

Situació actual de la grip A

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Hospital Clínic/UB***

- ✓ Pandèmia?
- ✓ Hiperactuació?
- ✓ Benigna?
- ✓ Protecció prèvia?
- ✓ Evolució futura?

- ✓ **Virus de la grip nou**
- ✓ **Transmissió persona-persona**
- ✓ **Afectació > 2 regions OMS**

Àfrica

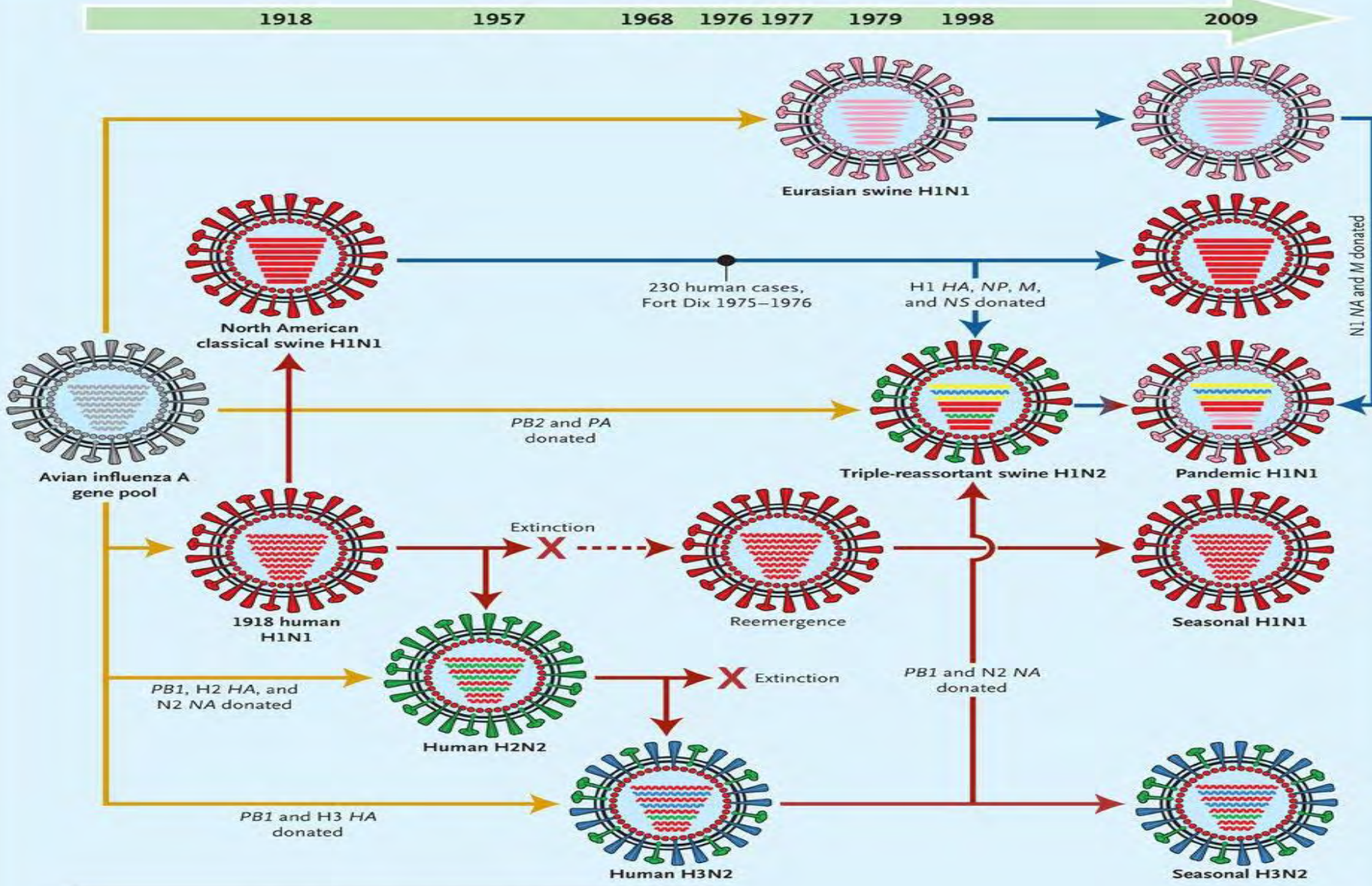
Amèrica

Europa

Mediterrani Oriental

Sud-Est Asiàtic

Pacífic Occidental



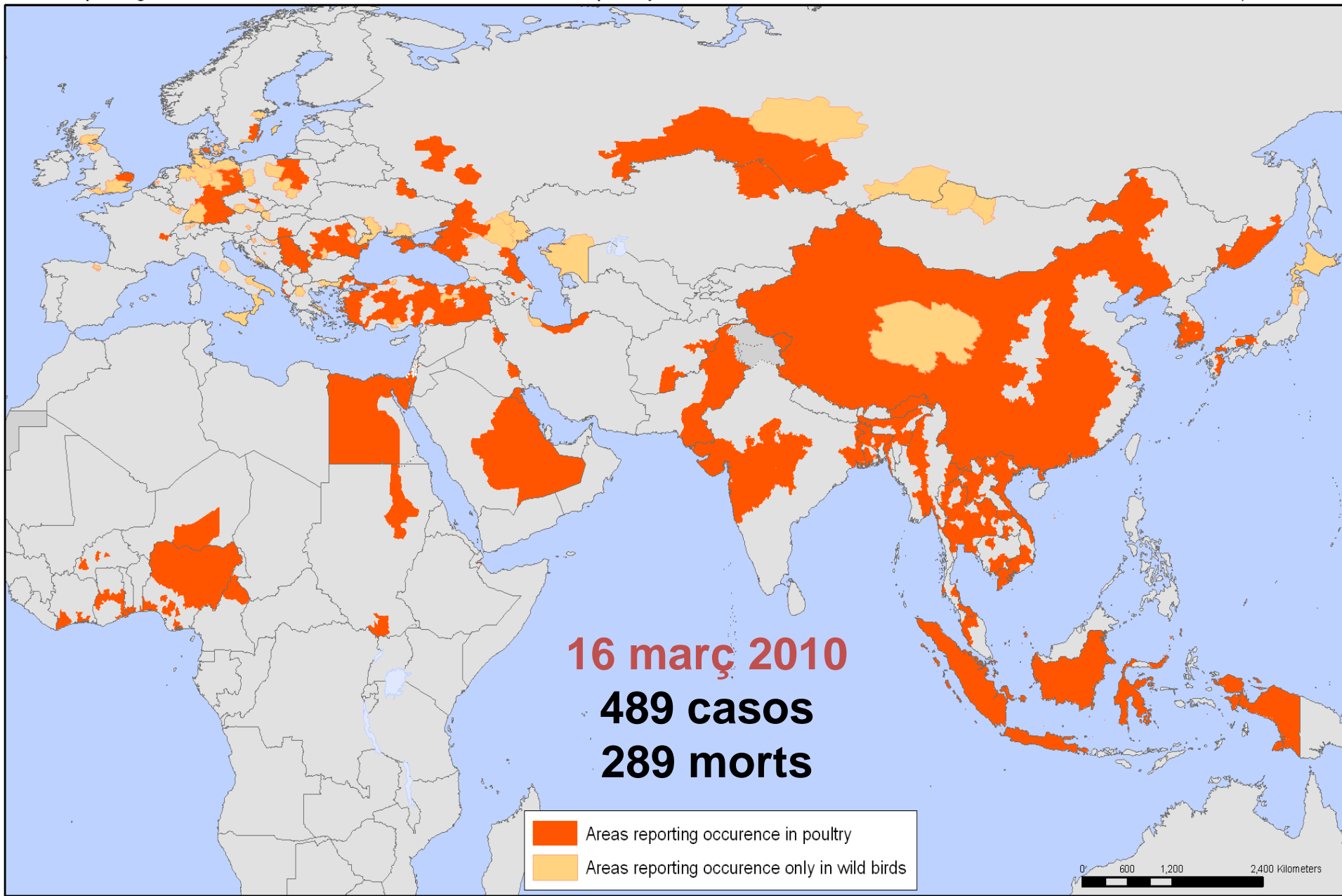
Genes of H1N1 progenitor influenza A viruses

- HA surface protein
- NA surface protein
- M protein
- PB2
- PB1
- PA
- HA
- NP
- NA
- M
- NS

- Human 1918 H1N1
- Swine 1918 H1N1
- Swine 1979 H1N1



Areas reporting confirmed occurrence of H5N1 avian influenza in poultry and wild birds since 2003



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Organisation for Animal Health (OIE) and national governments

Map Production: Public Health Information and Geographic Information Systems (GIS), World Health Organization

EXCELSIOR

Cancelan actos masi



EL UNIVERSAL

Se suspenden todos los eventos públicos



CRÓNICA
Van 68 muertos y 1, 00 infectados en el Valle de Méx

La Jornada



MILENIO

Hay medicina, ha cura, hay psicosis

El Diario

Bloquea PAN a Cor



EL INFORMADOR

El país, en emergencia por influ



El Porvenir



El Sol de Sinaloa



El Estímulo



Alerta total en

Diario de Yucatán

Avanza rápido la influer



Diario de México

20 decesos por influenza porcina; analizan 28 casos más

el mexicano

BC, en alerta por influenza

ENFOQUE

Nayarit libre de influenza

[=]XPRESO

Gripe porcina mata a

LA PRENSA

¡GRIPE PUERCA



Meridiano



MURAL



El Sol de Mazatlán

TENSA SITUACION causa la influen

El Sol de México

Apoyo emergente municipal contra influenza en Méx

- ✓ Pandèmia?
- ✓ Hiperactuació?
- ✓ **Benigna?**
- ✓ Protecció previa?
- ✓ Evolució futura?

Ingresos en UCI

- ✓ **722 ingresos por VGA (H1N1) 2009 (40 años)**
- ✓ **28,7 casos/millón hab.**

2005 (57)/ 2006 (33)/ 2007 (69)/ 2008 (69)

- ✓ **Ventilación mecánica 64%**
- ✓ **Mortalidad 17%**

-
- ✓ **Neumonía viral primaria 49%**
 - ✓ **Neumonía bacteriana secundaria 20%**
 - ✓ **Empeoramiento problema pulmonar 14%**
 - ✓ **Otros 17%**

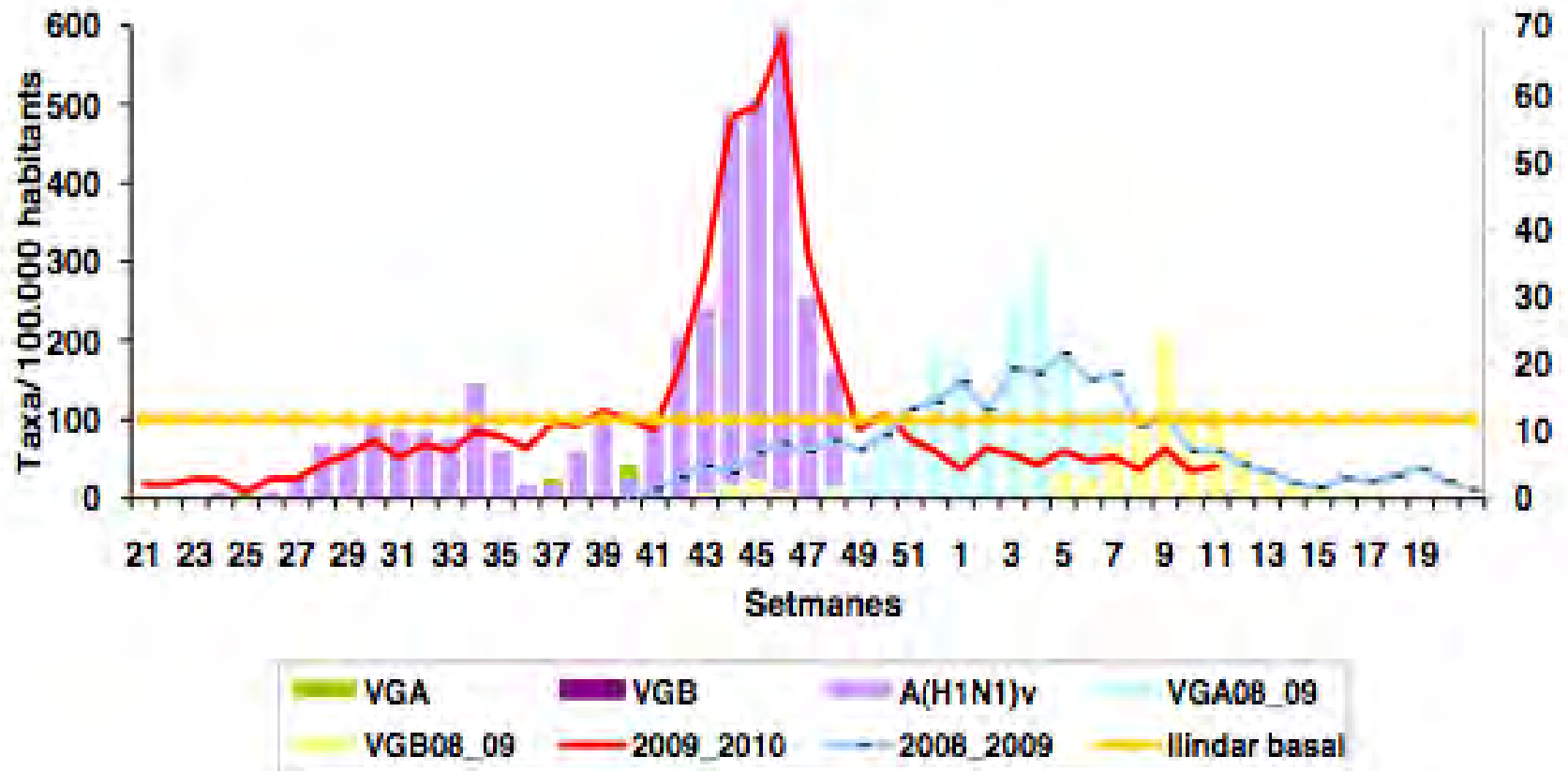
Factores de Riesgo

Embarazadas	10%
Obesidad IMC > 35	29%
Diabetes	16%
Asma o Pulmonar crónica	33%
Cardíaca crónica	10%
Sin factor de riesgo	32%

The ANZIC Influenza Investigators. N Engl J Med 2009; 361: 1-10

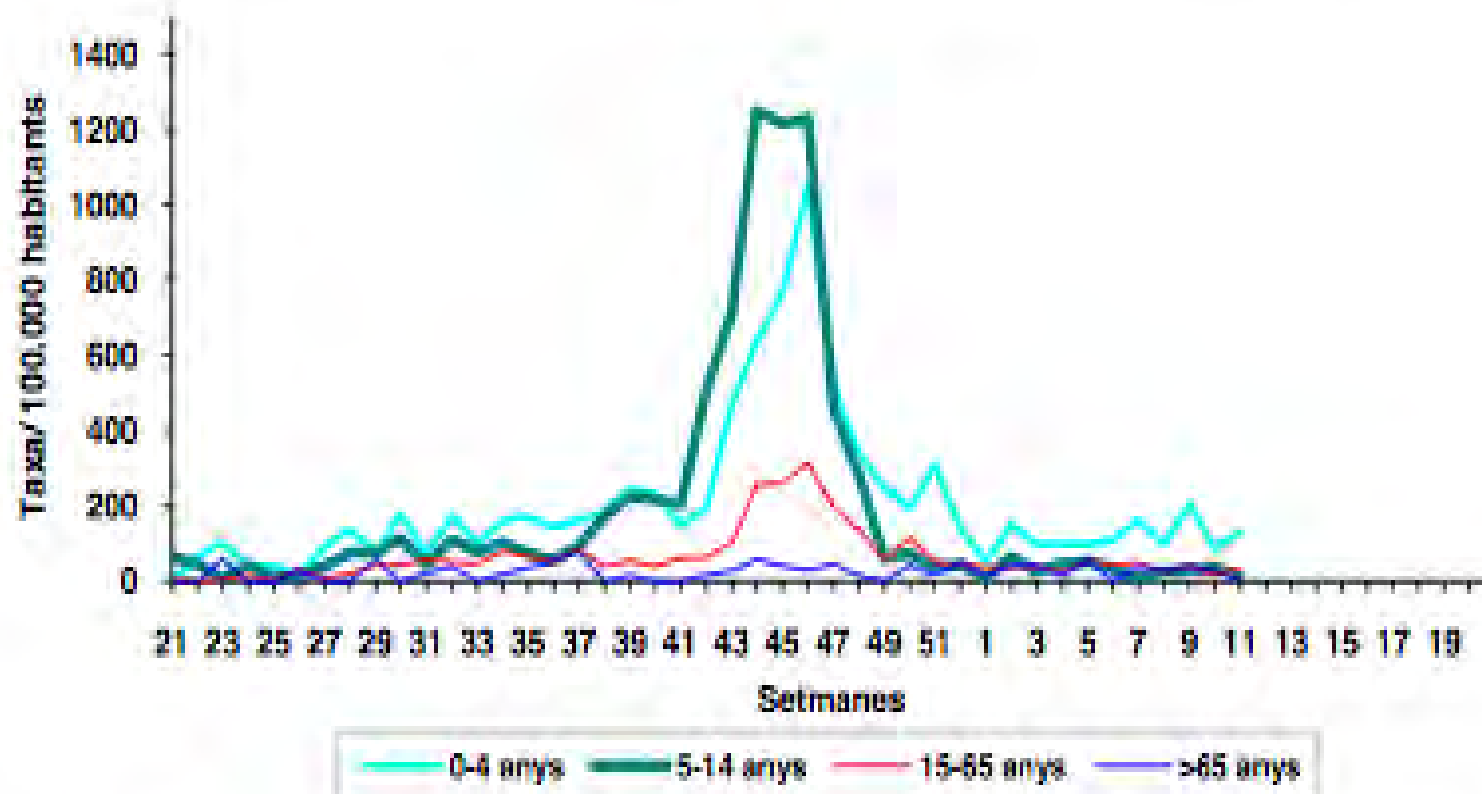
Pandèmia grip A (H1N1). Catalunya

Figura 6a. Taxa d'incidència de síndrome gripal i nombre d'aïllaments de virus de la grip A i B. Dades procedents de la xarxa sentinella. Setmanes 21(2009)-11 (2010)*



Pandèmia grip A (H1N1). Catalunya

Figura 6b. Taxa d'incidència de síndrome gripal per grups d'edat. Dades procedents de la xarxa sentinella. Setmanes 21(2009)-11 (2010)*



*Nota :La taxa d'incidència de setmanes prèvies s'actualitza amb les dades rebudes la setmana en curs.

Pandèmia grip A (H1N1). Catalunya

Nombre acumulat de pacients greus a Catalunya per edat
3 feb 2010

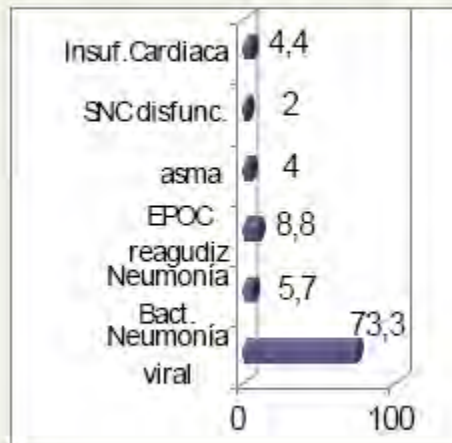
Grup d'edat (Anys)	Població	Pacients greus	Taxa/10 ⁵ hab.
0-4	418.271	84	20,1
5-14	715.308	79	11,0
15-44	3.345.794	295	8,8
45-64	1.839.021	228	12,4
>64	1.233.465	77	6,2
TOTAL	7.551.859	763	10,1

Font: PIDIRAC

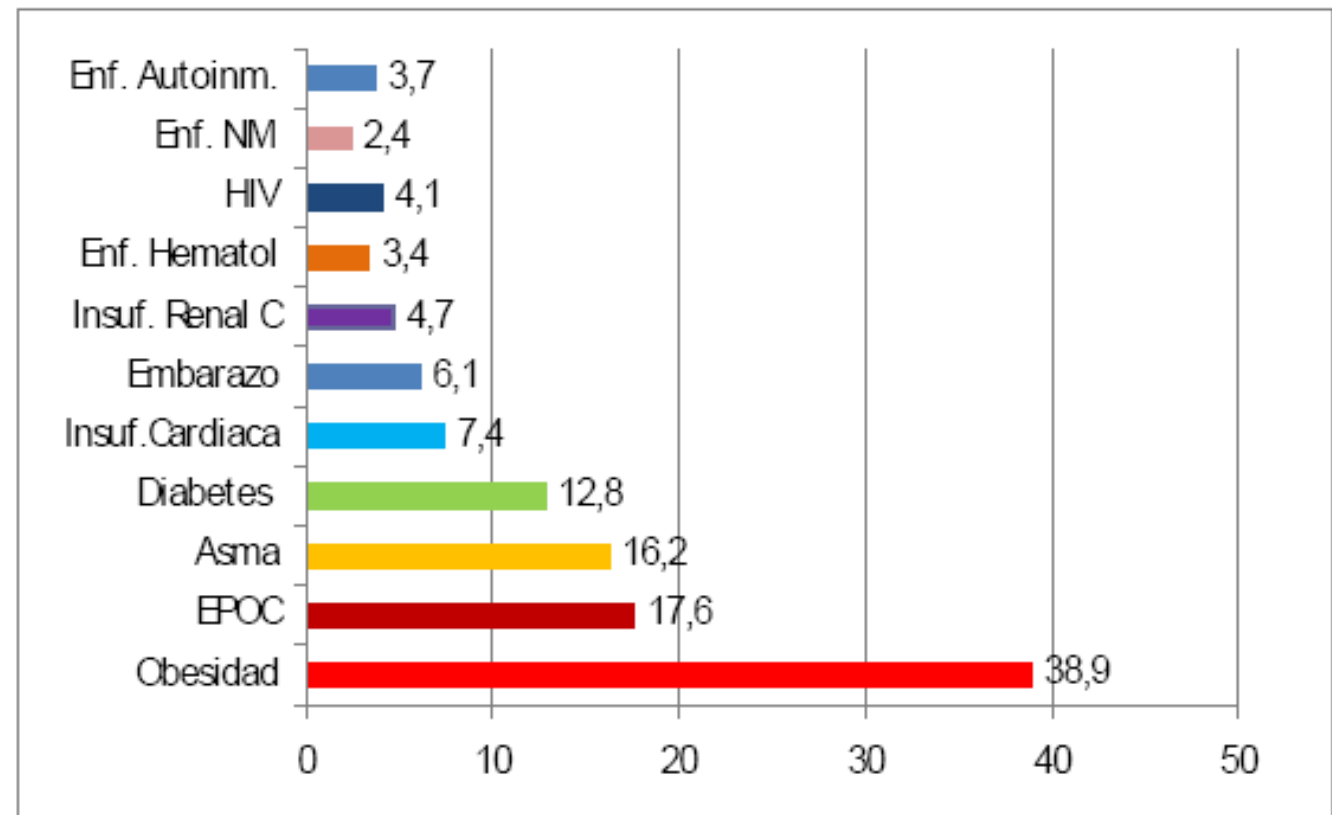
Pacients ingressats a UCI

34% dels pacients ingressats greus

GRIP A PRESENTACIÓN



Las comorbilidades aparecen en el 73% de los casos, manteniéndose la predominancia de la obesidad, el EPOC y el asma tal como se observa en la figura



Pandèmia grip A (H1N1). Catalunya

Nombre acumulat de defuncions a Catalunya per edat
3 feb 2010

Grup d'edat (Anys)	Població	Defuncions	Taxa/10 ⁵ hab
0-4	418.271	4	1,0
5-14	715.308	5	0,7
15-44	3.345.794	22	0,7
45-64	1.839.021	15	0,8
>64	1.233.465	7	0,6
TOTAL	7.551.859	53	0,7

Font: PIDIRAC

Taxes d'ingressos, letalitat i mortalitat

	Catalunya	Dades internacionals
Taxa d'ingressos (greus) / 10^5 hab.	10,1	9 - 25
Taxa de letalitat (%)	0.02	
Taxa de mortlilitat / 10^5 habitants	0,7	0,4 - 1,5

Eurosurveillance, Volume 14, Issue 42, 22 October 2009

Pandèmia grip A (H1N1). Catalunya

Taxes de mortalitat dels casos greus

Hospitalized Patients with 2009 H1N1
Influenza in the United States, April–June 2009

7%

N Engl J Med 2009;361:1935-44.

Austràlia i Nova Zelanda

14-16%

Critically Ill Patients With 2009
Influenza A(H1N1) Infection in Canada

17.3% *

JAMA. 2009;302(17):1872-1879

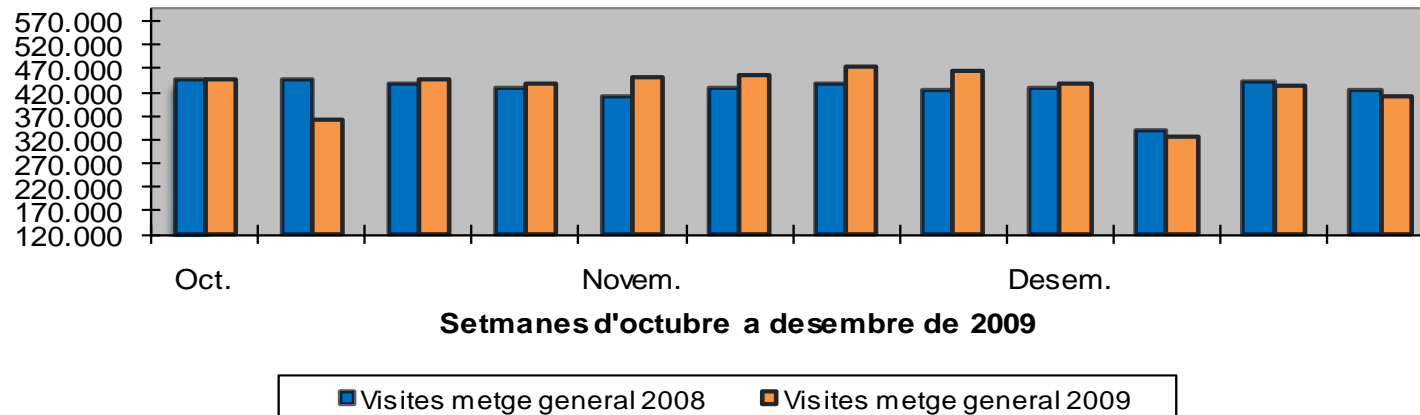
Catalunya

7,04%

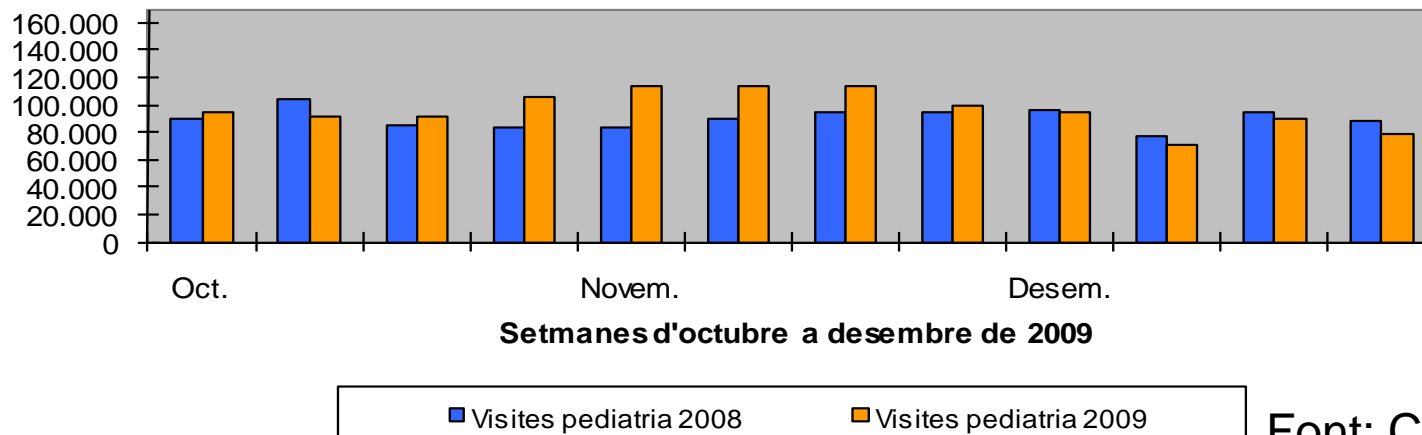
* A 90 dies

Pandèmia grip A (H1N1). Catalunya

Visites professionals metges generals (Centres d'Atenció Primària)



Visites professionals pediatria (Centres d'Atenció Primària)



Font: CatSalut

Impacte sobre els serveis assistencials

Urgències hospitalàries

Màxima activitat de finals d'octubre a mitjans de novembre

Pics màxims setmanals: Adults: 71.494 urgències
 Nens : 5.188 urgències

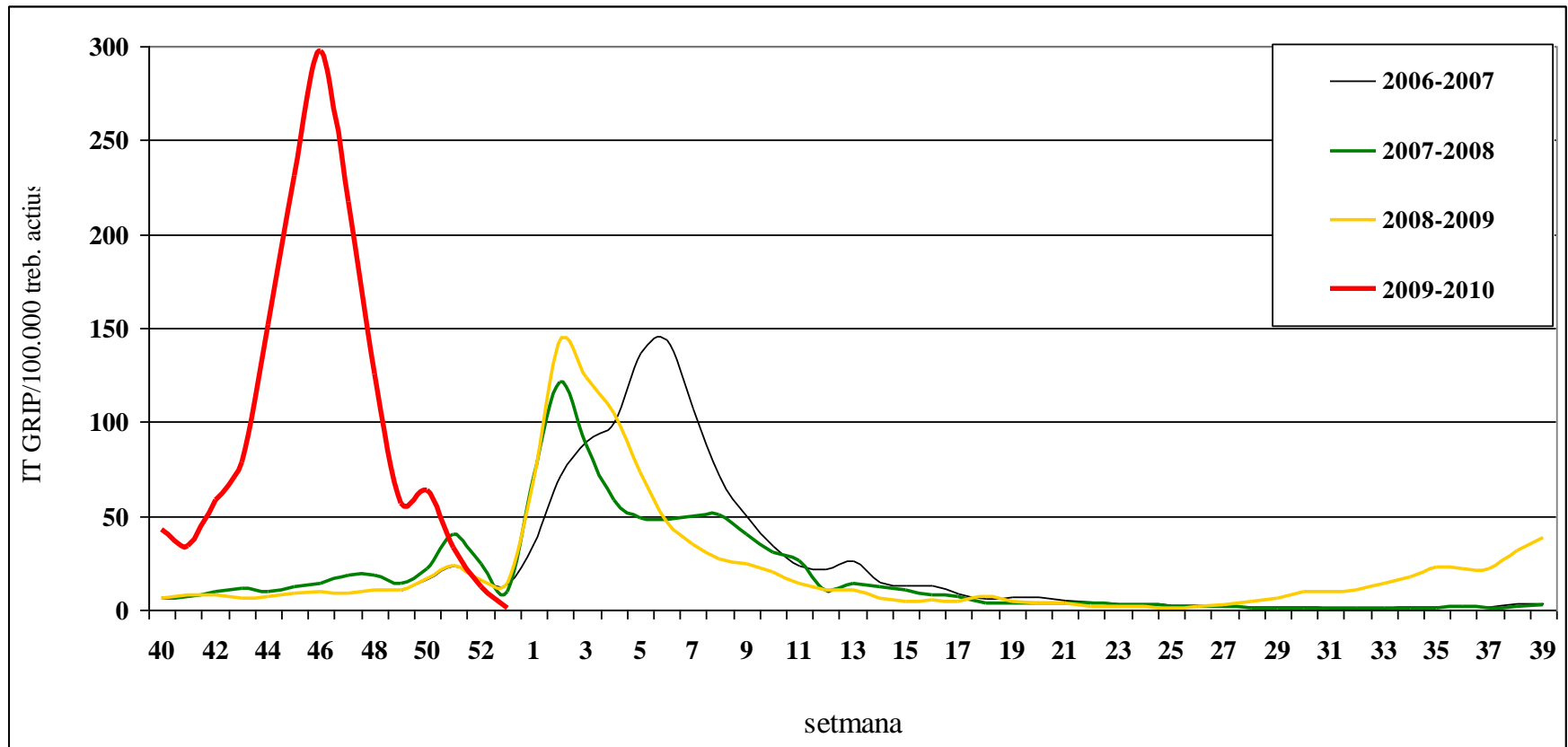
Canvis en relació a períodes similars

	Adults	Nens
Setmana equivalent del mes novembre	+ 16,6 %	+ 20,8 %
Setmana màxima dels darrers 6 anys	- 1,5 %	- 10,6 %

Font: CatSalut

Pandèmia grip A (H1N1). Catalunya

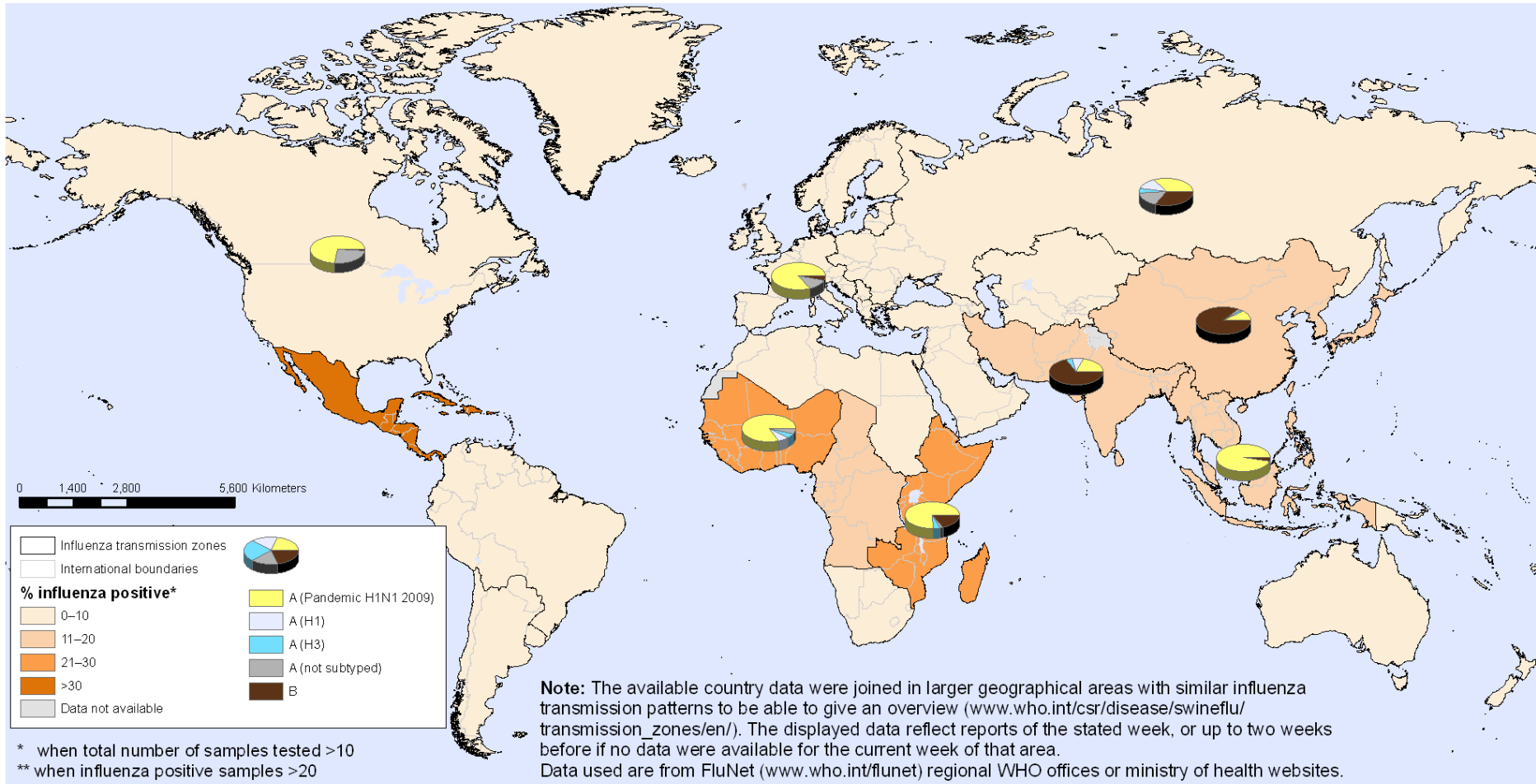
Incapacitat laboral transitòria



Font: ICAM

Percentage of respiratory specimens that tested positive for influenza

Status as of week 09
28 February–06 March 2010



* when total number of samples tested >10

** when influenza positive samples >20

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Data Source: World Health Organization
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization

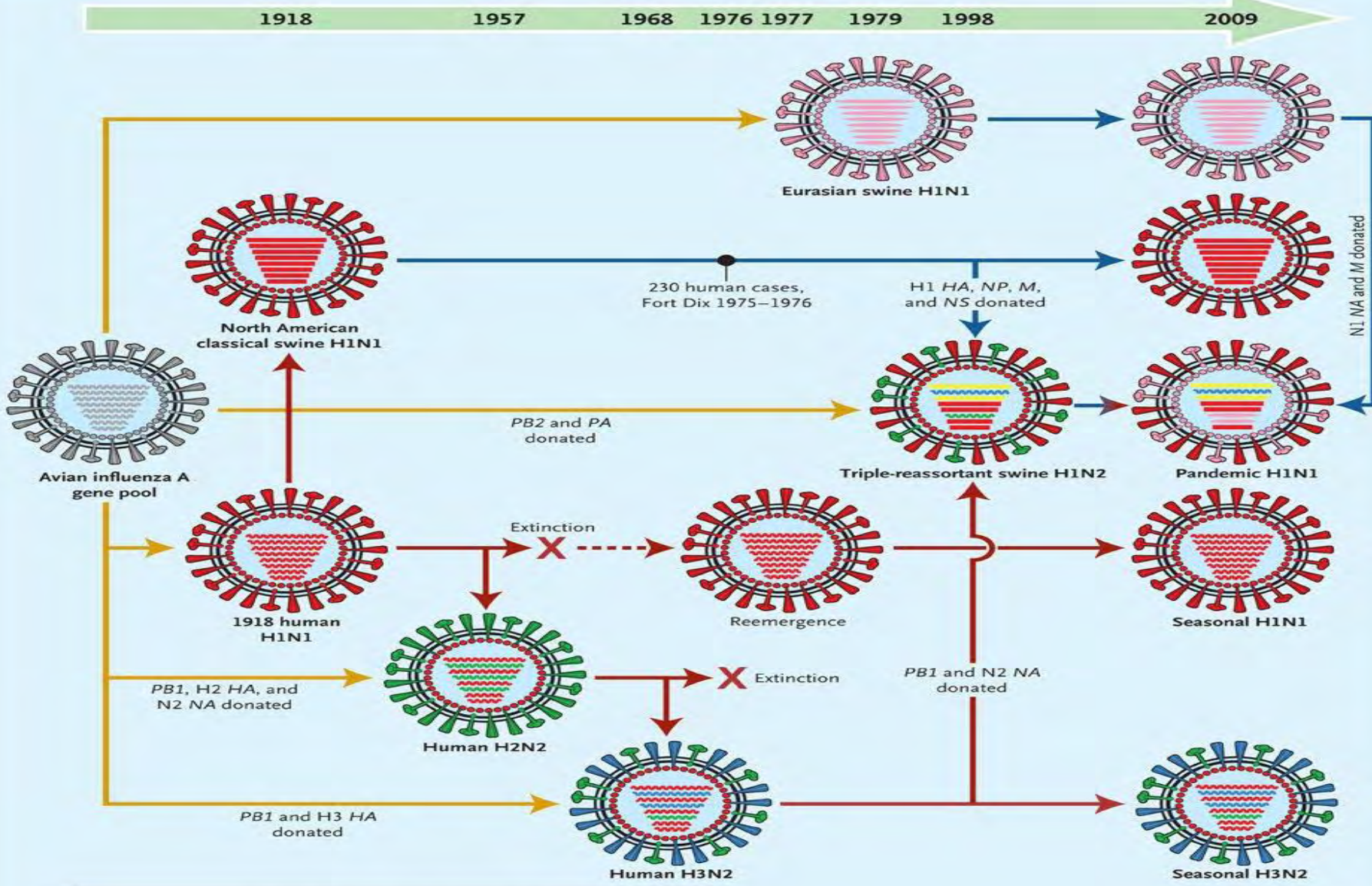


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LIFE ON THE FIELD

- ✓ Pandèmia?
- ✓ Hiperactuació?
- ✓ Benigna?
- ✓ Protecció previa?**
- ✓ Evolució futura?



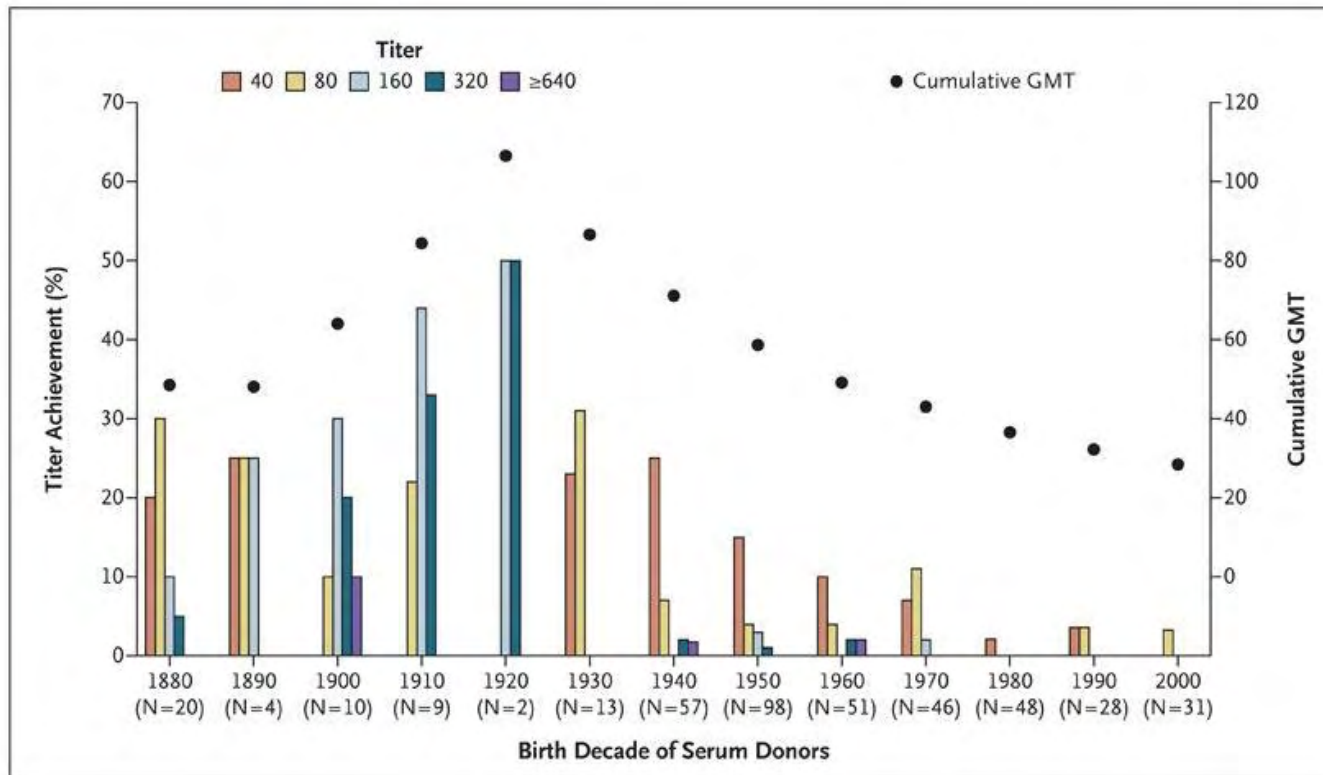
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- HA surface protein
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- M
- NS

- Human 1918 H1N1 (red wavy line)
- Swine 1918 H1N1 (red solid line)
- Swine 1979 H1N1 (pink solid line)

Virus de la gripe A pandémica (H1N1). **Acs Neutralizantes**

Neutralizing Antibody Titers against the 2009 Pandemic H1N1 Virus among Serum Donors, According to Birth Decade (1880-2000)



Hancock K et al. N Engl J Med 2009;10.1056/NEJMoa0906453

- ✓ No acs neutralizantes después de la vacuna estacional con o sin adjuvantes
- ✓ 34% nacidos <1950 titols neutralizantes >1/80
- ✓ Población EUA: Diferente historia vacunal
Vacunación H1N1 1976 20% población (A/NJ/76 (H1N1))

✓ Partial Protection of seasonal trivalent inactivated vaccine against novel pandemic influenza A/H1N1 2009: case control study in Mexico City

Garcia-Garcia L, et al.

BMJ 2009; 339: b3928

✓ Pre-existing immunity against swine-origin H1N1 influenza viruses in the general human populace.

Greenbaum J, et al.

Proc Natl Acad Sci 2009; DOI: 10.1073

Grip. Variabilitat Genètica. Composició vacuna de la grip 1989-2003

ANY	Virus A (H3N2)	Virus A (H1N1)	Virus B
89-90	A/Shanghai/11/87	A/Singapoore/6/86	B/Yamagata/16/88
90-91	A/Guizhou/54/89	A/Singapoore/6/86	B/Yamagata/16/88
91-92	A/Beijing/353/89	A/Singapoore/6/86	B/Yamagata/16/88
92-93	A/Beijing/353/89	A/Taiwan/1/86	B/Yamagata/16/88
93-94	A/Beijing/32/92	A/Singapore/6/86	B/Panama/45/90
94-95	A/Shangdong/9/93	A/Singapore/6/86	B/Panama/45/90
95-96	A/Johanesburg/33/94	A/Singapore/6/86	B/Beijing/184/93
96-97	A/Wuhan/395/95	A/Singapore/6/86	B/Beijing/184/93
97-98	A/Wuhan/395/95	A/Bayern/7/95	B/Beijing/184/93
98-99	A/Sidney/5/97	A/Beijing/262/95	B/Beijing/184/93
99-00	A/Sidney/5/97	A/Beijing/262/95	B/Beijing/184/93
00-01	A/Moscow/10/99	A/New Caledonia/20/99	B/Beijing/184/93
01-02	A/Moscow/10/99	A/New Caledonia/20/99	B/Beijing/184/93
02-03	A/Moscow/10/99	A/New Caledonia/20/99	B/Hong Kong/330/01

Recomenada per l'OMS per l'Hemisferi Nord

Virus de la gripe A pandémica (H1N1). Acs Neutralizantes

	Microneutralisation titre at or above 1:10	Haemagglutination inhibition titre at or above 1:8	Microneutralisation titre at or above 1:40	Haemagglutination inhibition titre at or above 1:32
0-4 years	7/143 (4.9%, 2.4-9.8)	6/171 (3.5%, 1.6-7.4)	4/143 (2.8%, 1.1-7.0)	3/171 (1.8%, 0.6-5.0)
5-14 years	20/163 (12.3%, 8.1-18.2)	17/188 (9.0%, 5.7-14.0)	7/163 (4.3%, 2.1-8.6)	7/188 (3.7%, 1.8-7.5)
15-24 years	32/110 (29.1%, 21.4-38.2)	30/120 (25.0%, 18.1-33.4)	14/110 (12.7%, 7.7-20.2)	21/120 (17.5%, 11.7-25.3)
25-49 years	41/168 (24.4%, 18.5-31.4)	35/193 (18.1%, 13.3-24.2)	16/168 (9.5%, 5.9-14.9)	19/193 (9.8%, 6.4-14.9)
50-64 years	29/65 (44.6%, 33.2-56.7)	67/182 (36.8%, 30.1-44.0)	12/65 (18.5%, 10.9-29.6)	26/182 (14.3%, 9.9-20.1)
65-74 years	95/167 (56.9%, 49.3-64.2)	68/190 (35.8%, 29.3-42.8)	42/167 (25.1%, 17.6-32.2)	40/190 (21.1%, 15.9-27.4)
75-79 years	101/187 (54.0%, 46.9-61.0)	77/193 (39.9%, 33.2-46.9)	33/187 (17.6%, 12.9-23.7)	36/193 (18.7%, 13.8-24.7)
≥80 years	139/166 (83.7%, 77.4-88.6)	105/166 (63.3%, 55.7-70.2)	78/166 (47.0%, 39.5-54.6)	52/166 (31.3%, 24.8-38.7)
Total	464/1169 (39.7%, 36.9-42.5)	405/1403 (28.9%, 26.6-31.3)	206/1169 (17.6%, 15.5-19.9)	204/1403 (14.5%, 12.8-16.5)

Data are number of individuals with antibody/number of individuals tested (%; 95% CI).

Table 1: Serum samples obtained in 2008 with antibody titre equal to or more than the minimum detection limit and with antibody titre at least four times higher than the minimum detection limit, by age group and test method

	Baseline*	August serum samples	August serum samples	Difference (Aug-baseline)	September serum samples	September serum samples	Difference (Sept-baseline)
<5 years	1.8% (0.6 to 5.0)	6/35	17.1% (8.1 to 32.7)	15.4% (5.8 to 31.0)	6/26	23.1% (11.0 to 42.1)	21.3% (8.8 to 40.3)
5-14 years	3.7% (1.8 to 7.5)	15/41	36.6% (23.6 to 51.9)	32.9% (19.3 to 48.3)	16/35	45.7% (30.5 to 61.8)	42.0% (26.3 to 58.2)
15-24 years	17.5% (11.7 to 25.3)	4/21	19.0% (7.7 to 40.0)	1.5% (-12.2 to 23.3)	8/21	38.1% (20.8 to 59.1)	20.6% (1.6 to 42.4)
25-44 years	8.9% (5.4 to 14.3)	14/69	20.3% (12.5 to 31.2)	11.4% (1.9 to 22.9)	8/53	15.1% (7.9 to 27.1)	6.2% (-2.8 to 18.7)
45-64 years	14.3% (10.3 to 19.6)	5/73	6.8% (3.0 to 15.1)	-7.4% (-14.0 to 1.7)	9/78	11.5% (6.2 to 20.5)	-2.7% (-10.3 to 7.1)
≥65 years†	23.3% (20.0 to 27.0)	16/77	20.8% (13.2 to 31.1)	-2.5% (-11.0 to 8.3)	15/62	24.2% (15.2 to 36.2)	0.9% (-8.8 to 13.3)

Data are % (95% CI) or n/N. *Baseline serum samples obtained in 2008 in England. Numbers for the proportions from the baseline survey are shown in table 1. †Data for the ≥65-year age group have been estimated by use of the age-standardised prevalence.

Table 2: Proportion of serum samples with haemagglutination inhibition titre 1:32 or more at baseline and in samples obtained in August and September, 2009, from London and the West Midlands, by age group

Miller E, et al. *Lancet* 2010 online january 21

- ✓ Pandèmia?
- ✓ Hiperactuació?
- ✓ Benigna?
- ✓ Protecció previa?
- ✓ Evolució futura?**

Virus de la grip A pandèmica (H1N1). **Evolució**

Tots els virus circulants similars a A/California/04/09 (H1N1)v

- ✓ **Similar al virus vacunal (A/California/07/2009)**
 - ✓ **Genètica y antigènicament estable**
 - ✓ **Perfil de baixa patogenicitat en els factors de virulència**
 - ✓ **Reconeix receptors humans i aviars**
 - ✓ **Sensible en els inh. Neuraminidasa**
 - ✓ **Resistent en els adamantans**
-

Variabilitat Genètica

Pressió:

Inmunològica y farmacològica

Oportunitat:

Reagrupament genètic

VGA estacional (H3N2 o H1N1)

virus amb potencial pandèmic (H5N1)

Vacuna 2010-2011 Hemisferi Nord (O.M.S.)

A/California/7/2009 (H1N1)-like virus

A/Perth/16/2009 (H3N2)-like virus

B/Brisbane/60/2008-like virus

Vigilància virològica de la grip a Catalunya

