

Corporate Pandemic Influenza Preparedness in Asia Pacific

The Elsevier conference on Corporate Pandemic Influenza Preparedness in the Asia Pacific brought together a distinguished panel of local and international economists and public health specialists in Hong Kong to discuss various corporate aspects of the long-expected H5N1 avian influenza pandemic.

Global Macroeconomic Consequences of Pandemic Influenza

The global macroeconomic consequences of pandemic influenza would be profound, especially if the source of the next pandemic was the highly virulent H5N1 avian influenza virus, as is currently thought likely.

The global economic consequences of such a pandemic can be estimated by dynamic economic modelling based on the influenza pandemics of different degrees of virulence that occurred in the 20th century, if the historical experience is adjusted for current conditions, and based on behaviour observed during the 2003 severe acquired respiratory syndrome (SARS) epidemic.

Even a mild pandemic, for example the 1968 Hong Kong influenza, would be associated with significant economic costs, estimated at 0.8% of the global gross domestic product (GDP), or around US\$330 billion. However, a repeat of a severe outbreak, such as the 1918/19 Spanish influenza pandemic, would cost as much as US\$4.4 trillion.¹

However, these are conservative estimates and the impact on developing countries would be larger, both because of greater shocks to local economies, and due to relocation of international

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capital to relatively safe areas such as Europe and the United States.

Other economic consequences of such scenarios would include collapsing equity markets and rallying bond markets, with inflation rising or falling, depending on the relative scale of cost increases versus demand switches. Moreover, monetary responses are important, with places such as Hong Kong, which peg their exchange rates, tending to suffer more due to the tightening of policies necessary to maintain the peg.

In conclusion, predicting the economic impact of pandemic influenza is difficult and depends on a range of assumptions, although economic modelling suggests that the cost is likely to be high and much larger than the resources that are currently being spent worldwide to tackle the potential sources of such an outbreak.

How to Face The Economic Impact of Pandemic Influenza

The costs of pandemic influenza include direct costs to the economy and indirect costs due to deaths and illness, with both needing consideration for proper economic assessment.

Direct costs depend on disease severity, with studies such as that by the World Bank² estimating possible losses of 2% to 5% of world GDP (US\$1.2–3 trillion), respectively, for moderate and severe influenza. By extrapolation, direct costs to Hong Kong's economy would be at least HK\$32–80 billion for moderate and severe disease, assuming that an effective new vaccine was developed within 6 months.

Indirect costs are harder to assess, but based on the 1918/19 Spanish influenza pandemic, which killed between 20 and 50

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million, a severe pandemic would cause 140 million deaths worldwide, or about 140,000 in Hong Kong. Depending on variables such as age and income, and using parameters estimated for other economies, an individual life in Hong Kong is estimated as worth at least HK\$20 million, so losses in lives could be up to HK\$2,900 billion.

Total costs would therefore be HK\$60 to 3,000 billion, not

including medical expenditure. This enormous cost and the fact that influenza pandemics occur every 30 to 50 years clearly justifies better preparation and greater spending by corporations, individuals and governments on mitigation.

Compared with 1918/19, modern businesses are highly inter-connected, with disruption of one part paralyzing an entire supply chain. Furthermore, fast modern travel allows the rapid spread of disease from the infection epicentre.

Corporate leaders should be aware of the potential impact on their companies, if just a few key employees develop influenza.

While the risk of a pandemic cannot be eliminated, it can be minimized with risk-reduction contingency plans, such as making it easier for employees to work at home and stockpiling appropriate drugs and preventive equipment such as masks.

Governments need to devise community-wide, crisis-control contingency plans, based on lessons learned during SARS, and educate the public about risks and mitigation measures in the event of pandemic influenza. Individuals can also consider means of avoiding infection and stockpile drugs, masks and storable food in times of such crises.

Concepts and Implementation of Business Continuity Planning for Pandemic Influenza

In an influenza pandemic, in the average business with 1000 workers, perhaps 250 will fall ill, 39 will require healthcare, and one will die. Furthermore, there will be potentially up to 100 million fatalities, with possible breakdown of supply chains and basic infrastructure such as power and water.

It is important to convince management and staff of the serious threat posed by an influenza pandemic, which has a 10% chance of occurring within the next year, with a 25% chance of a severe pandemic occurrence within a 25-year period, hence the need for staff mutual support and business continuity/contingency planning (BCP).³

In order to convince senior management of the seriousness of the threat, cite convincing legitimate external sources, such as the UK Risk Register 2008⁴, in which pandemic influenza is rated as having the highest impact on mortality and among the greatest likelihood of occurrence based on different disaster scenarios (Figure 1).

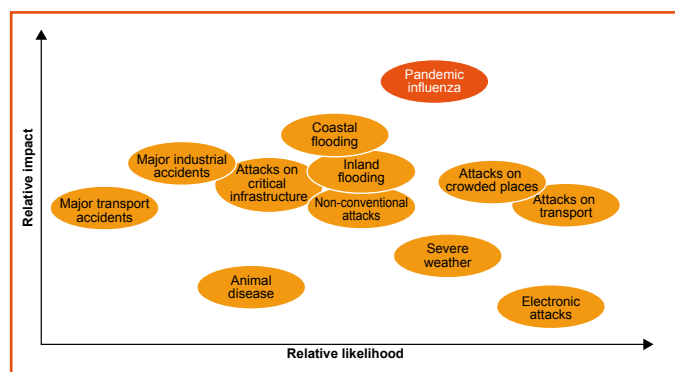


Figure 1. High consequence risks facing the UK (source: The Cabinet Office).⁴

Risk should be assessed in consultation with staff. A survey of health service employees found risk assessment involved more than stockpiling masks, oseltamivir, and alcohol hand gels,

although these are important. Staff were 10 times more likely to come to work if they were confident in their own skills, followed by certainty about their families' welfare in their absence, personal safety, and the importance and knowledge of their role in a pandemic.⁵

Thirty-eight percent said they would be absent from work if schools were closed, with 64% of those saying that they could work from home via e-mail, although internet connectivity may be unreliable during a serious pandemic.⁶

It is also important for companies to form closer ties with relevant government departments, similar companies, industry associations, and their suppliers and customers, in order to establish mutual support and co-operation networks.

BCP meetings are an effective way to enhance communications and familiarize staff with pandemic plans and their own roles. However, BCPs should not be overly long and written for the CEO, but for the people who need to use them, with short, 1 page protocols or procedures being preferable.

Finally, global companies with global plans should include local details regarding health care facilities. Good communications with staff should determine what is an acceptable risk and establish total care for staff and their families, while steps should be taken to ensure an adequate food and water supply. Masks may be stockpiled, but even some doctors and nurses do not know how to use them properly.

Most organizations completely rewrite their pandemic plans after testing them in an exercise so testing the plan against a range of plausible scenarios may be the most important preparedness step an organization can take.

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Roles and Responsibilities of Corporations in Pandemic Preparedness

A global problem with serious local implications, preparedness for preventing, containing, or mitigating a global influenza pandemic should be the responsibility of all sectors of society, ranging from UN agencies and local and central governments, to corporations and individuals.

An influenza pandemic could be associated with 15 to 50% of absenteeism due to staff sickness, compassionate leave, refusal to work, and other causes. This would disrupt upstream and downstream supply chains, having a huge impact on today's global economy, with altered provision of products and services creating important socioeconomic pressures and disturbances at all levels, resulting in considerable costs in terms of death, illness and economic productivity.

Pandemic influenza therefore represents a serious threat to business operations and global economies at all levels, and organizations must be prepared to face such a threat. However, research by the Communicable Diseases Policy Research Group (CDPRG) has revealed that advice from institutions offering advice to companies and national advice from governments is often incoherent and has substantial gaps.⁷⁻⁹

While there is advice on internal communications, external communications are frequently overlooked and, although

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some guidelines actively advocate teleworking, there is little advice about social distancing measures within the workplace. Moreover, most countries and organizations do not advise on general corporate stockpiling of antiviral medications, while guidance on personal protective equipment is non-specific and confusing.

Policies for managing employees suspected of being ill at work are scarce and legal issues such as fulfilling legal obligations towards employees in pandemics are under-addressed. Most organizations and countries do not advocate that businesses regularly test their BCPs through simulation exercises.

Thus there is a clear need for corporations to develop coherent, comprehensive, evidence-based guidelines that are explicit regarding corporate social responsibilities. In addition, BCPs are needed that are compatible with national strategic policies on pandemic influenza, with broader emergency contingency planning.

Antiviral Stockpiling Strategies and Roles of The Private Healthcare Sector in Hong Kong

According to the WHO, an influenza pandemic is both inevitable and overdue. Two of three pandemic criteria are already met by the current H5N1 strain in Asia, with the WHO pandemic alert now at Phase 3. However, demand for antiviral intervention is expected to outstrip supply once human-human transmission occurs and the Phase 4 pandemic alert is declared.¹⁰

It is important for businesses to have a pandemic preparedness plan that includes antiviral drugs and vaccines, the only pharmaceutical options available to help mitigate risk.¹¹ However, antiviral drugs such as oseltamivir will only be available and effective at the start of the outbreak if they are stockpiled now, while an effective vaccine is unlikely to be available for the first 6 months of a pandemic.¹²

Among companies that have stockpiled oseltamivir by industry sector, the financial sector is by far the largest.¹³

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Locally, the Hong Kong Department of Health released a guide to businesses on antiviral drug stockpiling in May 2006, the purpose of which is to provide information to those companies wishing to establish an antiviral stockpile as part of their strategy in BCP for an influenza pandemic, in order to minimize staff absenteeism due to sickness and to reduce the health, social and economic disruption, in which business continuity plays a major role.

The objectives of corporate antiviral stockpiling are to protect a company's most important asset—its employees, and therefore

maintain business operations during the pandemic and to help speed up recovery after the pandemic is over, thereby gaining a competitive advantage.

Influenza pandemics tend not to be short events and waves of disease outbreaks may occur. Corporate antiviral stockpiling is important, because a company cannot operate without its staff and operations will be severely impaired if 30% to 40% are absent, due to family or personal concerns about infection, which can be offset by availability of antivirals.

Companies cannot rely on governments to supply antiviral drugs during pandemics, with just a few percent of the global population covered by government stockpiles worldwide.⁸ While this figure is 25% to 30% in Hong Kong, a significant portion of this will be used as prophylaxis to maintain essential government services, such as the police service and government hospitals. Moreover, experience from SARS showed that a pandemic would probably exhaust public health facilities, necessitating a streaming process and use of corporate stockpiles for milder cases.

While there is no standard formula to calculate the quantity of drugs companies need, considerations include business size, core nature and structure, budgetary constraints, and a positive management attitude towards antiviral stockpiling as an investment to protect company assets. Business objectives during pandemics and whether to maintain core business only or protect all staff and their families will also play a role.

To ensure smooth implementation of stockpiling, budgets should be planned in advance, and advice sought from the local medical sector, or respective pharmaceutical company, to evaluate each company's situation and advice regarding employee coverage and distribution plans.

A medical professional will then place an order with pharmaceutical companies on the company's behalf, confirm delivery schedules and stockpile drugs. This medical professional will also advise on other personal protective equipment and be responsible for management training, contingency planning, and so forth.

If the pandemic is already underway, the doctor consults and prescribes the antivirals according to government guidelines and pre-determined requirements, as agreed in their contract with the company. The doctor will also closely monitor government guidelines, monitor patient progress, refer patients to government hospitals as necessary, and be responsible for maintaining the supply of drugs and protective equipment.

Finally, early planning is vital. As former US Secretary of State has warned: 'Preparing for a pandemic may not currently fall high on the list of priorities for businesses, but not doing so could result in devastating consequences for their operations.' Once WHO Phase 4 is declared '... it will be too late to do anything about it, which is why we have to prepare now,' according to John Oxford, Professor of Virology at St Bartholomew's and the Royal London Hospital.^{14,15}

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