



危機

# Emergency Management & Safety Solutions

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Pandemic Planning -  
Department Store Style!

September 2007



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## Emergency Management & Safety Solutions

# Agenda

- Current Status
- Recent Developments
- Building a Resilient Organization
  - Planning assumptions
  - Triggers - planning and execution



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# Basic Assumptions

- Business Continuity Planning (BCP) generally has two assumptions:
  - Back to “business as usual” in 30 days or less
  - Go from the “affected” site to the “unaffected site” and resume business

***Neither apply with Pandemic Influenza.***



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# Current Status - Pandemic Front



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# Current Human Cases & Death Toll

- These summary of cases and deaths is as of September 17, 2007
  - Indonesia 106/85 (77%) \*\*
  - Vietnam 100/46 (45.2%) \*\*
  - Thailand 25/17 (63.6%) \*\*
  - Egypt 38/15 (60%)
  - Cambodia 7/7 (100%)
  - China 25/16 (66.7%)
  - Turkey 12/4 (33.3%)
  - Iraq 3/2 (100%)
  - Azerbaijan 8/5 (62.5%)
  - Djibouti 1/0 (0%)
  - Nigeria 1/1 (100%)
  - Laos 2/2
  - Total 328 cases / 200 deaths
  - 61% fatality
- The total number of cases/deaths includes **only** WHO laboratory confirmed cases.



**\*\* Areas that have had documented human to human transmission**




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# Who has been affected?



- Who is affected?
  - 52 per cent were younger than 20 years old
  - 89 per cent were under age 40.
  - Men and women made up virtually an equal number of cases.
- Lowest death rate?
  - Over the age of 50
  - Followed by children:
    - Under age 5
    - Ages 5-9
- The total case fatality (CFR) rate was 60 per cent.
  - 2007 CFR has increased to 87%. 



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# Indonesia: Suspected Mutation?

- The head of the country's commission on bird flu control reported on 6 Jun 2007 that the H5N1 bird flu virus in Indonesia ***may*** have undergone a mutation that allows it to jump more easily from poultry to humans,.
  - The suspicions were based on preliminary findings of molecular genetic tests conducted at laboratories in Indonesia.
  - "Virus samples from poultry cases have increasingly shown a similarity in their structure to virus samples extracted from humans...
    - thereby making it easier for the virus to attach to human receptors."
- ProMED Digest V2007 #277 Moderator notes that this has NOT YET been documented in peer reviewed scientific publications.
  - Be sure to sign up up for: [www.promedmail.org](http://www.promedmail.org)



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# H5N1 Reassortment Could Occur Outside the Winter Months

- Health experts now warn reassortment (combination of human and bird flu viruses) could occur outside the short winter months.
  - Time frames of the circulating virus are longer and more unpredictable.
  - Suggestion that H5N1 is now endemic in ducks heightens the concern.

*The Lancet Infectious Diseases August 2007*





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# What does this mean?

- Frankly, no one knows...
  - Are we closer to a pandemic?
  - The same as before?
  - Never gonna happen with H5N1?
- All speculation...





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# Uphill Battle in Impacted Countries



AP / Said Abu el-Einein

- Convinced that her own pigeons are healthy, a poultry trader in the Nile delta in Egypt feeds corn by mouth to the birds.
  - *H5N1 avian flu has killed 15 people in Egypt.*



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**“It's not business as usual, but it's not like the house is on fire — it's somewhere in between.”**

*Keiji Fukuda MD MPH  
World Health Organization*



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# New Developments - Pandemic Front



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# New Vaccine - April 18, 2007

- The vaccine was obtained from a human strain and is intended for ages 18 through 64 years of age.
  - H5N1 influenza vaccine immunization consists of two intramuscular injections, given approximately one month apart.
  - The manufacturer, sanofi pasteur Inc., will **not** sell the vaccine commercially.
- The vaccine **could** be used in the event the current H5N1 avian virus were to become easily passable between humans.
  - The vaccine **may** provide early limited protection in the months before a vaccine tailored to the pandemic strain of the virus could be developed and produced.
- Efficacy is poor - 48 - 50% after two injections.
- The vaccine has been purchased by the federal government for inclusion within the U.S. Strategic National Stockpile for distribution by public health officials if needed.
  - Manufactured in Swiftwater, Pa.



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# Antivirals



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- Two antivirals are being used for treatment in H5N1:
  - Tamiflu (Osetamivir) - Roche.
  - Relenza (Zanamivir) - GlaxoSmithKline
- Neuraminidase (N) inhibitor, preventing the virus from penetrating the respiratory cells.
- Things to consider if you decide to pursue it for staff:
  - Employees? AND families? Who pays?
  - Stockpile? Distribute now?
  - Ethical, moral and legal issues for companies who decide to use it.
- Speculation that the Federal government will encourage stockpiling amongst National Infrastructure Advisory Council companies.
  - NIAC report - Jan 2007
    - [www.dhs.gov/xlibrary/assets/niac/niac-pandemic-wg\\_v8-011707.pdf](http://www.dhs.gov/xlibrary/assets/niac/niac-pandemic-wg_v8-011707.pdf)



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# CDC Mask Guidance



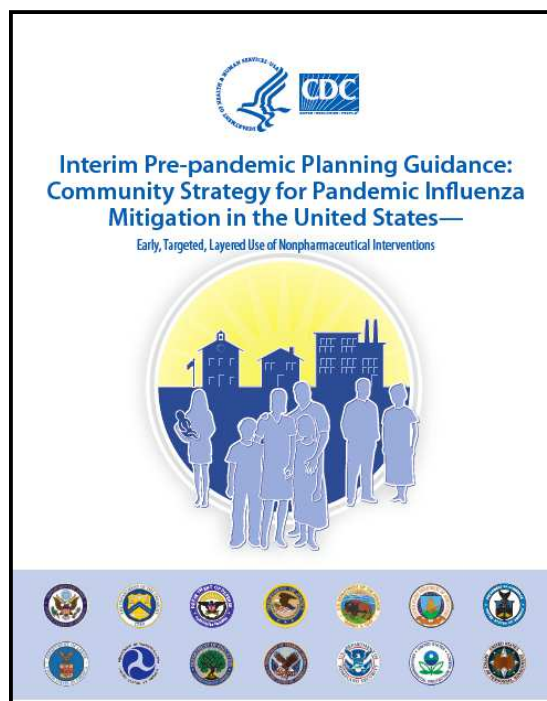
- Masks “**could**” be helpful.
- People **should** consider wearing a *facemask* during an influenza pandemic if they are:
  - Sick with the flu and think they might have close contact with other people < 6 ft.
  - Living with someone who has the flu symptoms (and might be in the early stages of infection)
  - Spending time in a crowded public place and thus may be in close contact with infected people.
  - Well and need to be in a crowded public place.



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# Community Strategy for Pandemics



*January 2007*

[http://www.pandemicflu.gov/plan/community/community\\_mitigation.pdf](http://www.pandemicflu.gov/plan/community/community_mitigation.pdf)

September 2007

16



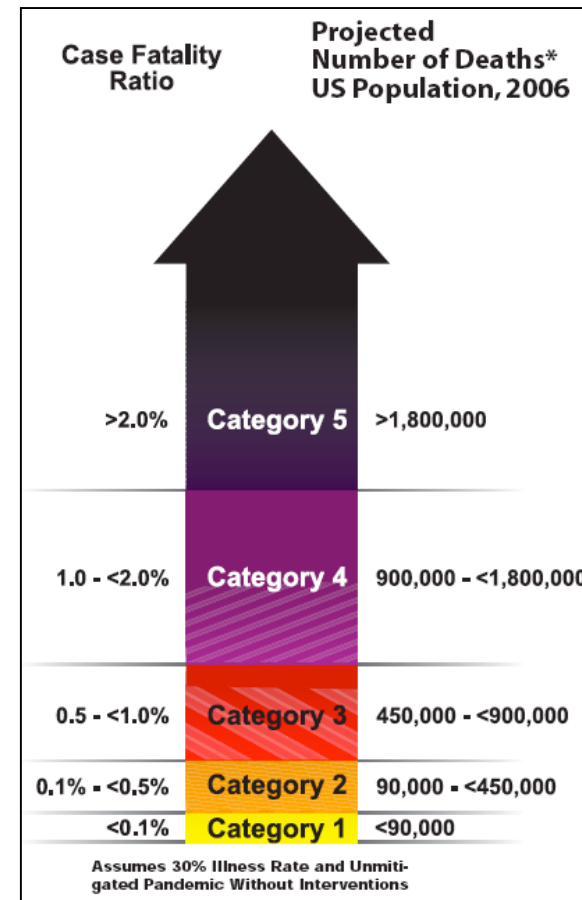


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# Pandemic Categorization

- Based on Hurricane ratings but using case-fatality ratios (deaths)
  - Category One - CFR of less than 0.1%
  - Category Two - CFR 0.1% to 0.5% (1957 and 1968)
  - Category Three - CFR 0.5% to 1%
  - Category Four - 1% to 2%
  - Category Five - 2% or higher (1918)
- Estimated school ***closures*** in the first wave
  - Category 2 & 3 - Up to 4 weeks
  - Category 4 & 5- Up to 12 weeks

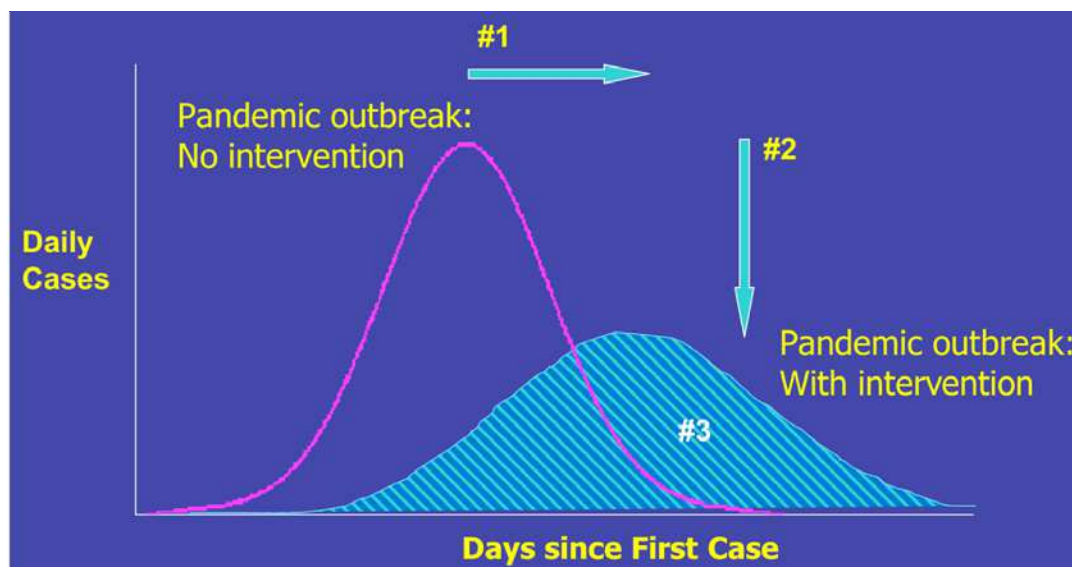




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# Community-Based Interventions

1. Delay outbreak peak
2. Decompress peak burden on hospitals & infrastructure
3. Diminish overall cases and health impacts





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# Building a Resilient Organization



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# Building a Resilient Organization

- The good news...
  - **All** of the pandemic planning will make your organization a much more resilient organization.

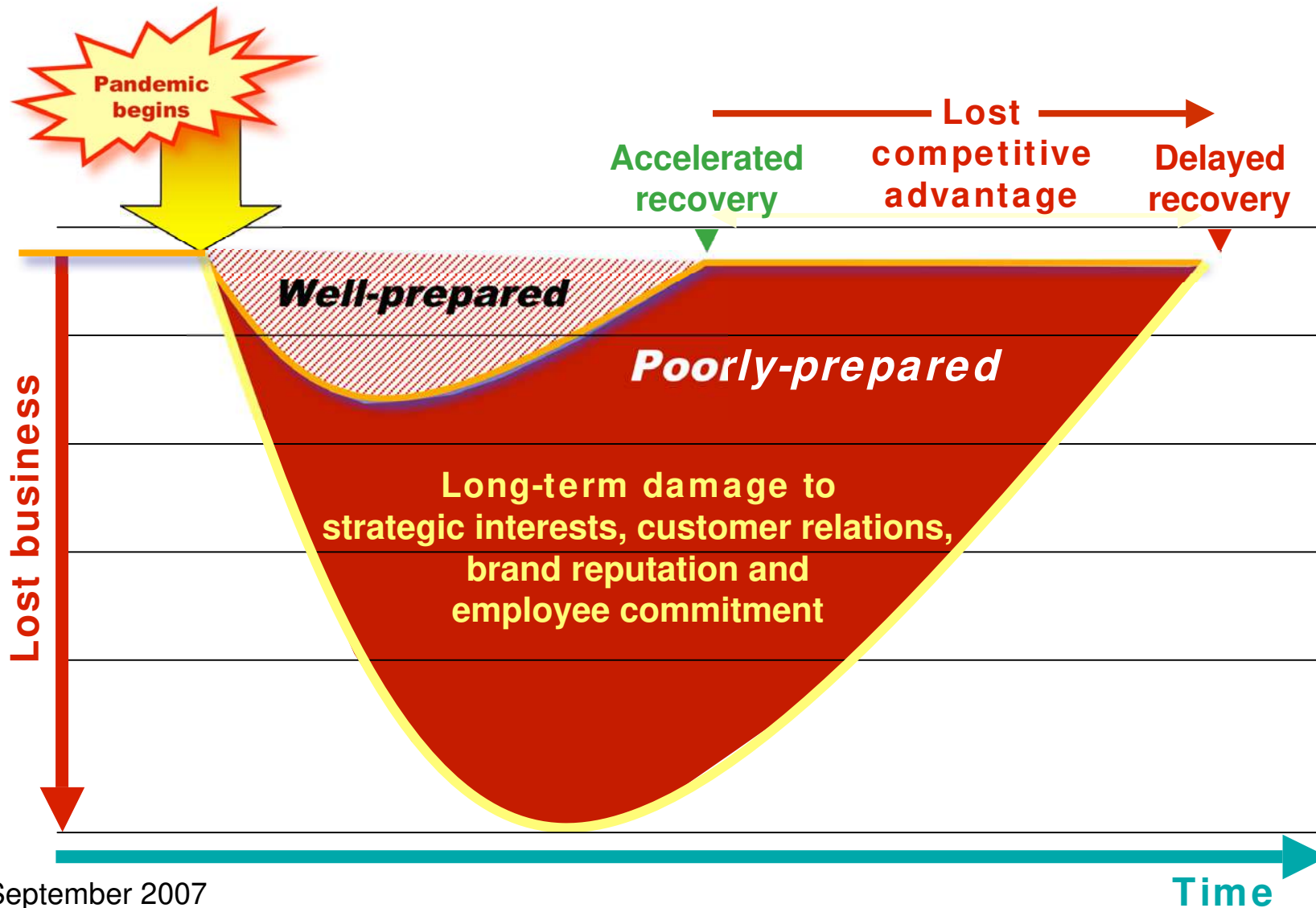




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Capture the competitive advantage by acting now





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# Planning Assumptions

1. 30% absenteeism of staff, vendors, services within the community such as health care, police, fire, etc.
2. The pandemic may last as long as eighteen months in three separate waves
  - Mortality and morbidity will increase and decrease in spurts.
3. Critical functions carried out by contractors, consultants and vendors cannot be guaranteed.
4. Civil society infrastructure will be stressed, but remain functional.
5. Potential closure of gathering places in the community including schools, churches, events, malls, etc.



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# Planning Assumptions

6. Will likely have less than six weeks of warning from the time the pandemic is announced before it reaches the United States.
7. No remedies will be immediately available. Tamiflu and other antivirals will be in very limited supply.
  - Vaccinations will take 9-10 months and antibiotics are only for the treatment of a secondary bacterial infection.
8. Current WHO Alert Levels do not provide any indication regarding the time interval between levels.
  - Current thinking among experts is that while it may take a significant amount of time for a virus to reach Alert Level 4 (small clusters of human to human viral spread), the time interval between Alert Levels 4, 5 and 6 may be rapid (ranging from days, to weeks, to months).
9. Phases One - Three are planning; Phases Four - Six execution.
10. Susceptibility will be universal.



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# Planning Triggers





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# WHO Phases

- **Phase 1 & 2** No new influenza virus subtypes have been detected in humans.
- **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*.
- **Phase 5.** Larger cluster(s) but human-to-human spread *still localized*,
- **Phase 6. Pandemic:** increased and sustained transmission in general population.
  - Pandemics historically last approximately 18 months.



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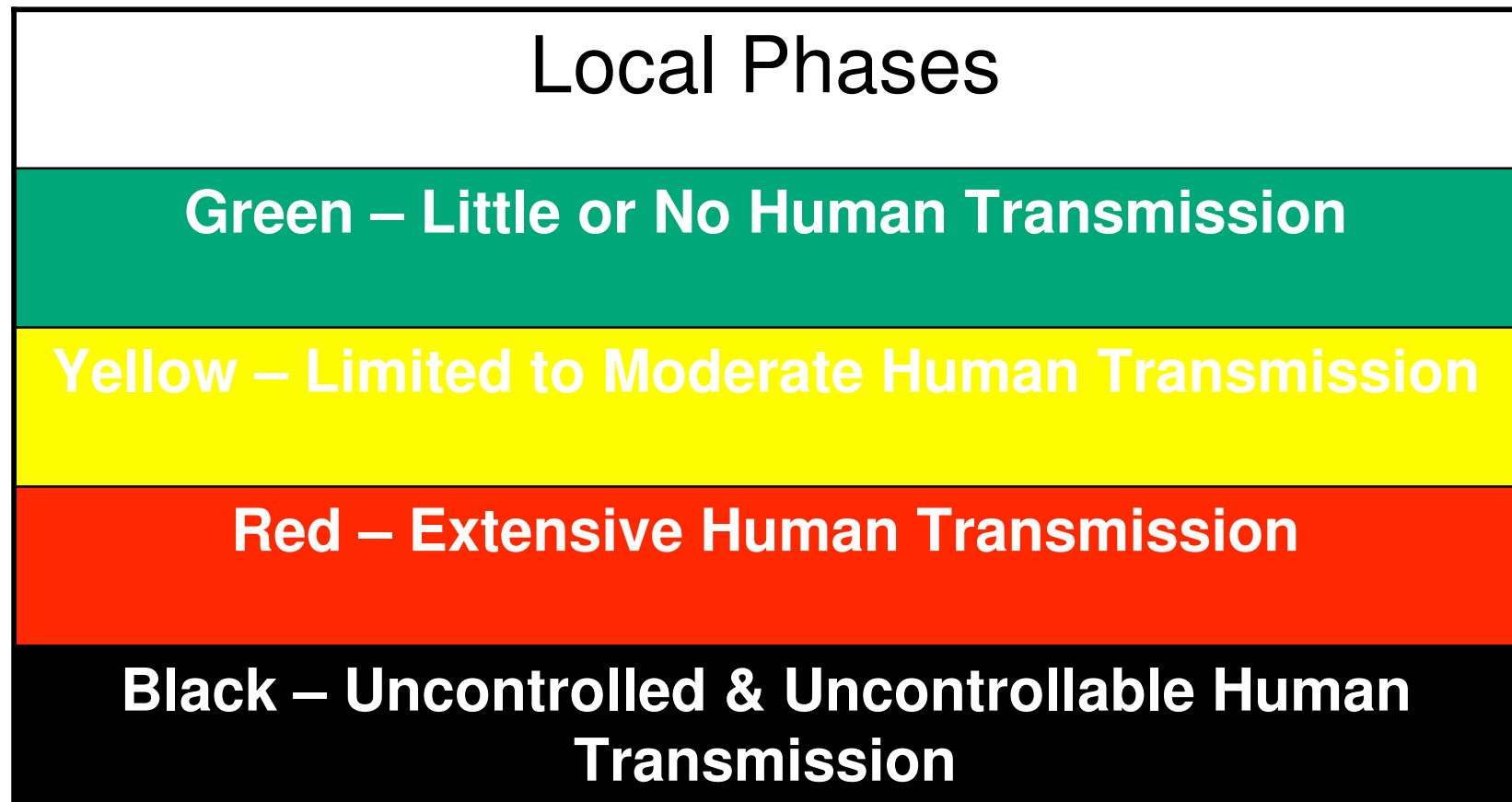
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# Plan Execution Triggers



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# Plan Globally Act Locally





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# Contemporary Experience - Infectious Diseases and Retail



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# SARS - Retail Impact



- Impact to Canadian economy - \$15 billion or 0.15 of GNP in 2003.
  - Only area impacted was Toronto



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# Pandemic Planning Department Store Style





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# THANK YOU!

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