Mitigating The Risk and Impact of a Pandemic On Your Business

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Agenda

- Introductions to Pandemic
- Why Pandemic
- Past Pandemic Lessons
- What happens in Pandemic
- Malaysian Scenario
- Best practices in organizations responding to Pandemics – Risk Mitigation
  - Business Operations
  - Business Continuity Issues
Introduction to Pandemics
Introduction to Pandemics

- **Endemic** – A disease that exists in a particular region or population – Eg: Dengue in Klang Valley

- **Epidemic** – An outbreak of a disease that attacks many people at the same time – Eg: Typhoid outbreak

- **Pandemic** – When an epidemic spreads throughout the world – Influenza (Flu – H1N1), Ebola, Mers CoV
Influenza basics

- **Influenza**, commonly known as the *flu*, is an infectious disease that affects birds and mammals.

- Influenza is a group of viruses (A,B,C):
  - Flu is caused by RNA viruses of the family Orthomyxoviridae (the influenza viruses).

- Called “*seasonal flu*” because it causes outbreaks of illness every winter.

Although it is often confused with the *common cold*, influenza is a much more severe disease and is caused by a different type of virus.
How is flu spread?

Infected people expel droplets when they talk, sneeze or cough. Most droplets fall quickly and land within 1-2 meters (3-6 feet). Surfaces can become contaminated with virus. Some particles float in the air (for a time) and can be inhaled.

*Note – if there is vomiting and diarrhoea, these body fluids may also be infectious.*

### Indirectly

**Transferred via the hands**

You touch an object that has droplets on it. Flu gets on your hands.

You rub your eyes, nose or mouth – and virus enters your body.*

### Directly

**Coughing and sneezing**

An infected person coughs, sneezes or talks to you very closely.

Virus droplets get into your eyes, nose or mouth.

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**You can get infected when droplets get into your mouth, nose, or eyes.**

**Fact:** *The flu virus can live for up to 48 hours on hard surfaces.*
Past Pandemics
What can we learn?
Pandemic Influenza

- There have been 3 to 4 influenza pandemics every 100 years for the last 400 years. First documented in 1580.

- Experts agree another influenza pandemic will occur, however it is not possible to predict where or when it may arise.

- All countries are expected to be eventually affected, regardless of the standards of health care.

A Pandemic is an epidemic occurring over a very wide area (several countries or continents) and usually affecting a large proportion of the population. Besides flu, other examples are cholera and HIV / AIDS.
1917-18 “Spanish Flu”

- Avian strain of influenza virus
- Spread around the globe in 4-6 months
- Had several "waves" of infection (each lasted 6-12 weeks)
- Infected between 25-30% of the world population (attack rate)
- Killed 40-100 million worldwide
- Deaths in very young, old AND healthy adults 18 to 40 years old
- Called “Spanish Flu”, however the disease struck all continents
- Virus reconstructed and has similarities to current H5N1 virus
Deaths in Influenza Pandemics

Spanish flu  1917-18: 600,000  (6 times more deaths than World War 1)
2009 H1N1    2009-10: 100,000 pneumonia & influenza

(Typical annual influenza season: 36,000)
H1N1 2009 Pandemic

- 151,700 to 575,400 fatalities
- Disproportionate in Southeast Asia and Africa
- More than 15 times higher than the number of laboratory-confirmed deaths reported to the World Health Organization (WHO)
- 3 times higher fatality rate than typical Influenza season
Malaysian Scenario

- 15th May 2009, the Health Ministry confirmed Malaysia's first case of A (H1N1) infection.

1st case - 21-year-old male student who had arrived at the KLIA on 13th May via Malaysia Airlines flight (MH091) from Newark and on transit at Stockholm-Arlanda Airport, followed by a 2nd case on 16th May of a female student in Johor who shared the same flight as the first patient and boarded an AirAsia flight (AK5358) from KLIA to Penang International Airport

- In total – 5,876 reported cases with 78 deaths
Malaysian Scenario

REPORTED DEATHS FROM INFLUENZA A(H1N1) IN MALAYSIA
AS OF 15 OCTOBER 2009
Emerging Medical Threats in Malaysia

- Zika
- Diphteria
- MERS- CoV – From Sept 2012, 1,354 cases, over 480 deaths. In Malaysia – 1 case in April 2014 confirmed.
- Typhoid Fever Outbreak – October 19th 2015 – till date 52 reported cases – KL & Selangor
- Rabies outbreak - August 19th 2015 in Perlis, Kedah and Penang – 3 yrs after the country was declared free from Rabies in 2012 by WHO
- HIV
- Tuberculosis – Uprising trend
Malaysian Scenario

- **Nipah virus** was identified in April 1999, when it caused an outbreak of neurological and respiratory disease on pig farms in peninsular *Malaysia*, resulting in 257 human cases, including 105 human deaths and the culling of one million pigs.

- The name "Nipah" refers to the place, Kampung Baru Sungai Nipah in Negeri Sembilan State, Malaysia.
What happens in a Pandemic

We don’t know what will happen during the next influenza pandemic. Its impact could be mild or could be severe.

Severe:
- Similar to the 1918 “Spanish flu” could cause millions of deaths and have dramatic effects on the world economy.

Mild:
- Similar to the 1968-69 “Hong Kong flu”, may cause far fewer deaths and be less disruptive to the global community.

Images of the “Spanish flu”
How long might a Pandemic last?

- A severe pandemic could affect the world for up to 18 months.

- Towns, cities or countries could be affected by waves of infection lasting 8 -12 weeks.

- During a severe pandemic, it is possible that:
  - Millions of people may become sick
  - Medical facilities could be overwhelmed, especially in developing countries
  - Normal services – water, food, sanitation – may stop working effectively
  - Business and factories may close
  - International travel will be severely restricted
Pandemic- Impact on Business Operations
Three Potential Outcome Paths…

Will H7N9, H5N1 or MERS-CoV become a Pandemic Flu?

- **NO ONE KNOWS**

Options 1: NO - Does NOT Evolve – like H5N1 “Bird Flu”

Option 2: YES - but “Mild” – like H1N1 “Swine Flu 2009”

Option 3: YES - but “Severe” – like “Spanish Flu” 1918

OR: any scenario in between…
Community Issues

- Restriction of public gatherings
- School closures
- Food and supplies shortages
- Services disruption from absenteeism
- Anxiety and fear of being in public
Risk - Organizational Impact

What might happen if A(H7N9) bird flu (or MERS-CoV) develops the ability to spread easily from person to person?

- Thousands of people may die
- Millions of people may require medical attention.
- Healthcare systems may become overwhelmed.
- Essential services may break down as key personnel are infected.
- Businesses and schools may close.
- Employees refuse to come to work.
- International travel may be limited as governments restrict entry.
Global Economy Issues

- High levels of absenteeism
- Closures of international borders
- Decline of tourism
- Supply chain disruption
- Focus on local economies
Implications to Business Continuity

- **Sickness and death among workforce**
  - 30% could be infected (over a 12-18 month period)
  - 5-10% of these could die (total of 1.5% - 3% of workers)
  - On average 5% of workers sick at any one time
  - On average 10-15% of workers unavailable at any one time (e.g. caring for children, parents, etc)
Implications to Business Continuity

NOT smooth and predictable, at any one time we could see:

High percentage affected in:

- An office / factory / rig
- A city
- A country
- A continent
- A critical department

Employees could be:

- Well
- Just developing influenza
- Severely ill
- In hospital
- Recuperating
- Recovered (“immune”)
- Off work caring for family

Up to 50% of employees could be absent
Proportion of Workforce Affected During a Pandemic

Employers should make contingency plans to operate for the pandemic period with at most 85% of their normal staff available, and between 50% and 65% available for the peak weeks of a pandemic.
Pandemic Risk Mitigation for Business Continuity
What can businesses do?

PLAN!

Amongst the **various things** businesses can do, there are three categories to reduce the risk of infection:

1. Non-pharmaceutical interventions
2. Antiviral medication & Vaccination
3. Education and communication
New Pandemic Model

1. **Pandemic interventions** need to be **proportional** to the **local** situation

2. The **local situation** (facility by facility) must be **evaluated** individually

3. **Severity** and **impact** must be **assessed** and will drive the **pandemic intervention** – regardless of the WHO phase and whether affected area
New Pandemic Model

Evaluating the Local Situation

1. **How many cases in the community and how fast are the cases changing (trajectory)**

   1. No cases in the country
   2. Cases in country, but none in the community
   3. Limited number of cases, growing slowly
   4. Significant number of cases, growing rapidly
   5. Cases resolving, recovery period
New Pandemic Model

Evaluating the Local Situation

1. **How severe are the cases – hospitalizations, and fatalities**
   1. Mild / Moderate
   2. Severe

2. **What are the local community implications**
   1. School and public service closures
   2. Community anxiety and social disruption
   3. Business and health services disruption
Three Main Planning Categories

Non-Pharmacological Interventions (NPI)

- Activities that “reduce” one’s exposure to the virus
- Include: Social Distancing, Quarantine, entry screening, PPE, etc.
- *Companies and individual’s main focus in a pandemic plan*

Antiviral Medications (e.g. Tamiflu) / Vaccination

- May reduce “severity” and “duration” of illness. Unproven.
- May be used to treat infection (given within 48hrs)
- May be used to protect against getting infected
- *Companies and individuals may consider providing employees with access to medication*

**Educate & communicate**

- Educate on ways to reduce risks
- Communicate what the organisation is doing
- Communicate early and pro-actively
- *Communicate accurately*
Non-pharmaceutical Interventions

Examples

1. **Social Isolation** – keep persons at home, no public gatherings
2. **Personal Hygiene** – hand wash, cough etiquette
3. **Personal Protective Equipment** (PPE) – masks, etc.
4. **School Closures** – children are major “spreaders”
5. **Home Quarantine** – stay home if you or family member ill
6. **Quarantine** – likely to be voluntary, or short mandatory
7. **Social Distancing**
8. **Travel Restrictions**
Social distancing

- A public health measure that is used to reduce spread of a disease that spreads between people

- Separation of infected people and their close contacts from non-infected people

- Sometimes mandated by authorities
  - Isolation (confinement) of cases
  - Quarantine of contacts.
  - Quarantine of affected areas
  - Restrictions on public gatherings (including entertainment, schools, work)

- Can be done in the workplace e.g. work from home, restricting visitors
Non-pharmaceutical Interventions

Preventing Spread

Hand washing

- Frequent
- Especially after blowing nose/coughing

Cough etiquette

- Cough onto back of upper arm
- Dispose of tissues carefully
- Wash hands

Don’t share items

- Keyboards, phones
- Kitchen items
- Care with door knobs, etc
Non-pharmaceutical Interventions

Personnel - Operational Implications

- Identify Employees Likely to be off work:
  - Family with children
  - Family with parents (elderly)
  - Public transport to work

- Who **CAN** work VS. who **SHOULD** work

- “Shut down and survive” VS. “Business Critical”

- Protect personnel so they can return to work healthy
Non-pharmaceutical Interventions

Identify and Manage Business Critical Operations:

- Which facilities can you afford to **shut down** completely

- Which facilities are **business critical**
  - Identify **Business critical staff** – develop plan to get them safely to and from work, and to work in as “safe” an environment as possible
  - Identify **“high risk”** business tasks/jobs and work to provide “safe” work **environment**

- Which **suppliers** are business critical
  - Request that providers have appropriate pandemic plan (Y2K again)
Protecting the Workers

- Occupational safety and health professionals use a framework called the "hierarchy of controls" to select ways of dealing with workplace hazards.

- The hierarchy of controls prioritizes intervention strategies based on the premise that the best way to control a hazard is to systematically remove it from the workplace, rather than relying on employees to reduce their exposure.

- The types of measures that may be used to protect yourself, your employees, and your customers (listed from most effective to least effective) are: engineering controls, administrative controls, work practices, and personal protective equipment (PPE)
Reduce the Risk of Exposure in the Workplace

- Encourage sick employees to stay at home.

- Encourage employees to wash their hands frequently with soap and water or with hand sanitizer if there is no soap or water available.

- Cover coughs and sneezes with a tissue, or to cough and sneeze into their upper sleeves if tissues are not available.

- All employees should wash their hands or use a hand sanitizer after they cough, sneeze or blow their noses.
Reduce the Risk of Exposure in the Workplace

- Employees should avoid close contact with their coworkers and customers (maintain a separation of at least 6 feet).

- They should avoid shaking hands and always wash their hands after contact with others.

- Keep work surfaces, telephones, computer equipment and other frequently touched surfaces and office equipment clean.

- Discourage employees from using other employees' phones, desks, offices or other work tools and equipment.
Maintaining good health

- Promote healthy lifestyles
  - good nutrition
  - exercise
  - smoking cessation

- Overall health impacts body's immune system and can affect ability to fight off, or recover from, an infectious disease.
International workforce

- Restrictions on local and international movement imposed for public health reasons

- Fear among Expat employees – To leave the country - Risky
Communications system

- Targeted, clear communications, posters, guidance and FAQs

- Disseminate plan to all employees and stakeholders in advance of a pandemic, including expected roles/actions

- Anticipate employee fear, anxiety, rumors and misinformation, and ensure that communications are culturally and linguistically appropriate.

- Develop 24/7 means (e.g. hotline, dedicated website) for communicating pandemic status updates/actions to employees and service delivery news to vendors and customers.

- Establish system to account for employee status (e.g. dial-in system).
Antivirals & Vaccines

• Effectiveness and limitations
• Resistance
• Provider-specific limitations for distribution
• Country-specific limitations for distribution
• Local governments can limit ability to provide antivirals:
  − May not be licensed in-country
  − May not be available in-country
  − May not be licensed for corporate stockpiling
  − May legislated access to stockpiling
Protect Yourself and Others

- **Wash your hands often** Wash regularly and properly with soap. Carry hand sanitizer and use it when you can’t wash your hands.

- **Cover your cough or sneeze** If you are sick, cover your cough or sneeze to avoid transferring the virus to others.

- **Avoid touching your face** Viruses can transfer from surfaces to your hands, then to your mouth and nose.

- **Keep your distance from people who are sick** If you have to attend to someone who is ill, wash your hands afterwards.

- **Flu vaccine** Especially important for people in high risk categories like children, older adults and pregnant women.

- **Avoid unnecessary exposure** to birds and animals. Ensure eggs and poultry for consumption are thoroughly cooked.
Crisis Management Plan

Health Incident Plan

- Influenza Pandemic Plan
- Infectious Disease Plan
- Chemical, Biological, Radiological and Nuclear (CBRN) Plan

Physical Infrastructure

(Earthquake, Tsunami, Floods, Hurricanes, Fires, explosions)

Hardware / Software

(Data backup, integrity, viruses)

Personal Security
Summary

- The Pandemic Plan is dynamic not static: it needs to be maintained and adjusted to the risk in the community.
- Corporations have moved beyond Pandemics: it’s just one variety of a health threat.
- A complete HIP should include a Pandemic Plan.
- Corporations need to have the tools/resources to monitor global events (inclusive of health risks).
- Corporation stakeholders need to be prepared and trained.
- The Pandemic or HIP should have a “global structure” with “local action”.
Thank You

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