

## THE TIME TO PLAN IS WHEN YOU HAVE TIME TO PLAN

Planning for a Pandemic

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Experts tell us that pandemics don't get managed. They get endured mostly. If you're really well prepared they get mitigated.

Dr. Peter Sandman

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### 3 Areas for Discussion. . .

- Information on pandemics and infectious diseases
- Impacts of a pandemic on businesses, including Local Government
- Challenges faced by Municipalities in responding to a pandemic
- Action plans

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### What is a virus

- A **virus** is an infectious agent, often highly host-specific, consisting of genetic material surrounded by a protein coat. Viruses infect humans, animals, plants, fungi and bacteria
- Viruses are not strictly free-living, as they cannot reproduce on their own.
- The primary function of a virus is to inhabit host cells and create more viruses.

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### Pandemic

An epidemic that is geographically widespread through a region or throughout the world.

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### Influenza

Human influenza is a respiratory infection caused by the influenza virus. This virus spreads through droplets that have been coughed or sneezed into the air by someone who has the flu.

Individuals may be infected and contagious, up to 4 days prior to showing symptoms.

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- Influenza pandemics are rare but recurring events.

- The last **major** world flu' pandemic was the 1918-19 "Spanish flu," which killed 20-100 million people worldwide.

- The most recent **minor** flu' pandemics occurred in 1957 and 1968

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Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO - September 8/06 - and confirmed by laboratory testing

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Azerbaijan	8 cases -	5 deaths
Cambodia	6 cases -	6 deaths
China	21 cases -	14 deaths
Djibouti	1 case -	1 death
Egypt	14 cases -	6 deaths
Indonesia	63 cases -	48 deaths
Iraq	2 cases -	2 deaths
Thailand	24 cases -	16 deaths
Turkey	12 cases -	4 deaths
Viet Nam	93 cases -	42 deaths

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A Google search using the key words "pandemic" produces a list of 15,600,000 sites.

Canadian data suggest that between two million and five million people would require medical care, between 34,000 and 138,000 people could require hospitalization and between 11,000 and 58,000 could die.

Government of Canada

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## Pandemic Stages

The World Health Organization has identified the Stages of a Pandemic

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## 3 Distinct stages

- The inter-pandemic period, when there are outbreaks of influenza in animals and/or birds but no new influenza strains are detected in humans;
- The pandemic alert period, characterized by human outbreaks of a new influenza strain; and
- The pandemic period, with sustained human-to-human transmission of the virus in the general population.

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### Stage 1 - Inter-Pandemic Stage

- **Phase 1:** There have been no new influenza virus subtypes detected in humans that would signal the conditions required for a pandemic. Based on past evidence, the influenza viruses detected in animals are considered to be of low risk to humans.

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### Stage 1

- **Phase 2:** There have been no new influenza virus subtypes detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease. This assessment is based on various factors, such as past history of a similar strain causing serious illness in humans and the extent of the outbreaks in animals.

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### Stage 2- Pandemic Alert

- **Phase 3:** A new influenza virus subtype is detected in humans. There may be rare instances of an infected individual spreading the virus to other individuals they have been in close contact with, but in general there is no evidence of the virus spreading easily among humans.
- **Phase 4:** Small clusters of human-to-human spread of the virus are reported. But outbreaks are localized, which suggests that the virus does not spread easily to and among humans.

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### Stage 2

- **Phase 5:** One or more larger clusters are reported, but human-to-human spread is still localized, which suggests that the virus is becoming increasingly capable of infecting humans but may not be fully transmissible (there is a substantial pandemic risk).

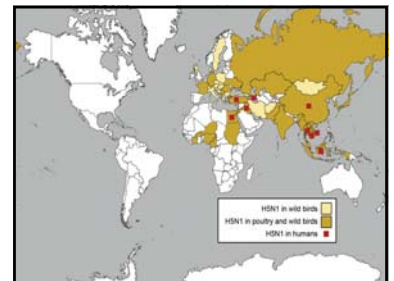
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### Stage 3 - Pandemic period

- **Phase 6:** The virus is easily transmitted to and among humans, resulting in increased and sustained spread of the virus in the general population.

Public Health Agency of Canada

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- Mortality rate
- Current H5N1 human mortality rate at +50% of **known** cases
- Pandemic mortality rate estimated at 1.5% - 10% of population

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### Can We Eradicate H5N1 Now?

- No – because
  - Domestic ducks have become a “silent” reservoir
  - Migratory birds spread the virus
  - Traditional farming methods are very difficult to change
  - No compensation for Asian farmers for reporting infected domestic poultry

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In the human population, flu' viruses are spread by direct personal contact or indirect contact.

- **Personal contact** might be a kiss.
- **Indirect contact** might involve a cough or sneeze sending the viruses airborne. Or a sick person can - by cough, sneeze or touch - leave viruses where others can pick them up.

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### Pandemic Impact

On Local Government

- Maintaining essential services in the face of staff shortages
  - Internal services
  - Services to the community
- Possibility of Social Disorder
  - Kids with no school (shut down by MOH)
  - Scapegoating of vulnerable minorities
  - Panic buying

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### Pandemic Impact

On Local Government

- Control over some municipal functions now in hands of MOH
  - Policing – e.g. enforcing quarantines
  - Burial – e.g. storage of bodies in public arenas
  - Recreational facilities – closed
  - Cleaning protocols for public transportation such as LRT, busses, taxis, etc.
- Confusion for citizens over who has responsibility for what

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### Pandemic Impact

On Businesses -Economic – affecting local tax base

- Tourist and associated activities severely curtailed – SARS in Toronto example:
  - 39 million dollars lost revenue in one month in April 2003
  - 800 bus and tours cancelled for an estimated loss of 5-6 million
  - Restaurant business down 20-30%
  - Cancellation of conferences

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### Pandemic Impact

On Businesses

- Supply chain issues – transportation and logistics infrastructure
  - Inability to receive supplies
  - Inability to distribute goods
- Loss of key personnel
- Loss of key knowledge including processes

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- Global disruption rather than local
- People rather than things will be the primary target
- Outside help will likely be unavailable

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### Supply Chain Issues

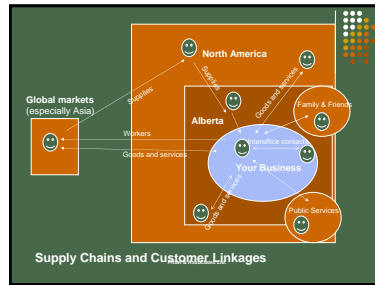
We are globally linked through workers, materials and information

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## Supply Chain Elements

- Raw materials
- Producers at origin
- Facilities
- Workers (labour)
- Workers (knowledge)
- Worker transportation
- Transportation of materials
  - Road
  - Air
  - Water
- Intermediate processing and transporting
- **YOU**
- The citizens

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Supply Chains and Customer Linkages

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## Municipal Challenges

Municipalities MUST maintain critical, essential services. In times of a pandemic, it means developing Human Capital Resilience.

That is, the ability to respond and adapt rapidly to threats posed to its workforce.

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A survey conducted by the Society for Human Resource Management, (2005) showed that only 34% of organizations indicated that HR issues formed a significant part of their business continuity or disaster plans.

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IBM has identified 3 major areas to consider in a crisis situation insofar as human capital is concerned:

- Ability to attend work
- Ability to maintain business operations
- Ability to deliver critical internal services

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## HR Issues

- Staff absenteeism
  - Anticipate 20-60% absenteeism for periods of 2-4 weeks for each wave due to:
    - Personal illness – 25-35 %
    - Care of sick family members
    - Lack of child care options
    - Fear

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● Present HR policies likely inadequate to manage this type of crisis

- Employee absenteeism policies
- Sick leave provisions
- Removal and Return of Employees to Work
- Flex-time, Telecommuting

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- Care for family provisions
- Compensation and benefit policies
- Filling Vacancies, Retention
- Provision for after Pandemic counseling (PTSD)

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- Communicable Diseases Policy
  - How do you identify sick workers?
  - Who identifies them?
  - Who send sick people home?
  - How are they sent home?
- Sick Leave Policy
  - Does it encourage sick people to come to work?

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- Labour, Union contract issues
  - People not available to do critical, core work
  - People not returning after pandemic
  - Increased competition for specialized jobs
  - Contract issues re cross training across unions

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### Additionally . . .

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- Quarantines, self-imposed and government imposed
- WHO Pandemic Stage 5/6- Governments **may** close borders or restrict travel to/from infected areas
- Schools closed, mass gatherings restricted
- People avoid connecting and interacting with strangers, or customers – Social Distancing

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- Risk of social disruption
  - Panic buying with accompanying shortages
  - Shortages *may* result in looting, hoarding, mob behaviour
  - Blaming, scape-goating of vulnerable minorities

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- Availability of prophylactics, or vaccines
  - Protective devices (masks, gloves) in short supply; Insufficient number of respirators for those who fall ill
  - Vaccine unlikely to be available for first 2-4 months
  - Anti-virals unlikely to be available to all who want it

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- Unavailability of essential supplies/services
  - Police, Fire and EMS services will be severely limited for non-pandemic responses
  - Power, water, utility services *may* go down for lack of maintenance and skilled workers to fix problems
  - JIT inventory practices may result in empty shelves due to transportation disruption, quarantines, or labour shortages

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- Computer internet *may* not be available
- Certain food supplies will be in short supply
- Prescription drugs *may* not be available

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### Communication Issues

Municipalities have two constituent groups with whom they **MUST** communicate –

- Their staff
- The public

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Communication plan likely to be insufficient to handle situation

- Lack of varied communication platforms to dispel rumours –staff, citizens
- Current systems unable to handle remote information exchange
- Remote worksites unable to access technical assistance

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- Pre-Pandemic
  - Information on prevention
- Pandemic
  - Reduce rumours
  - Relay status updates
- Post-Pandemic
  - Acknowledging staff contributions
  - Addressing rumours

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## Business Practices

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- Corporate hygiene practices inadequate
  - Staff education inadequate or absent
  - No corporate habit of disinfecting of common tools, areas
  - Building air conditioning not disinfected
  - Unavailability of essential supplies/services for cleaning, protection, prevention

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- Loss of leadership
  - Senior leaders not immune from contracting the flu'
  - Current leaders (supervisors on shop floor, team leaders, etc.) not immune from contracting the flu'
  - Corporate memory disrupted

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## Action Plan

- Pandemic Planning Team
  - Decide on membership
    - Cross functional
    - Senior level executive presence critical
  - Establish Pandemic Links in each business unit

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- Identify critical and core positions
  - What jobs are critical to the organization?
  - Who backfills that position?
  - What critical skills are currently outsourced?

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- Examine existing policies for required modifications during a pandemic period
- Prepare a business continuity plan for each essential function or service
- Establish the trigger points for start and end of pandemic activities
- Revise and test plan as required

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- Build a communication plan —keep staff, and citizens informed
  - Clearly identify decision makers and their backups
  - Decide on the communication platforms that need to be used
  - Decide on the key messages

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- Review HR strategies, especially procedures around absenteeism, removal from and return to work, working from home, etc.
  - If you Outsource critical functions, include these people as partners in planning

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- Identify support (medical, emotional) services that may be required and available including transportation of sick employees, emergency funding, etc.

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- Review Insurance policies
- Aon Risk Survey of 2003 says:
  - 50% of firms will recover 25% or less of total losses through insurance
  - Claims settlement can take up to 6 months
  - 92% of organizations without a plan do NOT survive a major disaster
  - 40% never reopen
  - 40% reopen but fail within 18 months

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- Apply appropriate social distancing policies to reduce person to person contact
- Reduce meetings
- Stop shaking hands
- Use video-conferencing where feasible

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- Increase disinfecting and cleaning activities – both personal hygiene and materials cleansing, including air conditioners, air systems, commonly shared items. Good hygiene is critical!
- Get cooperation from ALL tenants in shared spaces

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- Include the **hourly disinfecting** of high-traffic surfaces and the use of **hand sanitizers, gloves, and masks.**
- Educate staff on preventative measures

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- Investigate flexible work hours, working from home
- Concerns:
  - Security of data and information
  - Technical assistance not rapidly available
  - Lack of necessary equipment at home for highly technical jobs

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Strategies for the post-pandemic time are as important as pre-pandemic planning

- For example
  - How will you notify staff to return to work?
  - How will you replace staff who do not return?

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- Build Trust
  - Build, maintain or restore trust in those responsible for managing the outbreak or for providing information about it.
  - When reassuring (but inaccurate) information was provided about BSE in Britain, trust in government plummeted with severe economic and political consequences

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- Announce early – the situation, the plan, the help available
- Be transparent by issuing communication that is candid, easily understood, complete and accurate

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- Respect concerns of citizens
- Plan in advance – the time to plan is when you have time to plan

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### Conclusions from the Research

- The H5N1 virus *may not* be the virus that starts a pandemic
- History, however, suggests that we are overdue for a pandemic of some sort – it's not "IF", it's "WHEN".
- We already face "superbugs" which have developed resistance to most anti-bacterials

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- Many business continuity plans are better suited for physical disasters than for people disasters.
- We operate in a global economy so are not immune to a crisis in another part of the world.

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- Currently, there is no proven vaccine available to combat H5N1 (or other potential pandemic causing virus). Tamiflu (an anti-viral) may not be available in sufficient quantities.
- When a vaccine is produced, there will **not** be sufficient supply for everyone.

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- Fear, panic and ignorance will be as devastating to communities as will the actual virus.
- A majority of companies surveyed have **NOT** put a pandemic plan in place.
- Local government is more prepared, BUT they have not, generally, begun to educate either their own staff or the public

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### Additional Internet Information

- <http://www.history.com/stories/1918-spanish-flu-pandemic> - history of the 1918 Spanish flu pandemic
- [www.pitser.ca/pitser/avianflu](http://www.pitser.ca/pitser/avianflu)
- Report on Avian Flu Pandemic Preparedness Survey Report
- <http://knowledge.wharton.upenn.edu/article.cfm?id=k050901>
- The Wharton School, University of Pennsylvania: Avian Flu – What to expect and How Companies can Prepare for It.

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- [www.pandemicflu.ca/](http://www.pandemicflu.ca/),
- Canadian Government website
- [http://www.who.int/csr/resources/publications/flu/pandemic050505\\_LRN\\_IPC\\_PIC\\_0-04.pdf](http://www.who.int/csr/resources/publications/flu/pandemic050505_LRN_IPC_PIC_0-04.pdf)
- World Health Organization – Strategic Actions to Prepare for Flu
- [http://www.health.gov.au/csr/influenza/P5\\_stress.htm](http://www.health.gov.au/csr/influenza/P5_stress.htm)
- Dealing With Stress or Fear because of influenza

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- <http://www.phac-aspc.gc.ca/ipm-pdca/>
- Canadian Pandemic Influenza Plan-Canadian Public Health Agency
- [http://www.who.int/csr/don/20050519\\_influenza\\_pandemic050505/](http://www.who.int/csr/don/20050519_influenza_pandemic050505/)
- World Health Organization Pandemic information

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- <http://dectanbutler.info/Flumaps1/avianflu.htm#Introduction>
- Live Google map of human and poultry H5N1 cases
- <http://www7.nationalgeographic.com/ngm/0510/feature1/multimedia.html>
- Multimedia presentation on the Killer Flu' from National Geographic Magazine

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