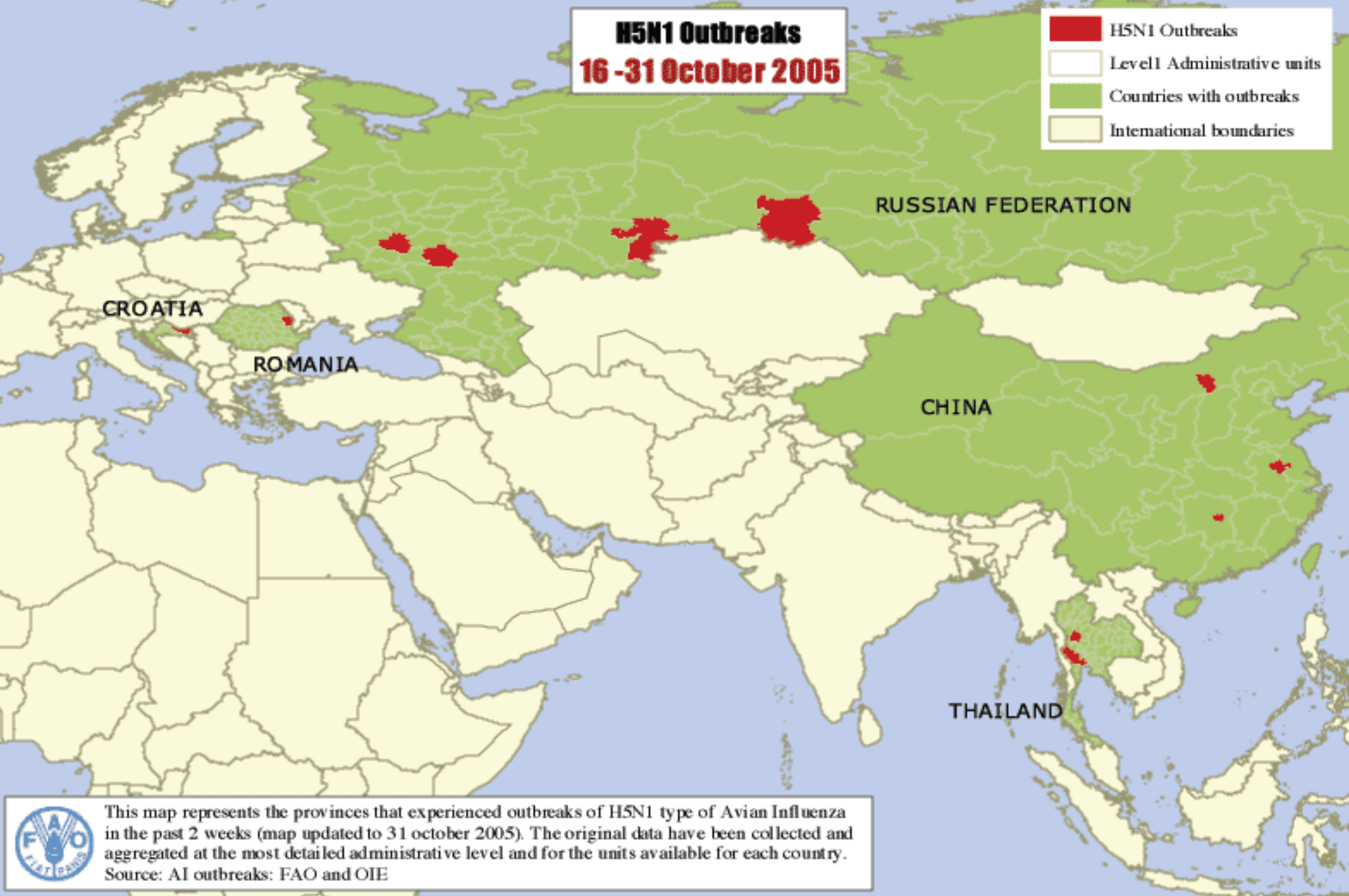
2 1 5 4





H5N1 Outbreaks 16 -31 October 2005

-  H5N1 Outbreaks
-  Level1 Administrative units
-  Countries with outbreaks
-  International boundaries



CROATIA

ROMANIA

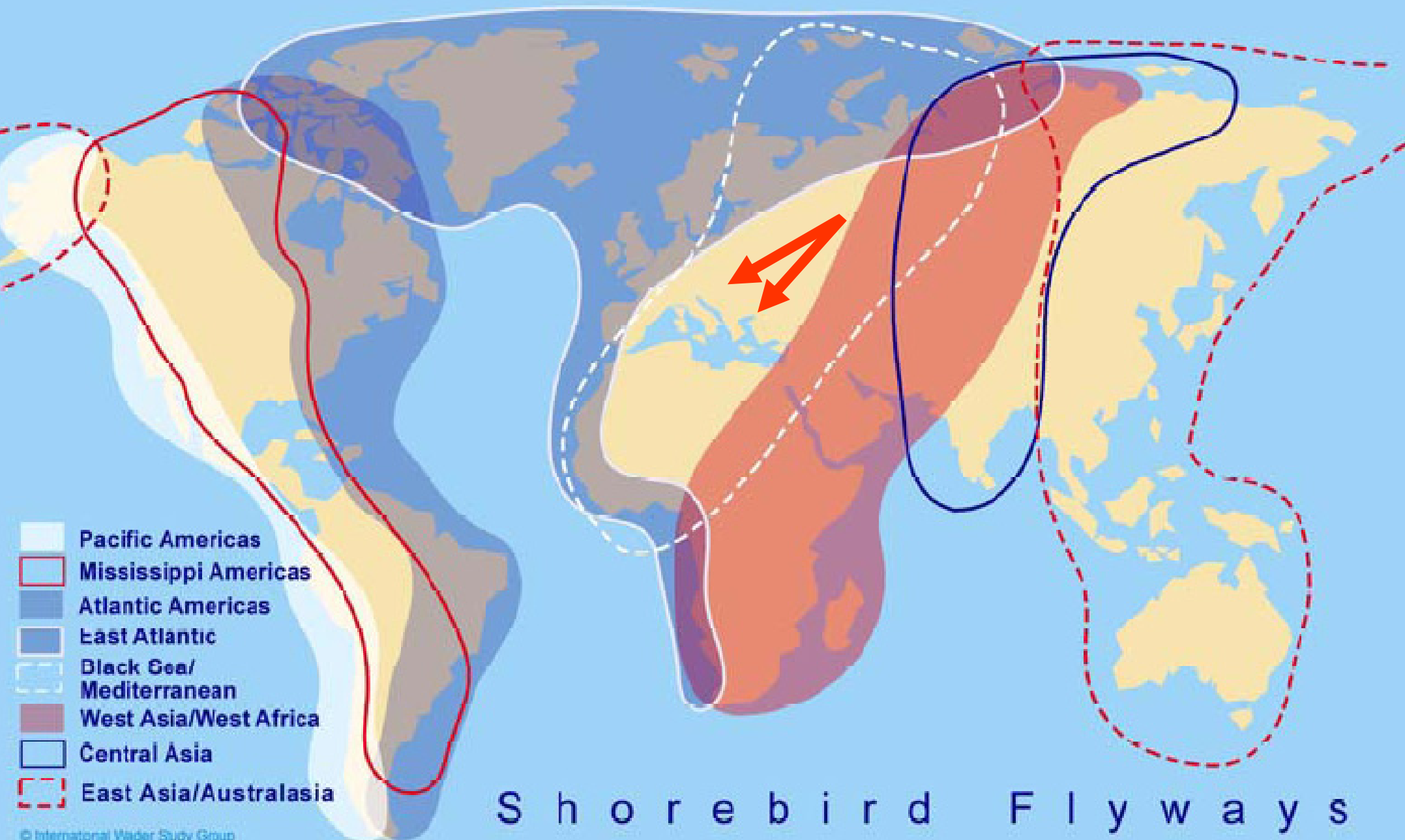
RUSSIAN FEDERATION

CHINA

THAILAND



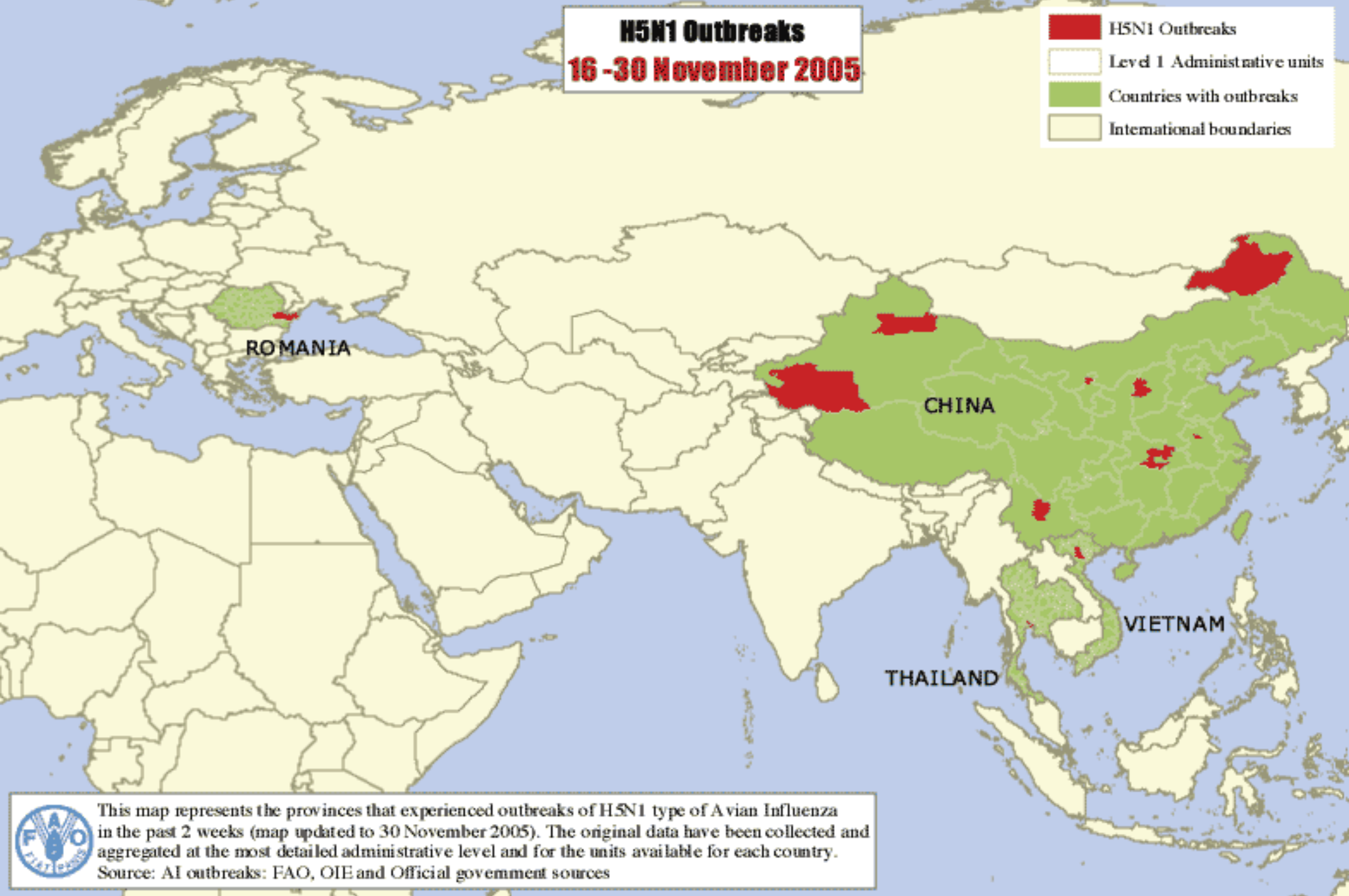
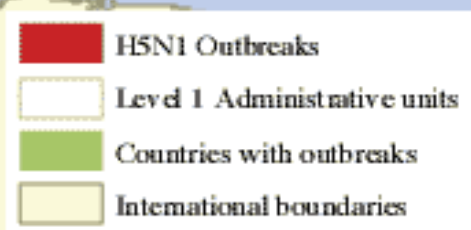
This map represents the provinces that experienced outbreaks of H5N1 type of Avian Influenza in the past 2 weeks (map updated to 31 October 2005). The original data have been collected and aggregated at the most detailed administrative level and for the units available for each country. Source: AI outbreaks: FAO and OIE



- Pacific Americas
- Mississippi Americas
- Atlantic Americas
- East Atlantic
- Black Sea/Mediterranean
- West Asia/West Africa
- Central Asia
- East Asia/Australasia

S h o r e b i r d F l y w a y s

H5N1 Outbreaks 16 -30 November 2005



This map represents the provinces that experienced outbreaks of H5N1 type of Avian Influenza in the past 2 weeks (map updated to 30 November 2005). The original data have been collected and aggregated at the most detailed administrative level and for the units available for each country. Source: AI outbreaks: FAO, OIE and Official government sources

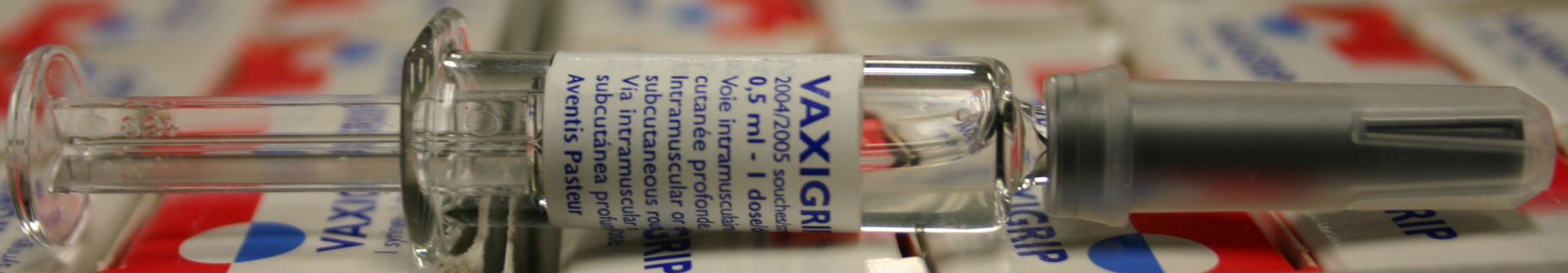


Cumulative Number of Confirmed Human Cases of Avian Influenza A/ (H5N1) Reported to WHO

6 December 2005

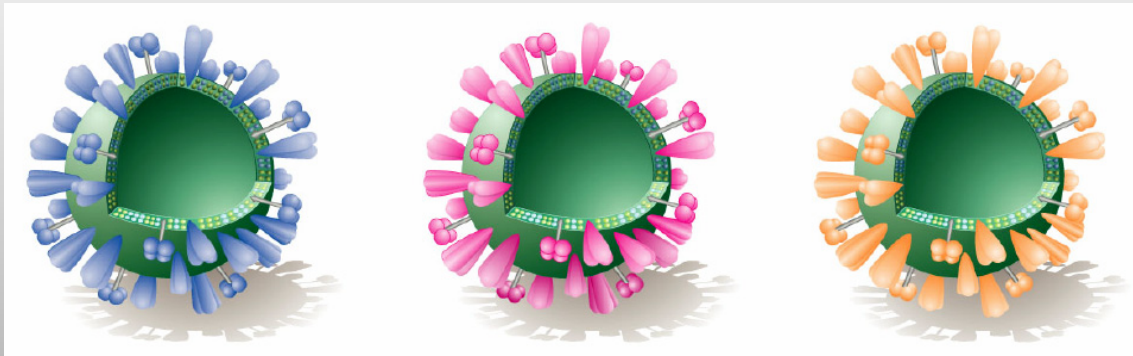
Date of onset	Cambodia		China		Indonesia		Thailand		Viet Nam		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
26.12.03-10.03.04	0	0	0	0	0	0	12	8	23	16	35	24
19.07.04-08.10.04	0	0	0	0	0	0	5	4	4	4	9	8
16.12.04-to date	4	4	3	2	13	8	4	1	66	22	90	37
Total	4	4	3	2	13	8	21	13	93	42	134	69

Total number of cases includes number of deaths.
WHO reports only laboratory-confirmed cases.

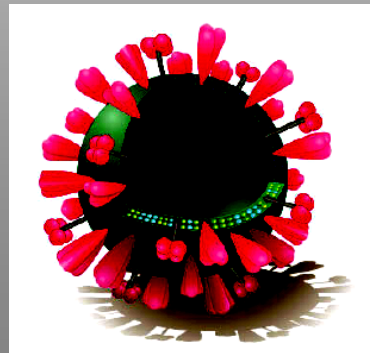


VAXIGRIP
2004/2005 souche
0,5 ml - 1 dose
Voie intramusculaire
cutanée profonde
Intramuscular or
subcutaneous route
Via intramuscular
subcutánea profunda
Aventis Pasteur

INCREASE IN VACCINATION COVERAGE TO 33% IN 2010



33%



100%

Tamiflu
oseltamivir phosphate



57.000 Euro

OKAY MR. BUSH...
WE ARE LISTENING.



IRAQ

SYRIA

N.KOREA

IRAN

CUBA

AXIS OF EVIL



SMALLPOX



AXIS OF EVIL



700.000



SMALLPOX

MEASLES



AXIS OF EVIL



2.000.000



700.000



SMALLPOX

MEASLES

MALARIA



AXIS OF EVIL



2.500.000



2.000.000



700.000



SMALLPOX

MEASLES

MALARIA

TBC

[REDACTED]

AXIS OF EVIL



3.000.000



2.500.000



2.000.000



700.000



SMALLPOX

MEASLES

MALARIA

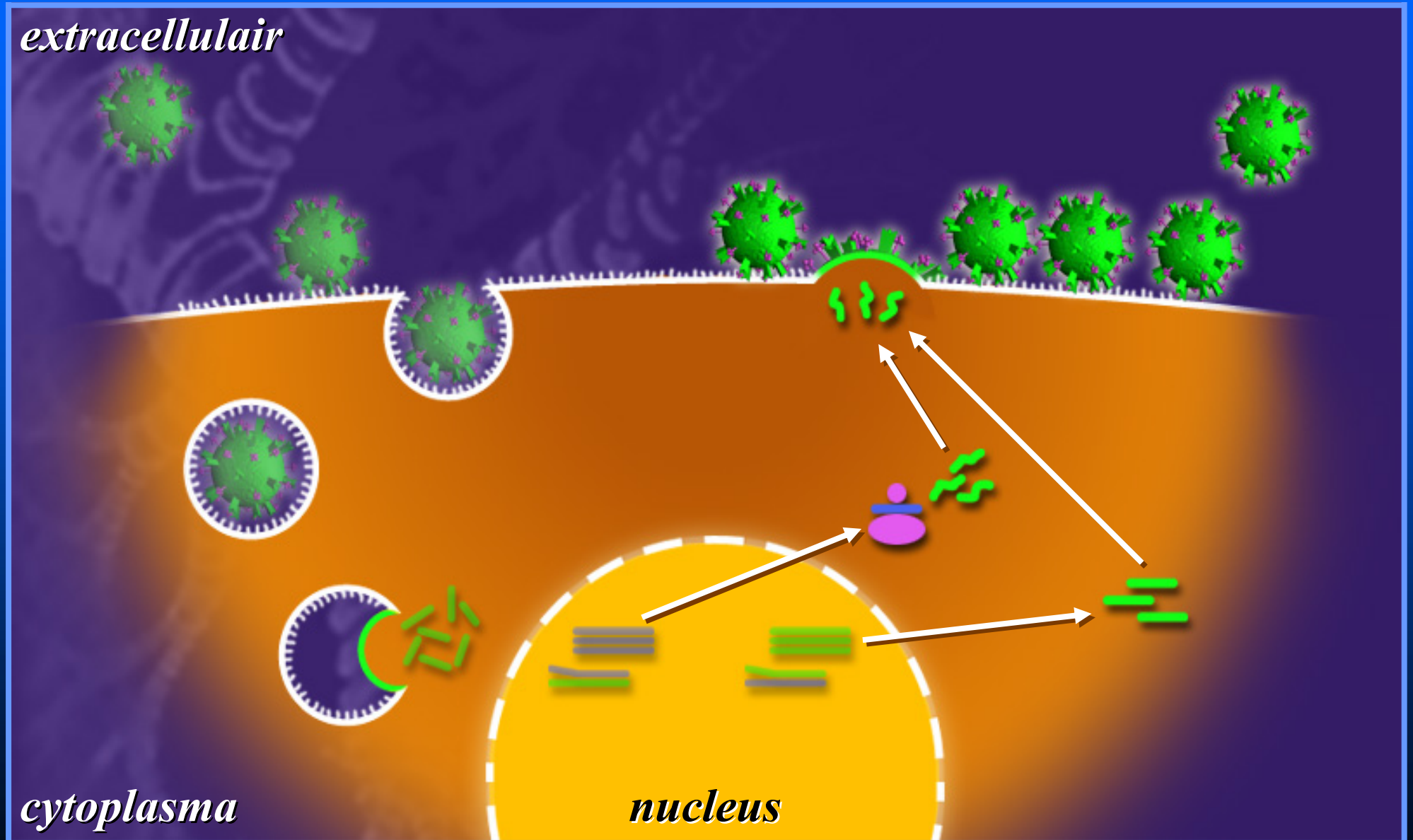
TBC

HIV

AXIS OF EVIL



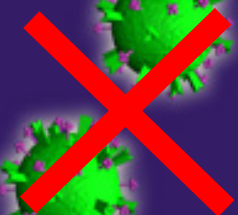
INFLUENZA VIRUS REPLICATIE



INFLUENZA VIRUS REPLICATIE

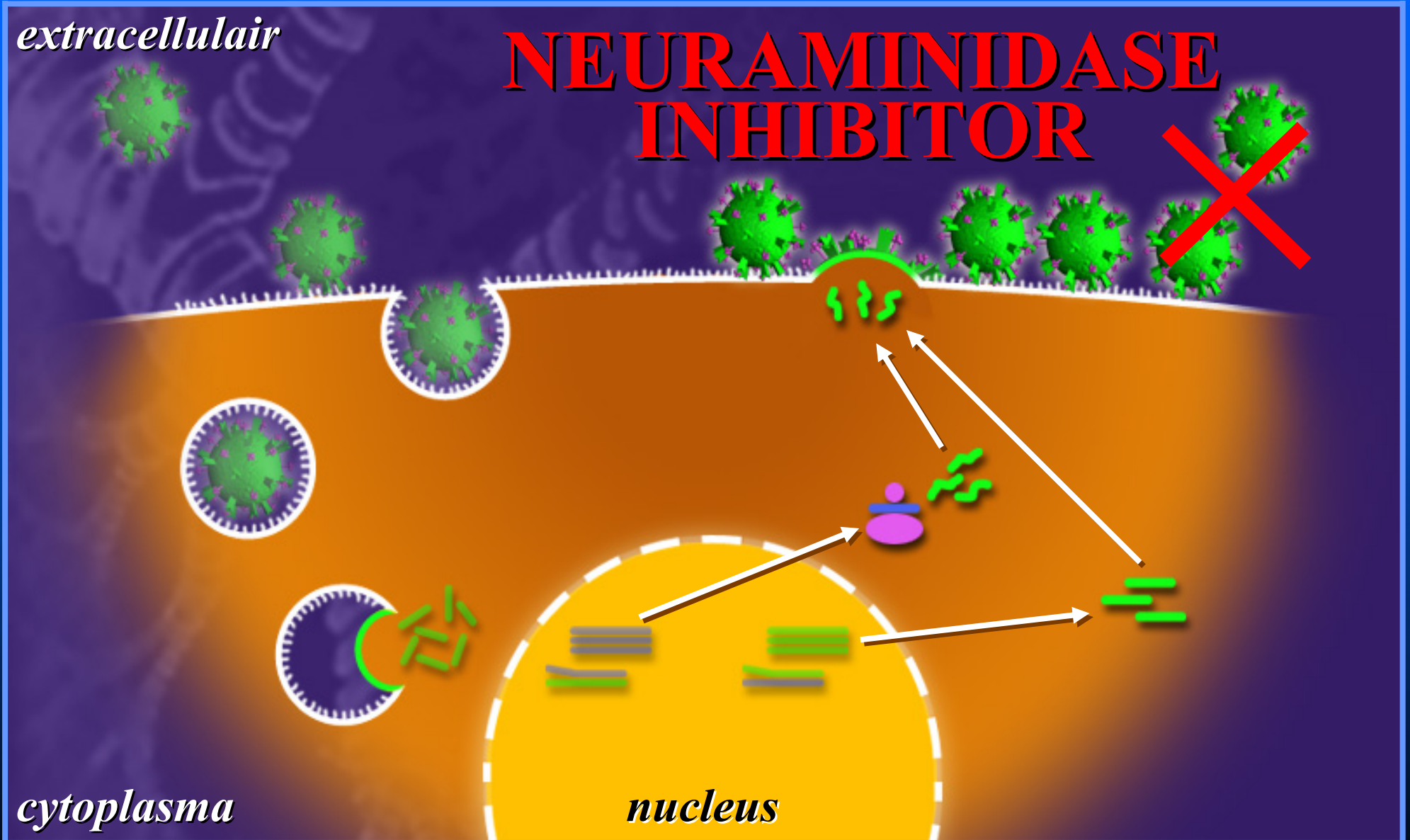
extracellulair

**NEURAMINIDASE
INHIBITOR**

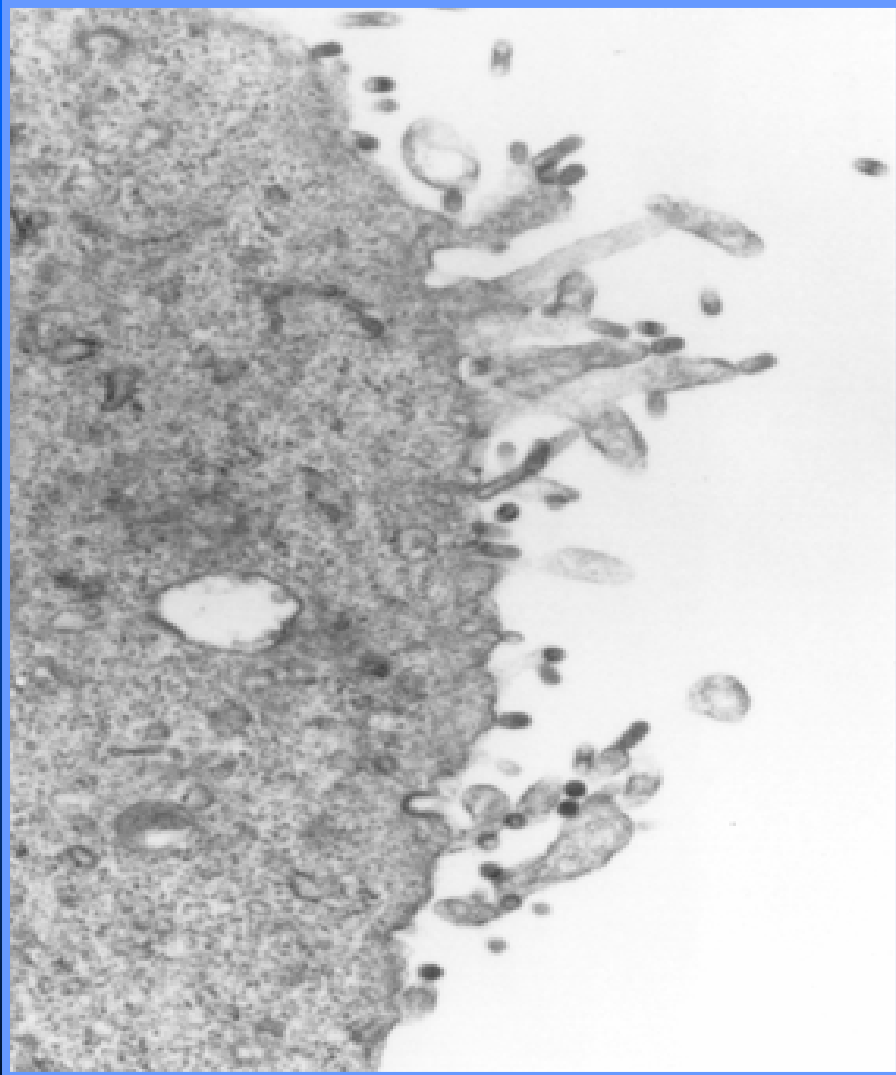


cytoplasma

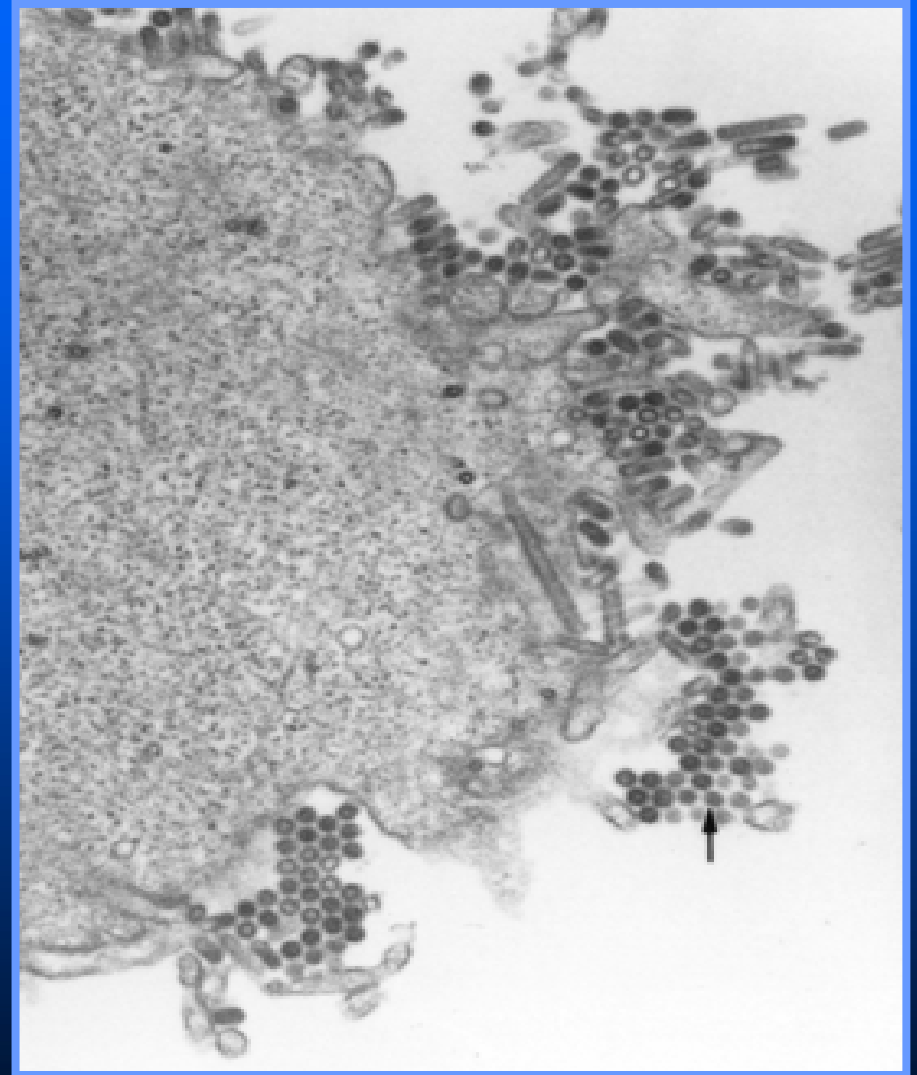
nucleus



NEURAMINIDASE INHIBITIE



MDCK cells + influenza A



MDCK cells + influenza A
+ ZANAMIVIR