Preparing for an Influenza Pandemic

Ontario Risk and Insurance Management Society Professional Development Day

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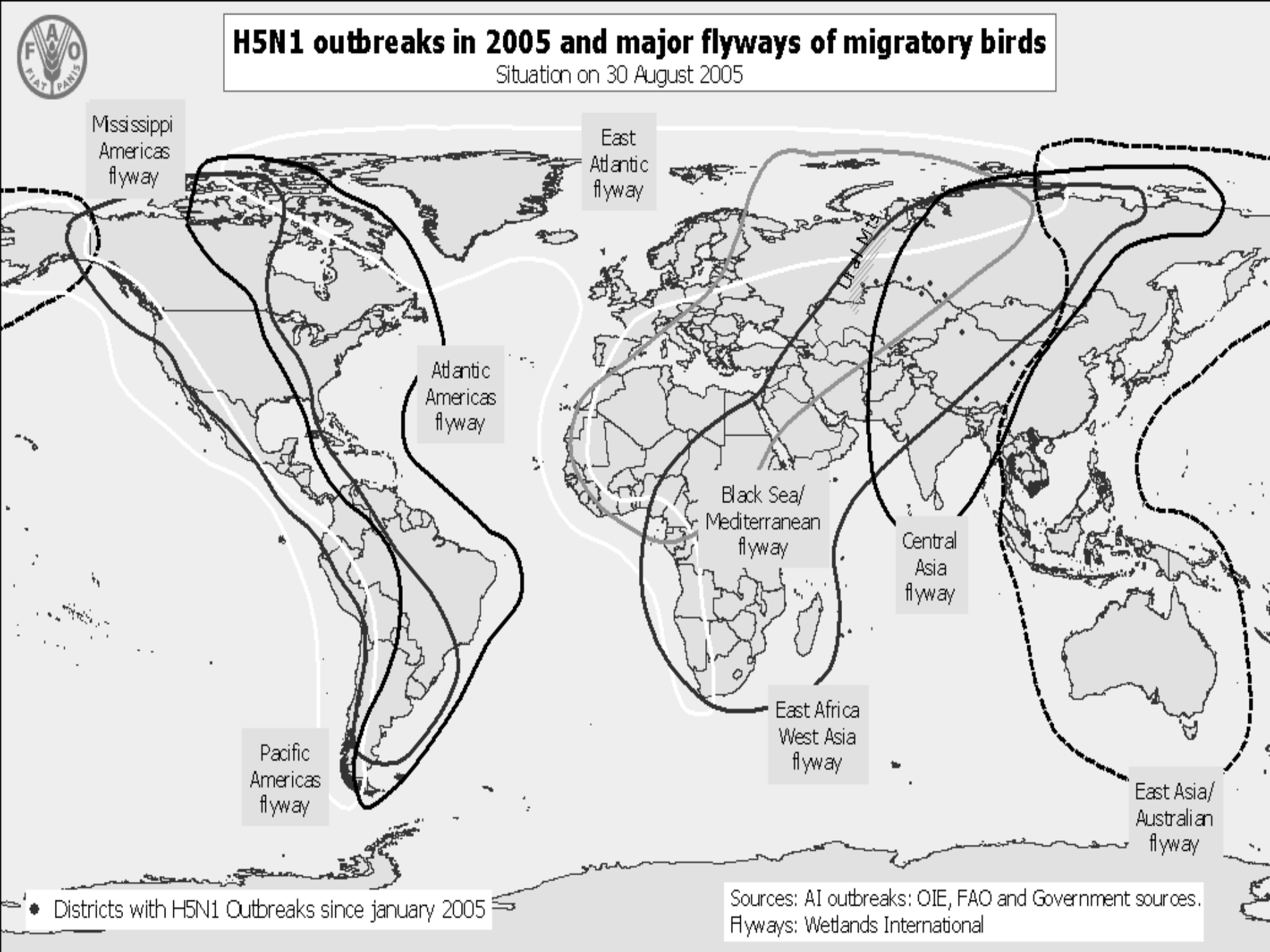
Ontario

Pandemic 101

Characteristics of an Influenza Pandemic

Requirements:	Current Status
• Introduction of a novel (new) influenza virus	✓ New virus
• Highly contagious: human to human transmission happens easily	× **Limited transmission to date**
• New virus causes serious illness and/or death	✓ Avian flu with up to 48% mortality
• Population has little/no immunity	✓ In place
• Occurs roughly three times a century and international impact	✓ Overdue
• Usually starts in southeast Asia	✓ Began in southeast Asia (recently to Europe, Africa, India)
• Animal influenza outbreaks may result in mutations that can affect humans	× **Limited spread to humans**


H5N1 outbreaks in 2005 and major flyways of migratory birds
Situation on 30 August 2005
Mississippi Americas flyway
East Atlantic flyway
Ural Mts
Atlantic Americas flyway
Black Sea/ Mediterranean flyway
Central Asia flyway
East Africa West Asia flyway
Pacific Americas flyway
East Asia/ Australian flyway
Districts with H5N1 Outbreaks since january 2005
Sources: AI outbreaks: OIE, FAO and Government sources.
Flyways: Wetlands International

World Health Organization – Pandemic Phases

Period	Phase	Description
Interpandemic Period*	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.
Pandemic Alert Period**	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).
Pandemic Period	Phase 6	Increased and sustained transmission in general population.
Postpandemic Period		Return to interpandemic period

Important Reminders

Influenza Pandemic ≠ Seasonal Influenza

Influenza Pandemic ≠ SARS

Influenza Pandemic ≠ Avian Influenza

BUT

Important Lessons to be Learned from Each

The World View

The International Stage

- Countries with pandemic plans
  - Characteristics of plans consistent
  - National stockpiles of antivirals in place or planned
- Ethical issues
  - Rich versus poor countries and individuals
  - Distribution of antivirals
- Canada
  - Second plan to be released in March

Ontario Perspective

Accountabilities

Canada	Ontario	Municipality
•Liaise with WHO, CDC and other bodies to coordinate surveillance, investigation and vaccine activities •Health care for First Nations, military, RCMP •Support coordinated/consistent pan-Canada response	•Planning and managing response in Ontario •Maintaining provincial surveillance, reporting of illnesses, investigation of outbreaks •Public education and information •Guidelines and direction to local level to ensure consistent response	•Municipal government and local public health authorities coordinate detailed local response plans •Local surveillance, reporting of ILI clusters and investigation of outbreaks

Ontario: Impacts

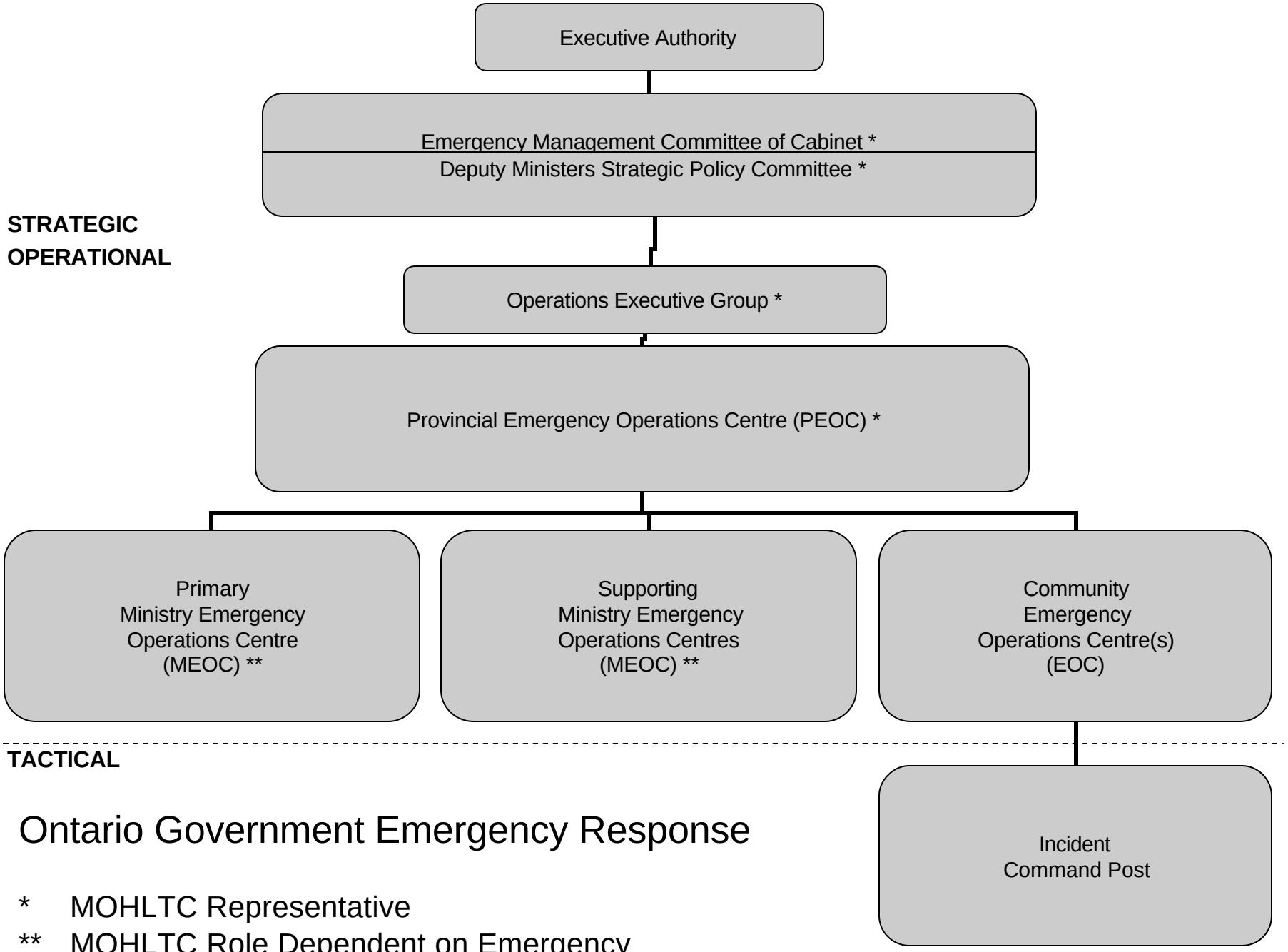
- Illness and Deaths in Ontario:
  - 52,000 hospitalizations* (1M hospitalizations in 2001, 375 hospitalizations in SARS)
  - 12,000 deaths* (87,000 in 2004, 43 deaths in SARS)
  - 2.3M* ill without hospitalization but 53% requiring primary care

- Economic:
  - Canada: $5-14B (2005)
  - U.S.: $70-160B (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: Assumptions

- 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 (off work/school for at least 0.5 day) at some point during the life of the pandemic
  - Care-giving, fear will increase absenteeism
- Vaccine not available in first wave, in short supply and high demand when available
- Antivirals in short supply for prevention and treatment. Ontario has 12.4M doses with further purchases in out years for total of 14.8M doses
- Non-life-threatening health services and public health programs curtailed
- Standards of health practice adapted to meet pandemic demands



Ontario Government Emergency Response

* MOHLTC Representative

** MOHLTC Role Dependent on Emergency

Emergency Management Ontario

- Responsible for development of appropriate pandemic response plans in other ministries and other sectors
- Ministry of Government Services (formerly Management Board Secretariat) responsible for business continuity plans within government for any emergency including pandemic
- EMO developing *Provincial Coordinating Plan for an Influenza Pandemic*
- New legislation enhancing powers in an emergency introduced as modifications to *Emergency Management Act*
- Government-wide pandemic exercise February 2006

What We Don’t Know

- Characteristics of the virus
  - How large the virus droplets will be influences PPE
- 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 will work…when it is ready
- Antivirals will *probably* work…but in short supply
  - Antivirals available for those who get ill through government stockpile
  - Prophylaxis
- Quarantine will not be effective in a pandemic
- Virus spread through contact closer than one metre—including coughing and sneezing
- Virus may live on hard surfaces for up to 48 hours

What We Do Know

- Individuals and employers can make decisions and take actions to mitigate their risk
- Nature abhors a vacuum…rumours will multiply
- Clients, suppliers will be affected
- Sporadic/sustained impacts on societal infrastructure
- Health system will be taxed
- Planning makes a difference

Ontario Health Plan for an Influenza Pandemic: Overview

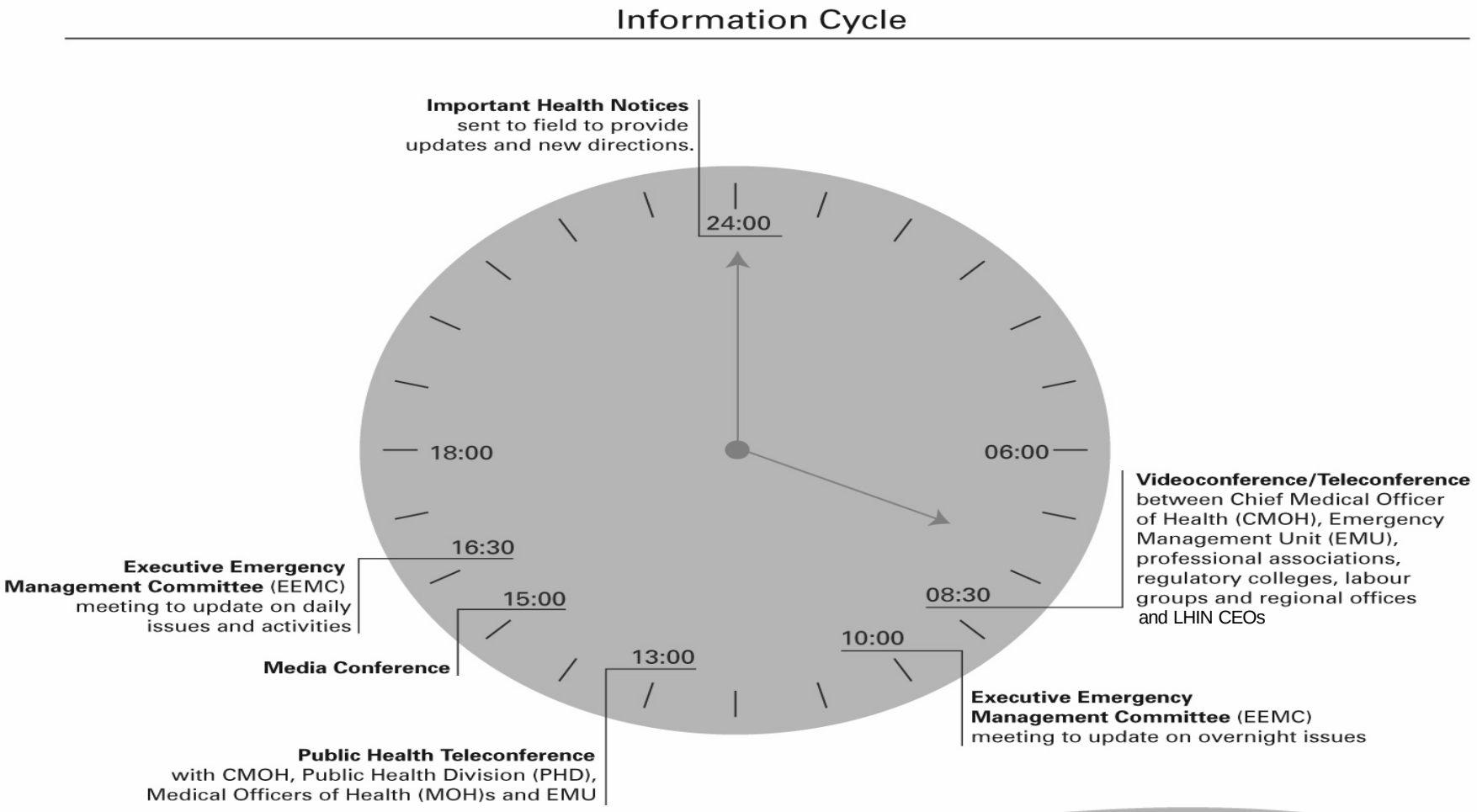
Goals:

- Minimize serious illness and overall deaths through appropriate management of Ontario's health care system
- Minimize societal disruption in Ontario as a result of influenza pandemic

Strategic Approach:

- Be ready – establish comprehensive contingency plans at provincial and local level
- Be watchful – practice active screening and monitor emerging epidemiological and clinical information
- Be decisive – act quickly and effectively to manage the epidemic
- Be transparent – communicate with health care providers and Ontarians

Information Cycle



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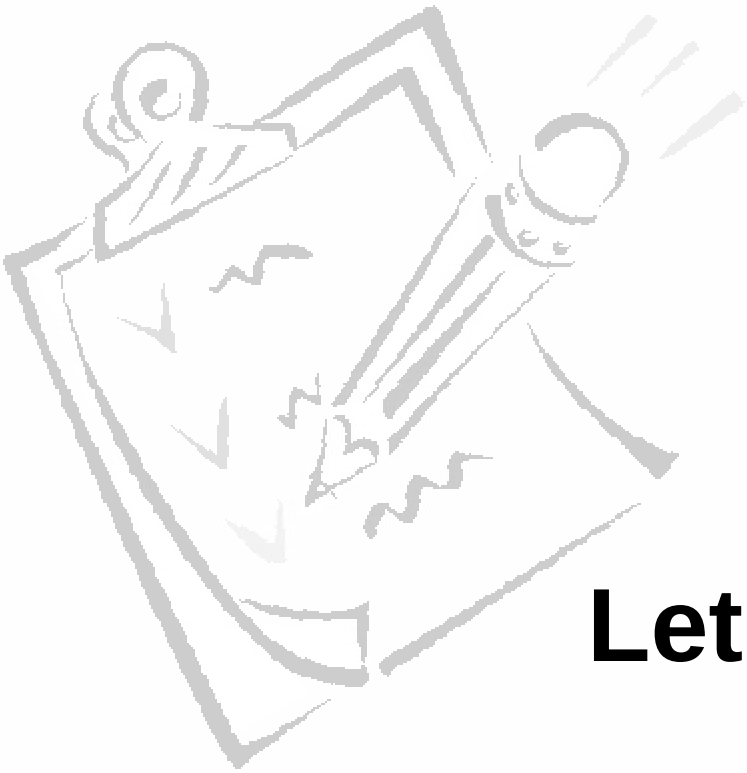

Let’s Get Personal…

Personal Preparedness

- Be informed
- Stay healthy:
  - Hand washing
  - Cough/sneeze etiquette: cover mouth and nose; dispose of tissues; wash hands
  - Avoid large crowds when possible
- 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:

Emergency Management Unit website:

http://www.health.gov.on.ca/english/public/program/emu/pan_flu/pan_flu_mn.html

For questions, contact Emergency Management Unit staff at:

1 866 331-0339	employers' health hotline
1 866 212-2272	24/7 health care provider hotline
emergencymanagement@moh.gov.on.ca	email

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