

# Pandemic Planning in Ontario

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# Characteristics of an Influenza Pandemic

## Requirements:

- Introduction of a novel (new) influenza virus
- Highly contagious: human to human transmission happens easily
- New virus causes serious illness and/or death
- Population has little/no immunity
- Occurs roughly three times a century and international impact
- Usually starts in southeast Asia

## Current Status

- ✓ New virus
- ✗ **Limited spread to humans**
- ✗ **Limited transmission to date**
- ✓ Avian flu with 50% mortality
- ✓ In place
- ✓ Overdue
- ✓ Began in southeast Asia (recently to Africa, Asia, Europe)

- Bird flu outbreaks
- Human cases
- Bird migration zones

Jan-Jun  
2004

Jul-Dec  
04

Jan-Jun  
05

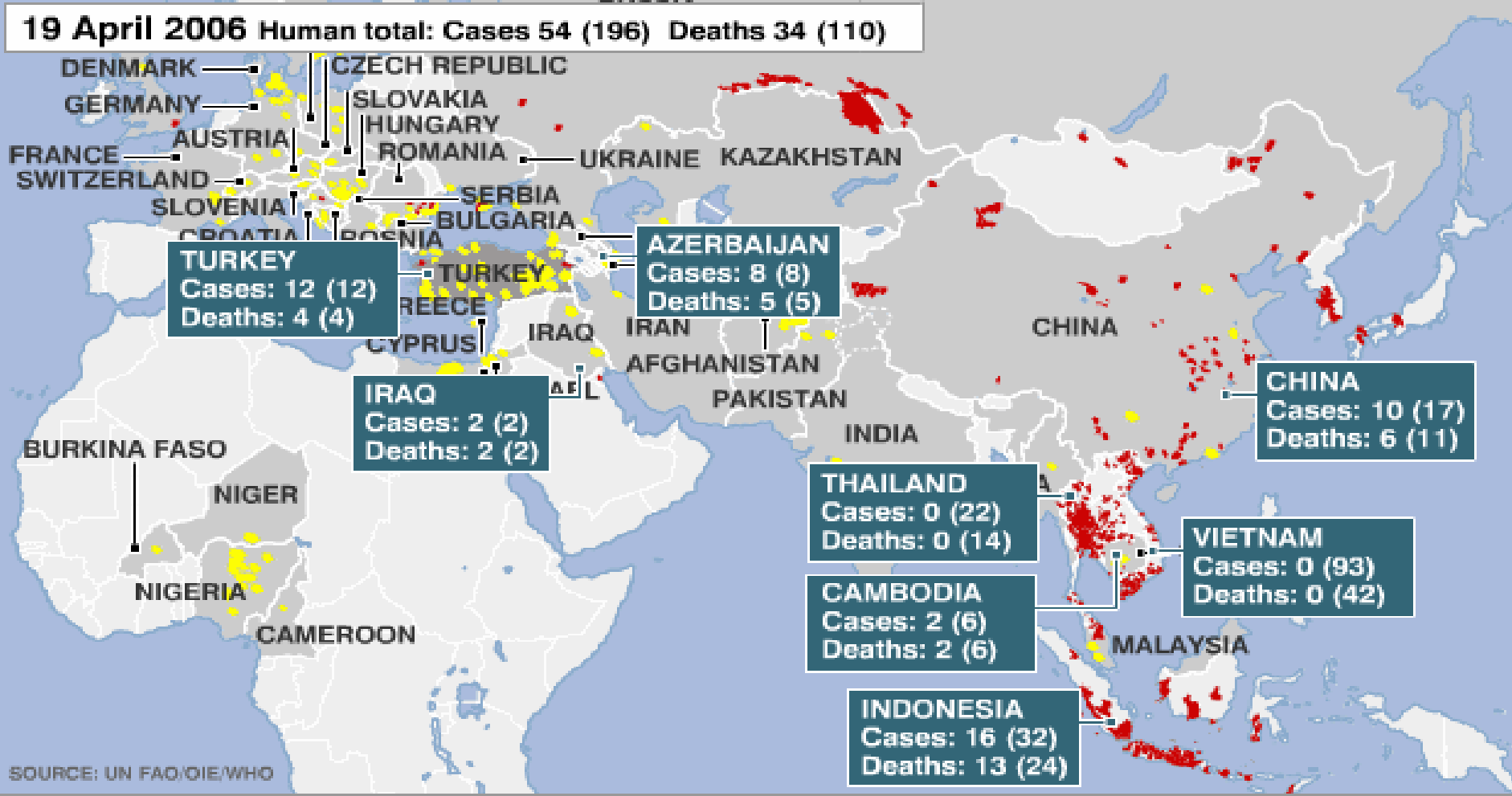
Jul-Dec  
05

Jan-date  
06



**BIRDS:** New cases  Previous cases  No of new cases in country  1-25  26-100  101-250  >250

**HUMANS:** Countries with cases/deaths (total)



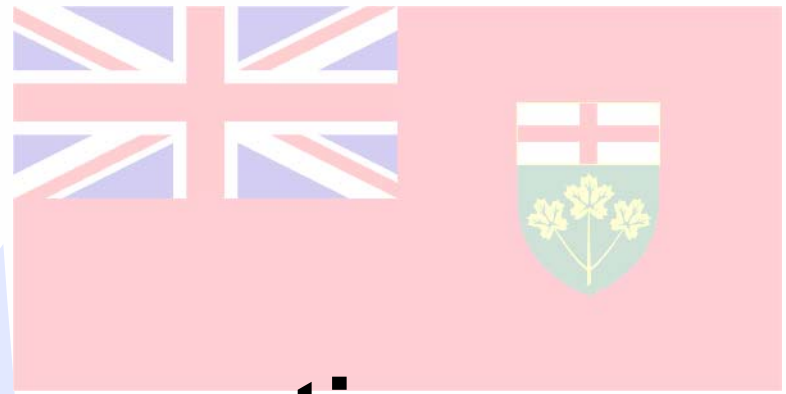
SOURCE: UN FAO/OIE/WHO

**SOURCE: BBC NEWS ON-LINE:**  
[http://news.bbc.co.uk/1/shared/spl/hi/world/05/bird\\_flu\\_map/html/1.stm](http://news.bbc.co.uk/1/shared/spl/hi/world/05/bird_flu_map/html/1.stm)

# World Health Organization – Pandemic Phases

| Period                         | Phase   | Description  |
|--------------------------------|---------|--|
| <b>Interpandemic Period*</b>   | Phase 1 | No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk* of human infection is considered to be low. |
|                                | Phase 2 | No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.   |
| <b>Pandemic Alert Period**</b> | Phase 3 | Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.   |
|                                | Phase 4 | Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.   |
|                                | Phase 5 | Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).                    |
| <b>Pandemic Period</b>         | Phase 6 | Increased and sustained transmission in general population.  |
| <b>Postpandemic Period</b>     |         | Return to interpandemic period   |





# Ontario Perspective

# Accountabilities: Province

- Planning and managing response in Ontario
- Maintaining provincial surveillance, reporting of illnesses, investigation of outbreaks
- Guidelines and direction to local level to ensure consistent response
- Public education and information

# Accountabilities: Local

- Municipal government and local public health authorities coordinate local response
- Local surveillance, reporting of influenza like illness clusters and investigation of outbreaks
- Distribution and immunization plans for vaccines, antivirals, supplies
- Assess local capacities and make alternate arrangements as necessary

# Ontario: Impacts

- Illness and Deaths in Ontario:
  - 52,000 hospitalizations\* (1M hospitalizations in 2001, 375 hospitalizations in SARS )
  - 12,000 deaths\* (87,000 in 2004, 43 deaths in SARS)
  - 2.3M\* ill without hospitalization but 53% requiring primary care
- Economic:
  - Canada: \$5B—\$14B
  - U.S.: \$70B-\$160B (1995) for 15% attack rate (Meltzer)
  - Southeast Asia: impact of avian flu to date: \$10B (July/05)
  - SARS: \$50B worldwide; \$2B Canada (of which \$1B Ontario)

\*most likely impact at 35% attack rate using Meltzer model



# Ontario: Goals and Strategies

## Goals:

- Minimize serious illness and overall deaths
- Minimize societal disruption

## Strategic Approach:

- Be ready
- Be watchful
- Be decisive
- Be transparent

# Assumptions for all Sectors

- All Ontarians at risk; communities may be affected at different times
- Little lead time before first wave of 8 weeks hits, followed within 3-9 months by second wave
- Attack rate of 35% means approximately 1/3 of population will get sick at some point during duration of pandemic
  - 20% absenteeism at peak: ill + care providers + fearful
- Vaccine not available in first wave, then initially in short supply and high demand
- Antivirals in short supply
- Community infrastructure may be affected intermittently: scarcity of food; power outages; fuel shortage; etc.

# Ontario: Beyond Health

- A societal emergency impacting all sectors
- Assumptions:
  - Your faith group WILL be affected: approximately 20% staff or volunteers absent for a week or more at the peak
  - Other organizations that you depend on and that depend on you will be similarly affected
- Coordination and planning:
  - Within your faith organization and across all sites
  - With your staff, volunteers, and faith group members
  - With local community
  - With dependencies and as a dependency

# Important Reminders

**Influenza Pandemic  $\neq$  Seasonal Influenza**

**Influenza Pandemic  $\neq$  SARS**

**Influenza Pandemic  $\neq$  Avian Influenza**

**BUT**

**Important Lessons to be Learned from Each**

# What We *Don't* Know

- Characteristics of the virus
- When the pandemic will occur
- Which public health measures will be used and when
  - Travel restrictions
  - Closure of borders
  - Restrictions on public gatherings
  - School/daycare closures
- Level of support for financial, legal, and other impacts for individuals and organizations

## What We Do Know

- Vaccine (provides immunity) will work...when it is ready
- Antivirals (provides protection and mitigates impact as long as taken) *may* work...but in short supply
  - Antivirals available for those who get ill through government stockpile
  - Treatment requires 2 pills x 5 days
  - Prophylaxis requires 1 pill x 56 days
- Quarantine will not be effective in a pandemic

## What We Can Do

- Recognize it *won't* be ready for first wave
- Antivirals *may* be used as prophylaxis for critical positions (not people) within critical infrastructure framework
- Encourage people to stay home if ill

## What We *Do* Know

- Virus spread through contact closer than one metre—including coughing and sneezing

## What We Can Do

- Social distancing
- Cough/sneeze etiquette
- Physical barriers where close contact i.e. < 1 metre, required/inevitable
- Use of masks not demonstrated as effective public health measure. May be individual decision

## What We *Do* Know

- Virus may live on hard surfaces for up to 48 hours
- Robust immune systems better able to resist viral attacks

## What We Can Do

- Modify infection control practices
  - Frequent cleaning of hard surfaces which have multiple users (i.e. desks)
  - Hand sanitizers outside eating areas and washroom doors
  - Individual headsets
  - Availability of hand hygiene products, tissues in every office
  - Increased frequency of garbage pick-up
- Stay healthy...get healthy!



## What We *Do* Know

- Stress will affect us all
  
- Individuals and employers can make personal decisions and take actions to mitigate their risk

## What We Can Do

- Take personal control
  
- **Individuals**
  - Self-screening/stay home when ill
  - Hand hygiene
  - Following cough/sneeze etiquette
  - Annual flu vaccine
  - Avoid touching face/eyes
  - Stay informed

## What We *Do* Know

- Individuals and employers can make personal decisions and take actions to mitigate their risk (con't)

## What We Can Do

- **Employers**
  - Training, signage
  - Flu vaccine clinics
  - Modify absenteeism policies
  - Additional measures appropriate to diverse work environments

## What We *Do* Know

- Nature abhors a vacuum...rumours will multiply
- Clients, suppliers will be affected
- Sporadic/sustained impacts on societal infrastructure

## What We Can Do

- Fill the void...**communicate**
  - Engagement of others
  - Newsletters
  - Sermons, meetings
  - Websites and links
- Plan as a system
- Anticipate and plan for intermittent infrastructure failures



**Let's Get Personal...**

# Accountabilities: Individual

- Be informed
- Stay healthy:
  - Hand washing
  - Cough/sneeze etiquette: cover mouth and nose; dispose of tissues; wash hands
  - Social distancing
- Identify contingency plans:
  - Daycare unavailable
  - Food shortages
  - Limited fuel
  - Caring for the ill at home
- Reach out:
  - Support of neighbours, friends, and family who may have difficulty managing in a pandemic

# Contacts:

For ongoing information, contact  
Emergency Management Unit website:

[www.health.gov.on.ca/pandemic](http://www.health.gov.on.ca/pandemic)

For questions, contact the  
Emergency Management Unit at:

**1-866-331-0339**

**(employers' health hotline)**

[emergencymanagement@moh.gov.on.ca](mailto:emergencymanagement@moh.gov.on.ca)

**(email)**