

# Novel Influenza A H1N1 or “Swine Flu”

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Often misunderstood and underestimated,  
Influenza is not just “a bad cold”!



Annual, winter  
influenza epidemics



Influenza pandemics  
every few decades  
(11–36 years)

# Differences between *Allergy, Cold and Flu*

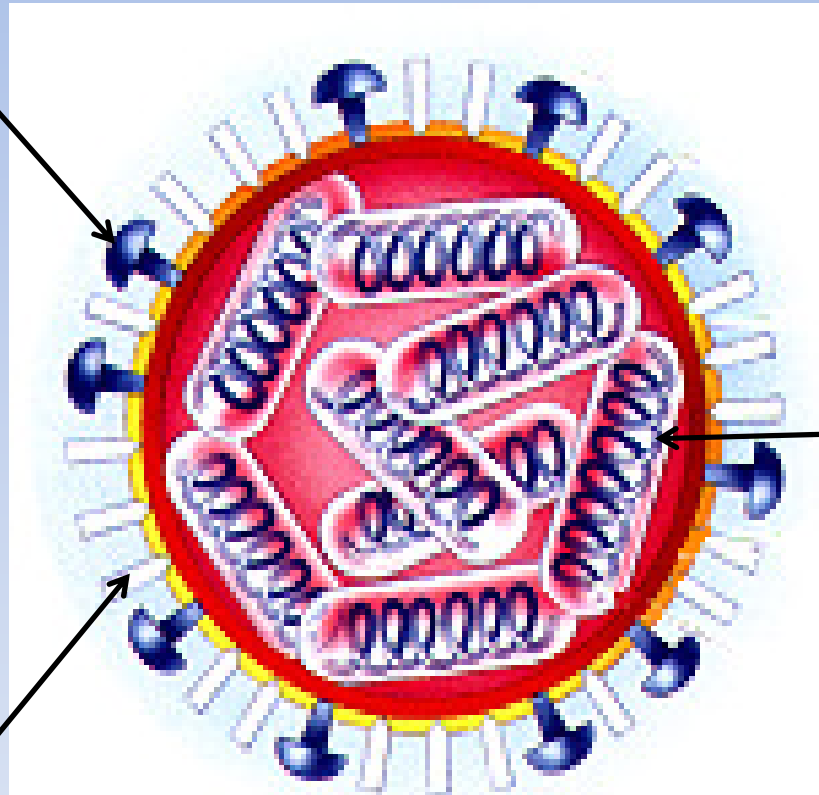
<b>Symptoms</b>	<b>Airborne allergy</b>	<b>Common Cold</b>	<b>Flu or Influenza Infection</b>
<b>Fever</b>	Never	Rare	Usual. <i>High (100-102F)(37.8-38.9C)</i> sometimes higher (especially in young children); last 3-5 days
<b>Headache</b>	Rare	Rare	<i>Common</i>
<b>General aches &amp; pains</b>	Never	Slight	Usual; often <i>severe</i>
Fatigue, weakness	Sometimes	Sometimes	Usual, can <i>last up to 3 weeks</i>
<b>Extreme exhaustion</b>	Never	Never	<i>Usual</i> , at the beginning of the illness
Stuffy or 'runny' nose	Common	Common	Sometimes
Sneezing	Usual	Usual	Sometimes
Sore throat	Sometimes	Common	Sometimes
Cough	Sometimes. Dry (non-productive)	Common, hacking, often productive	<i>Common</i> , can become severe. Usually non-productive
Chest discomfort	Rare	Mild to moderate	<i>Common</i>

# Differences between *Allergy, Cold and Flu*

<b><i>Symptom</i></b>	<b>Airborne allergy</b>	<b>Common Cold</b>	<b>Flu/Influenza Infection</b>
Onset	May be sudden	Gradual	<i>Acute &amp; sudden</i>
<b>Duration</b>	Over a week	3-5 days	<i>Over 5 days</i>
Red eye□/Conjunctivitis	Possible	Uncommon	May be prominent

# Influenza Virus Structure

Haemagglutinin



Nucleoprotein

Neuraminidase

H1N1 Virus

# Human Influenza – Some Facts

- Caused by Influenza Virus
  - 3 main types: A, B & C
- A & B: Cause **Epidemics** nearly every year
- A: Cause of **Pandemics**
- “A”: *Subtypes* based on different surface proteins – Haemagglutinin(H) & Neuraminidase (N)

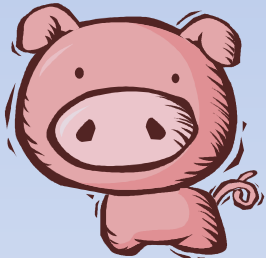
# Human Influenza – Some Facts

- Antigenic DRIFT → yearly epidemics
- Antigenic SHIFT → influenza pandemic (every 10-40 years)

# Antigenic Shift



Bird Flu



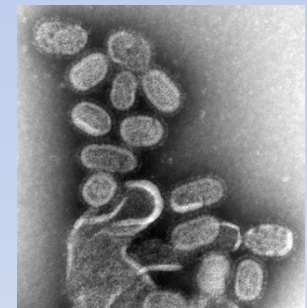
Swine Flu



Human Flu



Human Host



H1N1 Virus  
(new)

# Past Pandemics

- 1918 – Spanish flu (20 – 40 million cases)
- 1957 – Asian flu (1 million cases)
- 1968 – Hong Kong flu (0.7 million cases)



The "Spanish flu" pandemic of 1918 killed over 20 million people worldwide. Above: Two Red Cross nurses tend to a patient at a Red Cross emergency ambulance station in Washington, D.C., during the outbreak.





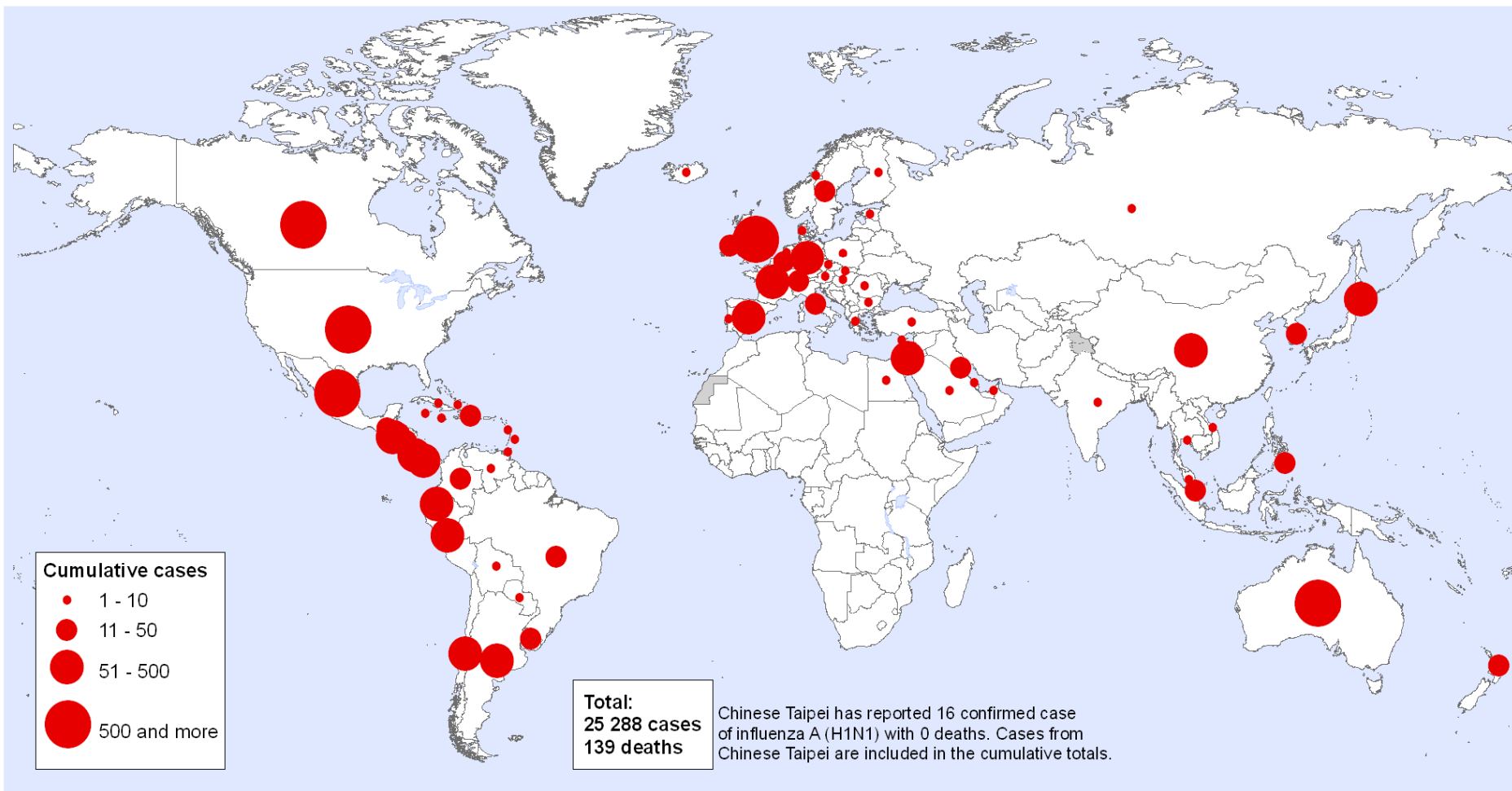
# Recent H1N1 Influenza “A” Outbreak

- April 4: 1<sup>st</sup> case in Mexico
- April 12: First death
- April 21-23: US confirms first 4 cases
- April 26: Canada confirms first cases
- April 27: Europe, Spain & Britain. WHO raises pandemic alert status to phase 4
- April 28: New Zealand & Israel
- April 29-30: Germany, Austria, Switzerland, Netherlands
- May 1: Hong Kong, Denmark, France
- May 2: South Korea, Italy

# Latest Count of Confirmed Cases & Deaths

New Influenza A (H1N1),  
Number of laboratory confirmed cases as reported to WHO

Status as of 08 June 2009  
06:00 GMT



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



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Map produced: 08 June 2009 06:30 GMT

# How Does H1N1 Spread?



Droplet (e.g. coughing, sneezing, speaking)



Contact (touching a contaminated surface)

# To Prevent H1N1 Spreading or Contracting?



Droplet (e.g. coughing, sneezing, speaking)

## Good Personal Hygiene-habits via

- a) **covering of mouth** with a tissue when coughing or sneezing and disposing it properly into the waste-basket
- b) **Wearing Surgical Masks** when unwell

## Personal Protective Equipments/PPE

- a) **N95 Masks** - for those who are well
- b) **Gowns** - for those who are well

# To Prevent H1N1 Spreading or Contracting?

## Good Personal Hygiene-habits via

a) **Hand-Washing/Cleansing** with soap or with Alcohol-based sanitizers

## PPE

a) **Gloves**

## Environmental Hygiene

Ensuring regular cleaning and sterilizing of work areas or equipments



Contact (touching a contaminated surface)

# To Prevent H1N1 Spreading or Contracting?



## **Exercise Social Responsibility**

When sick and not feeling well, to **see a doctor and stay at home**. Put on a mask if you really need to go out.

## **Maintaining a Healthy Lifestyle**

- a) **Exercising**
- b) Consuming a **Balanced Diet** and **adequate amount of Water** daily
- c) Essential Supplements such as **Vitamins A, C, E, and Zinc**
- d) Adequate **rest**



# To Prevent H1N1 Spreading or Contracting?

## Monitoring of Temperature

Temperature should be measured twice a day (morning and afternoon).

**Fever is Oral Temp  $>37.4$  degrees Celsius**  
*(immediately don a mask and visit the Doc)*

36.0-38.0 deg C can be normal  
for aural temp.



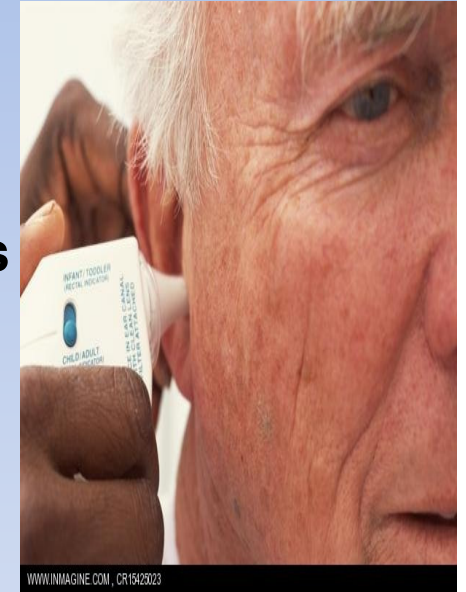
WWW.INMAGINE.COM , MW112220052

*Oral  
Temperature*



WWW.INMAGINE.COM , SMP0009226

*Forehead Temperature  
(Inaccurate)*



WWW.INMAGINE.COM , CR15129223

*Aural/Ear  
Temperature*

# How Does **Seasonal Influenza Vaccination** help to Prevent H1N1 Infection?

Does **NOT** protect against H1N1

But *recommended* because of :

- ***Personal protection*** against human influenza
- ***Precaution*** against possible re-assortment
- ***Enable Early Diagnosis & Isolation*** of true H1N1 Influenza patients



WWW.INMAGINE.COM , CRB50682703



# Recommendation For Seasonal Influenza Vaccination

Who should be vaccinated?

- Travelers
- Children 6 months – 5 years
- Elderly > 65
- Residents of nursing homes
- People with long term-illnesses (e.g. heart/lung)
- People with depressed immunity
- Pregnant women in 2<sup>nd</sup>-3<sup>rd</sup> trimester
- Healthcare workers
- **EVERYONE** in the face of a *Pandemic-threat*

# Treatment of Novel H1N1 Influenza A



**Tamiflu**

*(Can also be taken as a prophylaxis  
against Influenza infections)*



**Relenza**

# Advice to Travelers *prior* to travel

- a) **Avoid** unnecessary travel especially to epicenters of outbreak
- b) Get the **Flu Vaccination** at least 2 weeks before traveling
- c) Carry along a box of **Tamiflu** & some **N95 Masks**
- d) Bring a **Travel Medicine Kit**

# Advice to Travelers *after* travel

- a) **Quarantine** self and work from home, if traveling from epicenters, for 7 days while monitoring temperature regularly and for symptoms
- b) Keep self updated on the news in regards to possible contacts with confirmed cases while traveling
- c) To see doctor immediately if symptoms developed after traveling to Non-Epicenters

# General Advice

- Avoid crowded places
- Avoid unnecessary travel
- Spend more time in the outdoors or open spaces than in an enclosed air-con environment
- Be prepared by stocking up on masks, thermometers and Tamiflu.

# Important Advice

- If you have...
  - **Recently traveled** to Mexico, USA, Canada, Chile, Australia & Japan (Kobe & Osaka)
  - OR*
  - Contact** with anyone who traveled to the above places
  - **Fever > 38 degrees +/-** flu symptoms
- **Call 993** immediately

**Thank You!**

Questions?