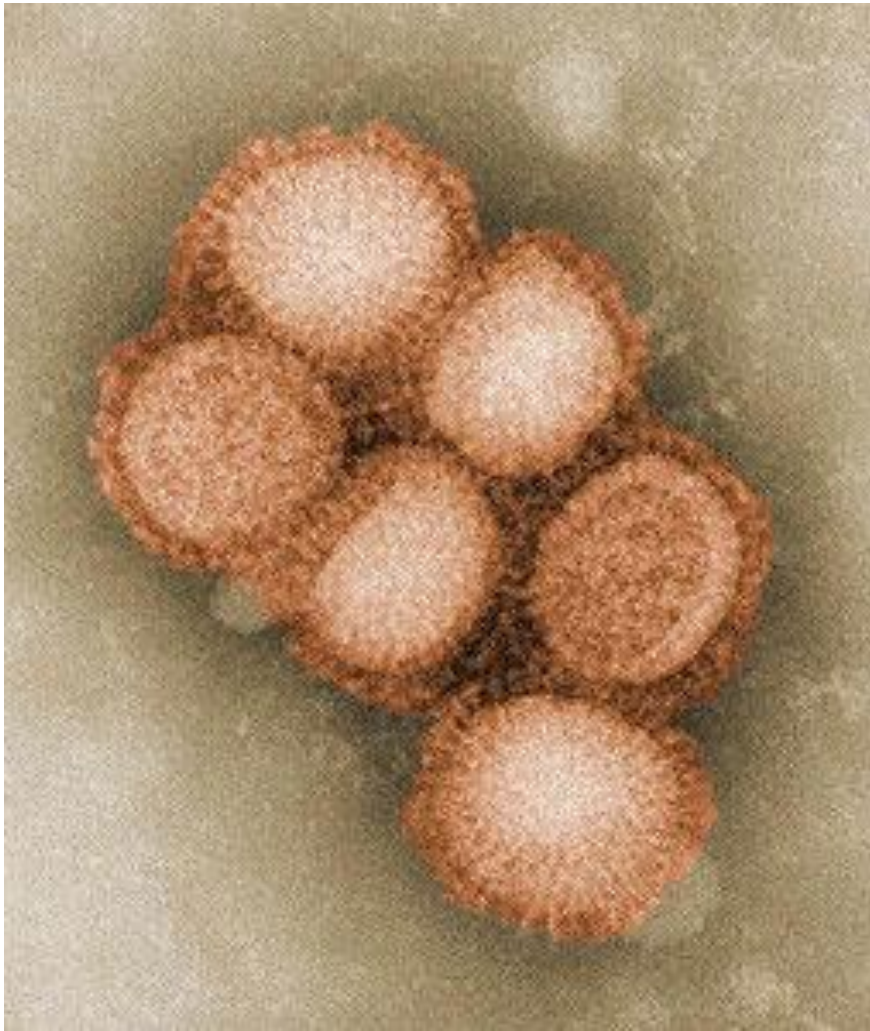


H1N1 Influenza – Pandemic or Panic?

G. Rohde, MD

Secretary of ERS scientific assembly 10
(Respiratory infections and tuberculosis)

ERS congress press conference
13. Sep. 2009



A/CA/4/09 Swine-Origin Influenza A /dpa

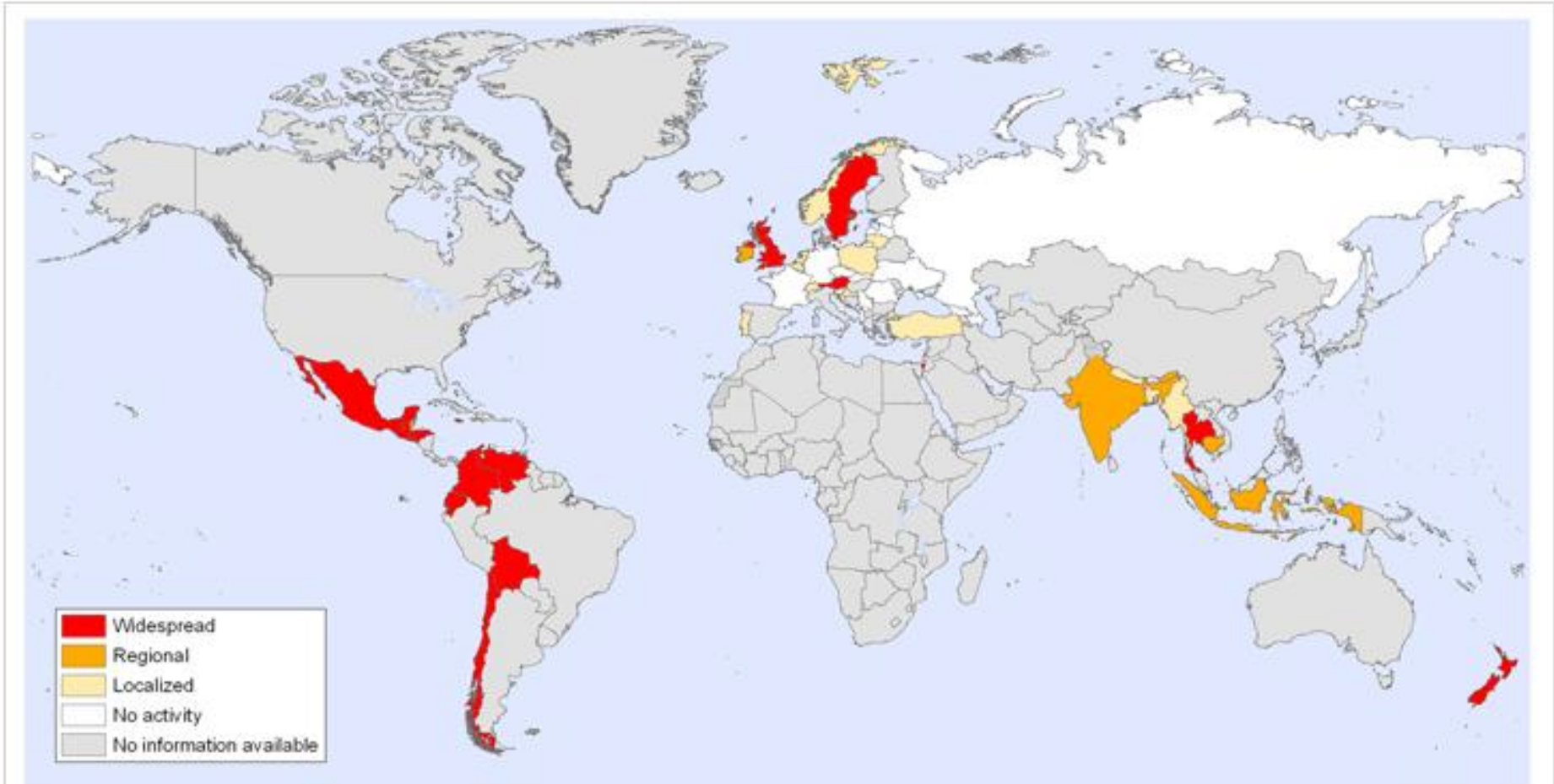
- On April 15 and April 17, 2009, the CDC identified two cases of human infection with a swine-origin influenza A (H1N1) virus (S-OIV) characterized by a unique combination of gene segments that had not been identified among human or swine influenza A viruses

N Engl J Med 2009;361



Status as of: week 33, 2009 (10–16 August)

◀
Previous



H1N1 now the dominant virus strain

- H1N1 pandemic virus has rapidly established itself and is now the dominant influenza strain in most parts of the world
- The pandemic will persist in the coming months as the virus continues to move through susceptible populations
- Viruses from all outbreaks remain virtually identical (no mutation to a more virulent or lethal form so far)
- The overwhelming majority of patients continue to experience mild illness

Large populations susceptible to infection

- Large numbers of people in all countries remain susceptible to infection
- The impact of the pandemic during the second wave could worsen as larger numbers of people become infected
- Larger numbers of severely ill patients requiring intensive care are likely to be the most urgent burden on health services

Cases and Deaths worldwide

Region	Cumulative total	
	as of 23 Aug 2009	
	Cases*	Deaths
WHO Regional Office for Africa (AFRO)	3843	11
WHO Regional Office for the Americas (AMRO)	110113	1876
WHO Regional Office for the Eastern Mediterranean (EMRO)	3128	10
WHO Regional Office for Europe (EURO)	Over 42,557	At least 85
WHO Regional Office for South-East Asia (SEARO)	15771	139
WHO Regional Office for the Western Pacific (WPRO)	34026	64
Total	Over 209438	At Least 2185

Differences to seasonal influenza

- The age groups affected by the pandemic are generally younger. This is true for those most frequently infected, and especially so for those experiencing severe or fatal illness
- In seasonal influenza around 90% of severe and fatal cases occur in people 65 years of age or older

Vulnerable groups

- Pregnancy
- Respiratory disease, notably asthma
- Cardiovascular disease
- Diabetes
- Immunosuppression
- Children < 5 years of age

Co-infection with HIV

- People co-infected with H1N1 and HIV are not at increased risk of severe or fatal illness, if they are receiving antiretroviral therapy
- In most of these patients, illness caused by H1N1 has been mild, with full recovery

Severe respiratory failure

- Perhaps most significantly, clinicians from around the world are reporting a very severe form of disease, also in young and otherwise healthy people, which is rarely seen during seasonal influenza infections
- In these patients, the virus directly infects the lung, causing severe respiratory failure. Saving these lives depends on highly specialized and demanding care in intensive care units, usually with long and costly stays
- During the winter season in the southern hemisphere, several countries have viewed the need for intensive care as the greatest burden on health services. Some cities in these countries report that nearly 15 percent of hospitalized cases have required intensive care
- Preparedness measures need to anticipate this increased demand on intensive care units, which could be overwhelmed by a sudden surge in the number of severe cases

WHO recommendations on therapy

- Oseltamivir can significantly reduce the risk of pneumonia and the need for hospitalization
- All patients who initially present with severe illness or whose condition begins to deteriorate should be treated (including children)
- All patients with underlying medical conditions that increase the risk of more severe disease should be treated (including children)
- Pregnant women should receive antiviral treatment as soon as possible after symptom onset
- Clinical deterioration is characterized by primary viral pneumonia, which destroys the lung tissue and does not respond to antibiotics, and the failure of multiple organs, including the heart, kidneys, and liver. These patients require management in intensive care units using therapies in addition to antivirals
- Clinicians, patients, and those providing home-based care need to be alert to warning signals that indicate progression to a more severe form of illness, and take urgent action, which should include treatment with oseltamivir

Monitoring for drug resistance

- Only a handful of pandemic viruses resistant to oseltamivir have been detected worldwide, despite the administration of many millions of treatment courses of antiviral drugs
- No instances of onward transmission of drug-resistant virus have been documented to date
- Intense monitoring is warranted

The pandemics

Year	Name	Deaths	Strain
1918	Spanish Flu	4.000.000	H1N1
1957	Asian Flu	150.000	H2N2
1968	Hong Kong Flu	80.000	H3N2
2009	Mexican Flu	2.200	H1N1

Pandemic Yes!

Panic No !

H1N1 Vaccination

- Target groups:
 - pregnant women
 - persons who live with or provide care for infants aged <6 months
 - health-care and emergency medical services personnel
 - children and young adults aged 6 months-24 years
 - persons aged 25-64 years who have medical conditions that put them at higher risk for influenza-related complications

H1N1 at the congress

Session 11	Influenza	<p>Monday , 14 September 2009</p> <p>Room C2 Session 170 10:45-12:45</p> <p>S Hot Topic : The influenza A (H1N1) pandemic</p> <p>Chairs : P. Penttinen (Stockholm, Sweden)</p> <p><i>Aims: The Novel (H1N1) Flu has generated a lot of discussions in both the scientific and the media settings. This session provides an up-to-date situation on the present epidemiological situation, the communication issues related to the pandemic, the balance among global health priorities, vaccination and other prevention measures as well as treatment-related challenges.</i></p> <p><i>Target audience: Clinicians, microbiologists and public health staff involved in prevention and care of influenza A (H1N1) cases.</i></p> <table border="1"> <tr> <td>10:45</td> <td>The spread of influenza viruses. State of the pandemic and prediction</td> <td>1763</td> </tr> <tr> <td>11:09</td> <td>Communicating pandemic risks to patients and the public P. Sandman (Princeton Nj, United States of America)</td> <td>1764</td> </tr> <tr> <td>11:33</td> <td>Keeping a balance among priorities P. Nunn (Geneva 27, Switzerland)</td> <td>1765</td> </tr> <tr> <td>11:57</td> <td>Influenza and Respiratory Health Care Workers. From preparedness to the treatment of severely affected patients</td> <td>1766</td> </tr> <tr> <td>12:21</td> <td>Racing against influenza viruses. Vaccinating against seasonal influenza and pandemic influenza A. Osterhaus (Rotterdam, The Netherlands)</td> <td>1767</td> </tr> </table>	10:45	The spread of influenza viruses. State of the pandemic and prediction	1763	11:09	Communicating pandemic risks to patients and the public P. Sandman (Princeton Nj, United States of America)	1764	11:33	Keeping a balance among priorities P. Nunn (Geneva 27, Switzerland)	1765	11:57	Influenza and Respiratory Health Care Workers. From preparedness to the treatment of severely affected patients	1766	12:21	Racing against influenza viruses. Vaccinating against seasonal influenza and pandemic influenza A. Osterhaus (Rotterdam, The Netherlands)	1767
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