Bird 'Flu and Business Continuity

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Source: *Swiss Re Corporate Risk Survey* 2005: "How concerned are you about various risks affecting your company?" (0–10)

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So far we have 2. and 3. We await H2H.

Each pandemic is unique, but we only have historical data to go on.

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  Pandemics in 1890, 1918 (Spanish 'flu), 1957 (Asian 'flu), 1968 (Hong Kong 'flu).
- *Zoonotic diseases:* (from other species)

China's populations (in millions):

	1968	2004
Pigs	5.2	508
Chickens	12.3	13,000
People	790	1,300

Source: Cooper & Coxe (2005)

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- In 1918 at least 20 mn people died.
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- In 1918 adults under 40 were disproportionately killed because of auto-immune (cytokine) responses (Cooper & Coxe 2005).
- Unlike earlier pandemic strains (1918 was H1, 1957 H2, and 1968 H3), the current 'flu virus is A(H5N1) — each pandemic is unique.

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- The SARS outbreak in 2003 estimated to have cost about 0.6% (USD$18 bn) of affected countries' GDPs (Bloom et al. 2005).

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$\therefore$ We should plan for the possibility of an Avian 'Flu Pandemic (AFP).

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- between 1,300 and 7,100 extra deaths.

See breakdown of age, risk status, and health-care workers in Table 2, below.

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- **public health measures, private hygiene,**
- **the responses of businesses,**
- **the responses of people, and the extent to which people panic.**

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- It affects the at-risk old and young disproportionately.

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Usually, to limit the impact of sudden failure of critical infrastructure from a terrorist act or a natural disaster:

- To maintain critical operations, and
- To recover critical operations.

And a BCP is the best way to reduce the impact of an AFP on the firm or organization. (But don't ignore external impacts on suppliers, services, and clients, as some do.)

An AFP: high impact, low probability.

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- **57% believe AFP a real threat to the U.S.; 34% undecided; 9% believe it's not a threat.**
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- **57% believe AFP a real threat to the U.S.; 34% undecided; 9% believe it's not a threat.**
- **But 60% either do not believe that AFP will affect their firm or undecided; 40% believe it will have an adverse impact on their firm.**
- **Moreover, 57% either believe that their firm is not very concerned about AFP or undecided; 43% say their firm is very concerned.**

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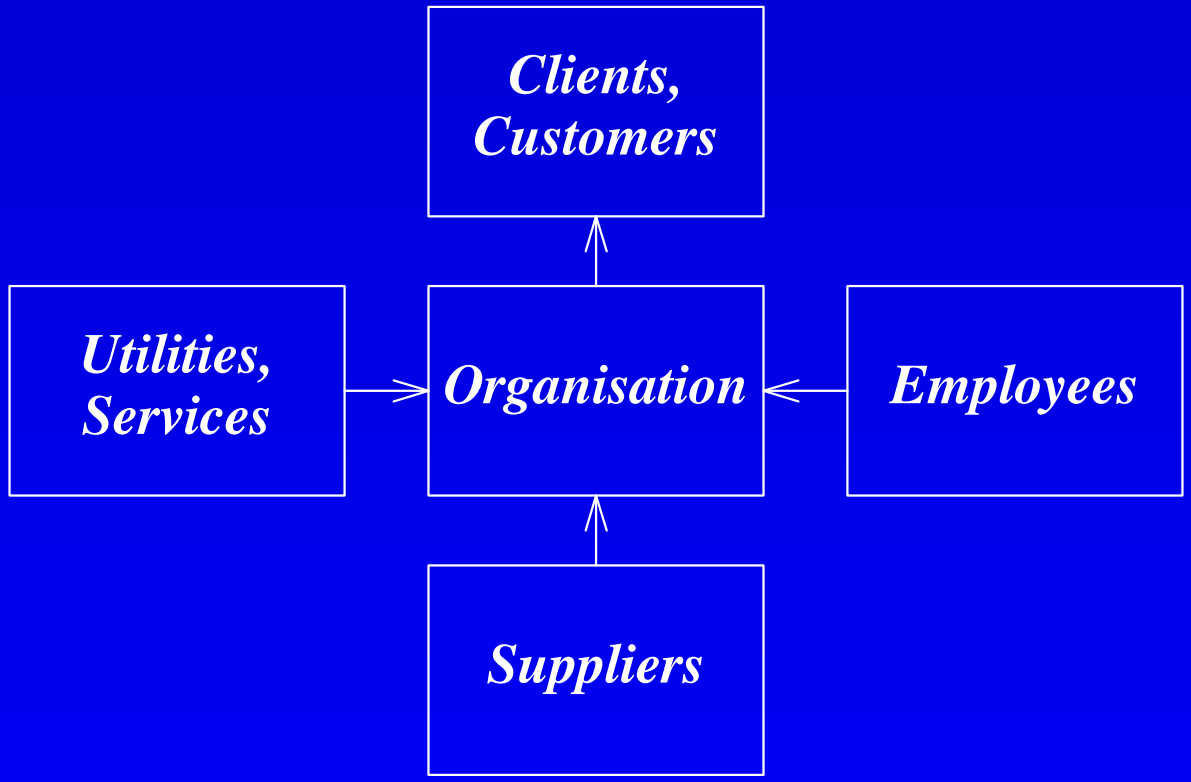
33% say no-one is in charge of their AFP BCP; 29% don't know or didn't respond; 38% say there is a AFP leader (HR, medical, OH&S, etc).

Reasons: AFP hype, ignorance about BCP, firm too decentralised, other business disruptions.

A Framework for BCP:



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- Capital Markets: equity or debt.

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An Avian 'Flu Pandemic (AFP) affects not only the externals, but also the internals — geographical spread is no insurance against an AFP.

Look Within, Not Outside

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   But this is endless.

2. Better to look within the firm/organisation and ask: what do we do, and what do we want to keep doing?

   How?

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5. Group and rank these actions, and decide which to undertake now.

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6. **Regular BCP Reviews:** Who? Which? How? When? A moving target.

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- **market risk analysis: volatility, disruptions**

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- key employees and supplies? scenario analysis and length and timing of disruption

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  - regularly test equipment and procedures of remote facilities
- expand IT and telecomms capacities — budget? security? bandwidth? remote access to key data?

For work at home:

- **For work at home:**
  - **enough staff resources — computer, programs, licences, data, broadband?**
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- electronic payments from customers? to employees? to suppliers?
- notifying customers and suppliers of any changes?

BCP: 3. Recovery Objectives

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- coordination with joint producers, joint venturers, complement producers.

BCP: 4. Communication

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BCP: 4. Communication

- with staff — prevent panic, strengthen morale, ensure health protected and critical functions continue
- start now, beforehand, to establish credibility
- details of mobiles (texting), sat phones, landlines, emailing — of staff, suppliers, key customers
- establish hotlines and websites
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BCP: 4. Communication

- with staff — prevent panic, strengthen morale, ensure health protected and critical functions continue
- start now, beforehand, to establish credibility
- details of mobiles (texting), sat phones, landlines, emailing — of staff, suppliers, key customers
- establish hotlines and websites
- inform staff about the BCP, triggers, monitoring preparations
-

BCP: 4. Communication

- with staff — prevent panic, strengthen morale, ensure health protected and critical functions continue
- start now, beforehand, to establish credibility
- details of mobiles (texting), sat phones, landlines, emailing — of staff, suppliers, key customers
- establish hotlines and websites
- inform staff about the BCP, triggers, monitoring preparations
- how do others get information?
-

BCP: 4. Communication

- with staff — prevent panic, strengthen morale, ensure health protected and critical functions continue
- start now, beforehand, to establish credibility
- details of mobiles (texting), sat phones, landlines, emailing — of staff, suppliers, key customers
- establish hotlines and websites
- inform staff about the BCP, triggers, monitoring preparations
- how do others get information?
- how do key suppliers plan to respond?

- **educate staff:**
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  - **liberal leave policies**

BCP: 5. Testing the BCP

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- **first, test specific tools, not scenarios — technology & infrastructure**
- **then “desk-top” tests with scenarios — debrief**
- **test remote facilities — computing, communications**
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BCP: 5. Testing the BCP

Important, but challenging.

- **first, test specific tools, not scenarios — technology & infrastructure**
- **then “desk-top” tests with scenarios — debrief**
- **test remote facilities — computing, communications**
- **seek surprises, weaknesses in BCP**
-

BCP: 5. Testing the BCP

Important, but challenging.

- **first, test specific tools, not scenarios — technology & infrastructure**
- **then “desk-top” tests with scenarios — debrief**
- **test remote facilities — computing, communications**
- **seek surprises, weaknesses in BCP**
- **remote sites and staff dispersion — costly**
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BCP: 5. Testing the BCP

Important, but challenging.

- **first, test specific tools, not scenarios — technology & infrastructure**
- **then "desk-top" tests with scenarios — debrief**
- **test remote facilities — computing, communications**
- **seek surprises, weaknesses in BCP**
- **remote sites and staff dispersion — costly**
- **which scenarios to test for? low incidence easier but high incidence different in kind.**

BCP: 6. Regular BCP Reviews

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- ***Poultry industries*** **hit, with its suppliers.**

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- Pharmas such as Biota/GSK and Gilead/Roche (the antivirals Relenza and Tamiflu, respectively).

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- *Identify core functions and employees,* plan redundancy for 25% to 40% of staff sick.
- *Stock up,* lest supply lines are disrupted.
- *Go it alone.* Sewerage, water, electricity, other utilities may be interrupted.

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- ***Sick leave policy?*** **Don't discourage employees from staying home when sick. Sick pay helps.**
- ***On-line and self-service options*** **for clients, customers, and partners.**
- ***Communicate.*** **Lack of information can lead to panic as people fear the worst.**

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- Good health habits: sleep, exercise, good foods, no smoking.
- Stay at home with disease or symptoms. Rest, and take medical advice.
- If sick, avoid dehydration: keep the fluids up.

Discussion

"The *gross attack rate* (infection rate) expresses the percentage of the population that is likely to become clinically ill. The potential range is quite high. Typically influenza pandemics have a gross attack rate of 20–40% (Taubenberger 2005). The percentage of the infected that succumbs to influenza is the *case fatality rate*. The *mortality rate* is determined by multiplying the gross attack rate with the case fatality rate. In the case of Spanish 'flu, it is estimated that the total mortality rate was between 2.5–5% of the world population (Barry 2005). But the 1957 outbreak had a mortality rate of 0.024% in the United States. Typically the very young and the old are at the greatest risk of mortality, but each 'flu outbreak is different and it is not possible to predict what groups will be most vulnerable (Simonsen et al. 2005)."

“It is also difficult to predict how the public will respond to a ’flu outbreak. Historical experience shows that even during an epidemic outbreak, the public soon adapts to the disease and economic activity continues. On the demand side, a pandemic is likely to affect consumer confidence and change consumption and social patterns. It will also affect investor confidence, which can have important long-term consequences. On the supply side, a pandemic will affect the availability of labor, as illness will force many workers to stay home. It will also continue to affect the livestock sector negatively. Governments will have to deal with an uncertain policy environment as they respond to the public health emergency and economic dislocation. Markets have a tendency to over-react, which could exacerbate the economic impact.”

Bloom et al. 2005

Table 1: Distributions of Disease Outcomes

Variables used to define distributions of disease outcomes of those with clinical cases of influenza. Rates per 1,000 persons.

Variable	Lower	Most Likely	Upper
Outpatient/GP visits—			
Not at high risk:			
0–19 yrs old	165	.	230
20–64 yrs old	40	.	85
65+ yrs old	45	.	74
High risk:			
0–19 yrs old	289	.	403
20–64 yrs old	70	.	149
65+ yrs old	79	.	130
Deaths—			
Not at high risk:			
0–19 yrs old	0.014	0.024	0.125
20–64 yrs old	0.025	0.037	0.09
65+ yrs old	0.28	0.42	0.54
High risk:			
0–19 yrs old	0.126	0.22	7.65
20–64 yrs old	0.1	.	5.72
66+ yrs old	2.76	.	5.63

Variable	Lower	Most Likely	Upper
Hospitalizations—			
Not at high risk:			
0–19 yrs old	0.2	0.5	2.9
20–64 yrs old	0.18	.	2.75
65+ yrs old	1.5	.	3.0
High risk:			
0–19 yrs old	2.1	2.9	9.0
20–64 yrs old	0.83	.	5.14
65+ yrs old	4.0	.	13

Source: Meltzer et al. 1999.

Clinical cases are defined as cases in persons with illness sufficient to cause an economic impact. The number of persons who will be ill but will not seek medical care are calculated as follows: Number ill(age) = (Population(age) $\times$ gross attack rate) – (deaths(age) + hospitalizations(age) + outpatients(age)). The number of deaths, hospitalizations, and outpatients are calculated below by using the rates presented in this table.

Note: there is a very high degree of uncertainty associated with the rates in Table 1.

Table 2: Australian Health Outcomes

Group	Size (mn)	Percentage (%)	Clinical illness (mn)	One or more GP visits Lower (th)	Upper (th)
Children 0–14	3.92	19.5	3.68	607.248	846.466
Healthy Adults 15–65	11.75	58.4	8.43	337.28	716.73
High-Risk Adults 15–65	1.06	5.3	0.68	47.87	101.90
Health-Care Workers	0.74	3.7	0.53	40.53	45.13
Elderly 66+	1.79	8.9	0.61	27.35	44.98
High-Risk Elderly 66+	0.84	4.2	0.28	22.49	37.02
Total	20.11	100.0	14.22	1082.78	1792.23

Group	Size (mn)	Hospitalisation Lower (th)	Upper (th)	Death Lower (th)	Upper (th)
Children 0–14	3.92	0.736	6.580	0.052	0.460
Healthy Adults 15–65	11.75	1.518	23.188	0.211	0.759
High-Risk Adults 15–65	1.06	1.514	3.515	0.068	3.912
Health-Care Workers	0.74	0.096	1.460	0.013	0.048
Elderly 66+	1.79	0.912	1.823	0.170	0.328
High-Risk Elderly 66+	0.84	1.139	3.702	0.786	1.603
Total	20.11	5.914	40.270	1.300	7.110

These figures are derived by multiplying the population in each group by the rates per 1,000 given in Table 1.
The ratios of at-risk (to respiratory complications) people to healthy people is taken from Swiss data (Piercy & Miles 2003).

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