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Pandemic Recovery Planning A Framework for Preparation

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The Reality of the Problem	A Business Perspective
Pandemic Response	Challenges for the Private Sector
Methodology	Pandemic Planning & Execution
Response Strategies	A Framework for Preparation
Execution	How will you and your organization react?
Effective Implementation	Critical Success Factors
A Final Word	Questions & Answers

The Reality of the Problem: A Business Perspective

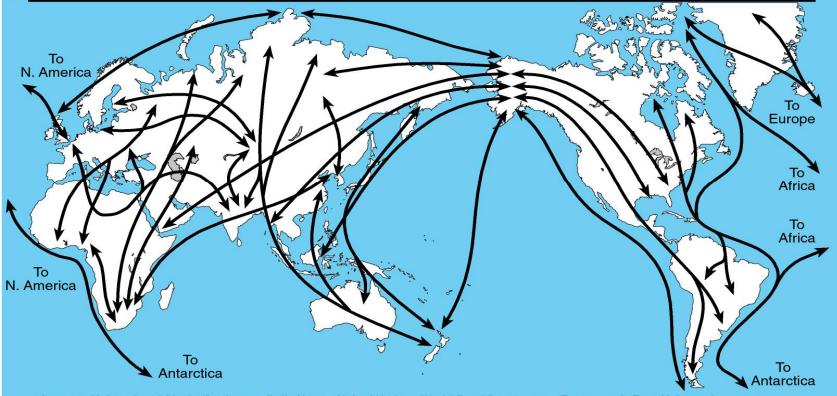
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What is the "bird flu"?

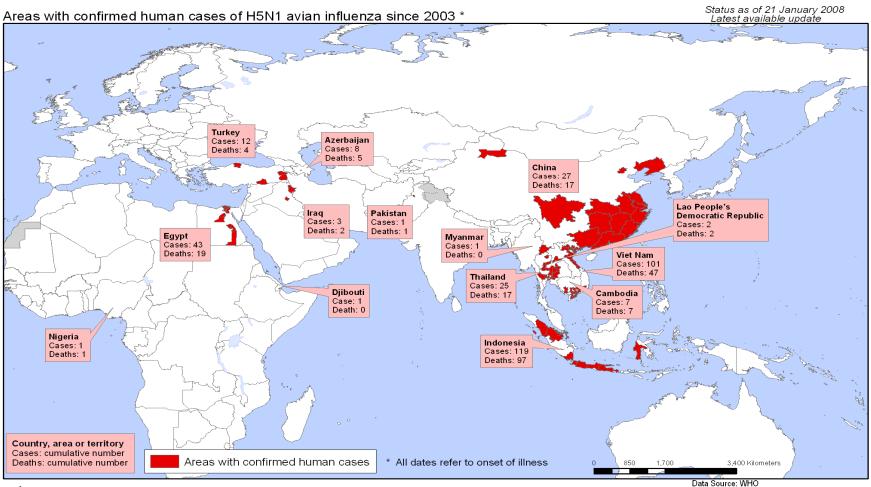
Avian (*or bird*) *influenza* is caused by influenza viruses that occur naturally among wild birds. There is no human immunity and vaccines remain questionable.

Migratory Bird Flyways



Sources: University of Alaska/Anchorage Daily News; United Nations World Food Programme; Tracey et al. *Emu*, Vol. 104 June 2004; Random House Atlas of Bird Migration© 1995.

Confirmed H5N1 avian influenza since 2003



World Health Organization or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Map Production: Public Health Mapping and GIS World Health Organization © WHO 2008. All rights reserved

Confirmed Cases: 357

Confirmed Deaths: 225

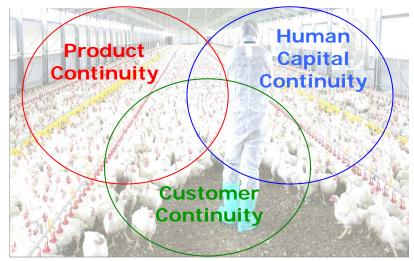
(As of 2/1/2008)

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This is old news! – Right?????

- **Potential risk has not abated much**! Number of deaths and illnesses globally in 2007 are down, but not out.
- Potential for multiple waves over a 12-18 month period, lasting for weeks at time
- Concern over employees', and their families, well being
- General impact on supply chain and increased need to provide certain goods and services
- Affects on local, state, governmental and national agencies & support





Pandemic Response: Challenges for the Private Sector

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Pandemic Flu: A Reality

CDC and WHO estimate a 100% probability of a global influenza pandemic.

- Influenza A (H5N1) virus is a virus subtype that occurs mainly in birds and is highly contagious and deadly among them
- Outbreaks of H5N1 started among poultry in 8 countries in Asia in 2003 with ongoing outbreaks. In October 2005, infections were reported in Turkey and Romania
- New human cases of avian flu are surfacing in Indonesia and through much of the rest of Asia. This strain of flu appears to be especially dangerous, with rapid deterioration and high fatality among those who become infected. In the present outbreak, more than half of those infected with the virus have died. Most cases have occurred in previously healthy children, young adults, and twenty to forty year olds

Pandemics: Snapshots from History

1918: Spanish Influenza

- Killed between 20 and 40 million people worldwide with 500,000 deaths in the U.S. It swept through North America, Europe, Asia, Africa, Brazil, and South Pacific.
- Mortality rate was 2.5%.
- Infection spread following the path of human carriers

1957: Asian flu

- 70,000 deaths in U.S.
- 2 million worldwide
- 1968: Hong Kong flu
- 34,000 deaths in U.S.
- 1 million worldwide



Role & Expectations of Private Sector

The federal government has outlined expectations and guidelines for the private sector in pandemic preparedness.

Role & Expectation	Guidelines & Checklist
The President's <i>National Strategy for Pandemic</i> <i>Influenza</i> describes the role of the private sector in pandemic preparedness:	To help businesses develop a pandemic plan, the CDC developed the <i>Business Pandemic Influenza Checklist</i> .
 Establish an ethic of infection control in the workplace Prepare contingency systems to maintain delivery of essential goods and services during sustained worker absenteeism Establish mechanisms to allow workers to provide services from home Establish partnerships with other private sector entities to provide support and maintenance of essential services 	 The checklist provides a list of activities to help businesses prepare for a pandemic and examine impacts on their operations and people. Plan for impact of pandemic on business Plan for impact of pandemic on employees and customers Establish policies to be implemented during a pandemic Allocate resources to protect employees and customers during a pandemic Communicate to and educate employees Coordinate with external organizations and help communities
Are	We Ready?

- Although U.S. companies view an influenza pandemic as a real threat to the nation, two-thirds believe they have inadequately planned to protect themselves in the event of an outbreak.
- 66 percent of respondents said their company had not adequately planned to protect itself from a pandemic flu outbreak .
- 58 percent said they are not confident their company is prepared to manage a pandemic flu outbreak

Source: Deloitte Center for Health Solutions, part of Deloitte & Touche USA LLP

Traditional BCM Planning Approach

- Worst Case Scenario
- Sample Scenarios
- Never Really Contemplates a Human Shortage Crisis over multiple time periods

Methodology: Pandemic Planning & Execution

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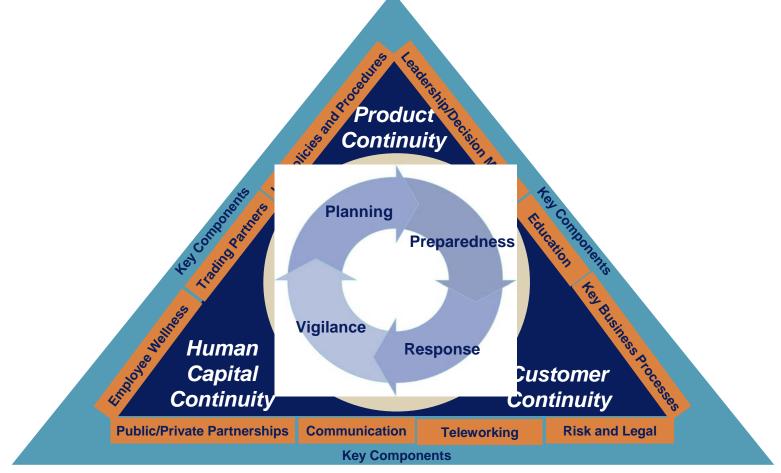
Dimensions of Business Continuity Risk

Business Continuity Management (BCM) seeks to mitigate to three dimensions of operational risk that impact both planning and investment decisions.



A Framework for Pandemic Planning and Preparation

A pandemic would impact a business in its ability to mobilize its work force to create products and serve its customers. All three of these aspects of planning an preparedness must be addressed. Our approach supplements these by identifying key components of a Pandemic Plan and an approach to developing such a plan.



The Threads of Pandemic Planning

- Human Capital Continuity
 - Employees are a critical resource to business and when they do not work or work inefficiently or ineffectively, business losses are incurred. The metrics for this objective are
 - Days of work lost to illness
 - The costs of hiring and training new employees
 - Insurance costs for self-insured employers
 - Standard measures of workplace efficiency specific to each industry
 - Businesses must also protect their employee's families in order to reduce revenue lost due to leave taken to care for a sick family member and insurance costs for self-insured employers
- Product and Service Continuity
 - Businesses must preserve their primary and secondary revenue streams. The metric for this objective is lost revenue.
- Customer and Strategic Partner Continuity
 - This involves determining how a pandemic might impact them and minimizing this impact. Strategic partners of note might include suppliers, manufacturers, distributors and regulators







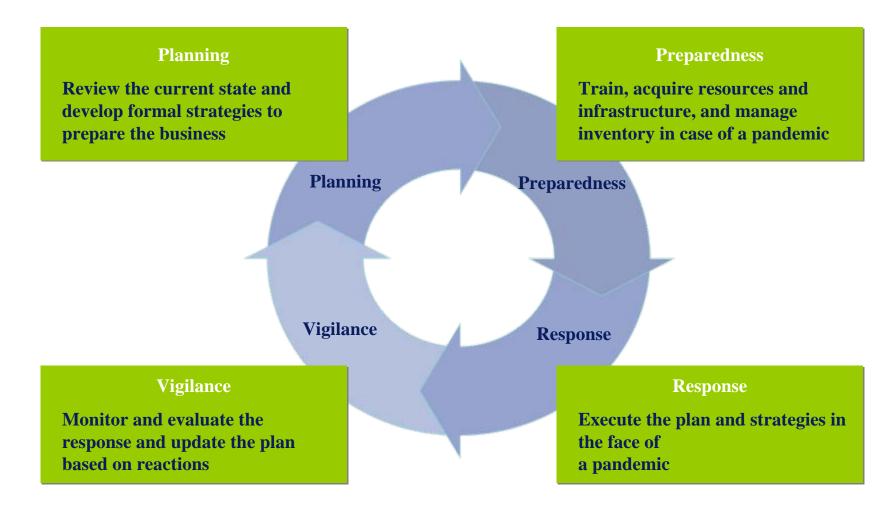
Key Pandemic Planning Components

The robust preparation strategy leverages ten key components which are critical to sustaining operations during a pandemic crisis

Key Components		
Key Business Processes	Develop policies and processes to maintain operational effectiveness during a pandemic	
Leadership/Decision Making	Implement a Pandemic Planning and Coordination Unit (PPCU) as part of the existing Business Continuity Planning (BCP) function	
Education	Increase awareness and knowledge about influenza prevention and treatment through clear, consistent, medically accurate information	
Public/Private Partnerships	Develop and maintain valuable partnerships with trading partners and critical stakeholders such as unions and public health agencies	
Communication	Communicate the response plan and approach to employees and families, customers, suppliers, and partners	
Teleworking	Identify organizational and technical infrastructure requirements to minimize the potential disruption resulting from a pandemic	
Risk and Legal	Identify likely threats in order to decrease the risk of threat occurrence and contain damage Develop risk mitigation policies and procedures	
HR Policies & Procedures	Identify core staff and functions and establish policies and procedures during the pandemic	
Trading Partners	Review demand, distribution, and production plans and link strategies with key trading partners to ensure that critical business processes are maintained	
Employee Wellness	Review contracts with health plans and provider networks to ensure coverage and provision of services such as vaccinations and access to medical facilities	

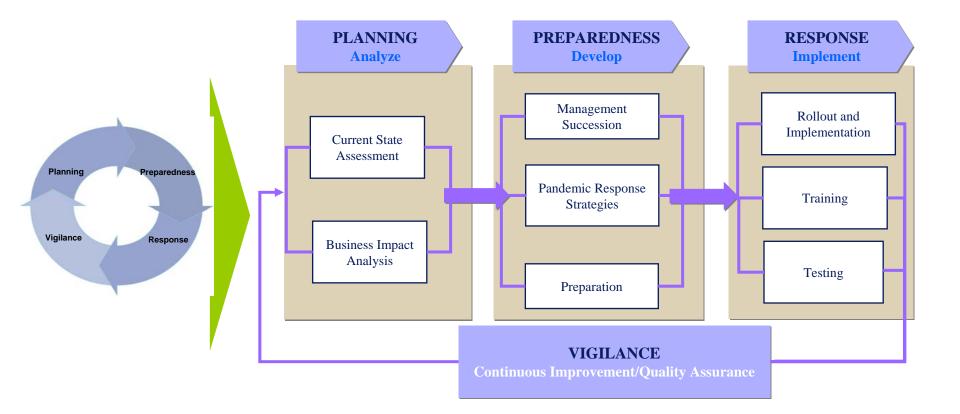
Planning & Framework The Core Activities of Pandemic Planning

Pandemic preparation is continuous process to help a business Plan, Prepare, Respond and Monitor their activities before, during, and after an outbreak



Methodology Deloitte's Methodology for Planning & Preparing

The Deloitte US Service Providers approach to Pandemic Planning builds on our experience with Business Continuity Planning and applies it to the unique requirements of the pandemic threat.



Response Strategies: A Framework for Preparation

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Before embarking on planning for a pandemic, businesses should take stock of their present level of preparedness for such an event

- Most major companies have some Business Continuity Plans.
 - Some involve alternate Information Technology support
 - Other address the loss of office space and work areas
- Some of these plans and the measures that have been put in place

to support them may be useful if a pandemic strikes

- Other aspects need to be addressed to deal with the specifics of a pandemic
 - Reduced work force
 - Interrupted supply chain
 - Continuing to serve customers, who may be impacted as well

Planning: Current State Assessment (cont'd)

Organizations can maximize benefits by expanding enterprise-wide business continuity procedures to address pandemic preparation efforts

Existing Business Continuity Plans may be the basis for preparing for a pandemic

- Critical resources necessary for the conduct of business may be unavailable
- It will be necessary to determine:
 - The priority of business functions
 - The minimum number of people required
 - Whether they need to work together
 - What resources they need to accomplish the function
- Training, testing and maintenance vehicles can be re-used
- Existing strategies can be applied
 - Cross-training
 - Telecommuting
 - Outsourcing

However, there are critical differences in planning for the response to a pandemic

- Human capital, rather than facilities and IT, are the primary focus
- Personnel may not be able to report for work in normal workplaces for an extended time period
- Alternate workspaces may be of little or no use
- Availability of third parties will take on added importance
- The outage may not have a clear beginning and end and may last for a longer period of time
 - Outbreaks of illness may come in waves, over time (up to 18 months)
 - Some locations may be worse hit than others at any given time

Planning: Business Impact Analysis

- Business Impact Analysis (BIA) is a well accepted part of Business Continuity Planning
 - However, unless the focus of the analysis includes widespread unavailability of personnel, additional work must be done
 - It is possible to leverage much of the existing BIA work

- Additional considerations include:
 - Identification of critical staff members and functions whose absence might slow or halt production
 - Personnel and functions that might be able to supplement those felt to be critical
 - The minimum number of people in each function needed to continue production
 - The length of time that each function can continue with severely reduced work forces
 - The ability to separate physically related functions and their personnel

Preparedness: Management Succession

- Who will make key management decisions if a third of Senior Management is unavailable?
 - The regular decisions that run the business in normal times
 - Pandemic-induced triage
 - Which customers to serve?
 - Which businesses to be in (or drop)?
 - Should work locations be closed?
 - How should teleworkers' effectiveness and productivity be measured?
- Management succession also applies to a much lower level of management
 - When should ill workers be allowed to return?
 - Who will manage business functions in the absence of mid-level leaders?
 - How will routine management functions be preformed?
 - Budgeting
 - Financial reporting

- The most important aspect of management succession is a well-framed policy written in advance – to detail how management expects a company to be run in their absence
 - The more that these issues are thought out prior to a pandemic outbreak, the smoother the response will be
 - They should provide guidance but avoid being overly prescriptive
 - Events will overtake the policy
 - Management should have the confidence in their successors to make decisions and to rectify mistakes

Preparedness: Pandemic Response Strategies

Organizations need to develop and implement strategies for dealing with a wide range of issues. Many of these are dealt with in general Business Continuity Plans but additional concerns re raised with regard to responding to a pandemic.

	Leadership and Governance
Management	Regulatory/Industry Compliance
	Crisis Management
	Business Process/Work Recovery
Process	Third Party Continuity
	Testing
	Centralized information Technology
	Distributed Information Technology
Technology	Desktop Technology
	Data Communications
	Voice Communications
	Data/Vital Records
Infrastructure	Facilities
	Training
People	Health and Safety

Preparedness: Pandemic Response Strategies (cont'd.)

Examples of key strategies that may be considered for pandemic response.

Categories	Issues	Potential Strategies
	Μ	anagement
Leadership and Governance	Management successionBoard responsibilitiesEffect on internal control	Pandemic policiesManagement by executive committeeThreshold levels of action
Regulatory / Industry Compliance	Maintaining complianceIndustry sustainabilityWorking with competitors	 Applying for waivers Accepting the penalties Working with industry groups to develop pandemic standards
Crisis Management	Communication with staffComm. with managementComm. with external publics	 Web based communications systems Automated notification systems Pandemic Crisis Management Team
		Process
Business Process/ Work Recovery	Where people will workSocial distancingService level commitments	 Functional distribution and teleworking Cross-training Contingent outsourcing
Third Party Continuity	 Supply chain viability Essential service continuity (power, telecom, transport) 	 Stockpile resources Diversify sources of materials and services Develop workarounds
Testing	Validate pandemic strategyValidate tactical capabilitiesIdentifying weaknesses	 Simulations, using current business continuity test processes Sidelining personnel in production processes Capacity testing for VPN remote access

Preparedness: Pandemic Response Strategies (cont'd.)

Examples of key strategies that may be considered for pandemic response.

Categories	Issues	Potential Strategies
Technology		
Centralized Information Technology	 Lack of data center staff Fixing application bugs Data loss and downtime	 Implementing remote high-availability systems (active-active) Contingent outsourcing of operations and application support Data replication (synchronous "real-time or asynchronous)
Distributed Information Technology	 Lack of local support staff Fixing application bugs Data loss and downtime	 Central or cross-trained support Contingent outsourcing application support Maintaining local backups
Desktop Technology	 Laptop distribution VPN software distribution Application software	 Before-the-fact distribution Distribution at the time of a pandemic, with pre-established distribution and pickup points
Data Communications	Network resiliencyInternet stability/capacityGateway capacity	Contingent outsourcing of network operationsShift operationsDistributed network operations
Voice Communications	Call center supportAccess to key personnelNetwork resiliency	 Contingent outsourcing of network operations Virtual call center Carrier diversity

Preparedness: Pandemic Response Strategies (cont'd.)

Examples of key strategies that may be considered for pandemic response.

Categories	Issues	Potential Strategies	
	Infrastructure		
Data/ Vital Records	Access to key files/data at closed facilities.Backup of key files/data	 Centralized automated backups Online imaging/workflow systems Prioritized protection for critical data assets 	
Facilities	Quarantine of facilitiesOutbreaks at co-tenantsUnwillingness to report	 Teleworking Process/Function re-distribution Sequestering of key staff 	
	People		
Training	Staff understanding of roles during pandemic responseAbility to do others' work	 Current business continuity training processes Staff mirroring and part-time role sharing Alternate access permissions 	
Health and Safety	Treating ill workersTreating worker familiesKeeping workers healthyReturn to work protocols	 Stockpiling and/or distribution of medications Access to available vaccines Mandatory work-at-home policy Health protocols at the job site 	

Response: Rollout and Implementation

There are a number of common strategic threads that require the acquisition of resources and the definition of roles and responsibilities

Acquisition	Definition	Contracting	Distribution
 Personal computers Enlarged gateway Automated notification systems VPN certificates Imaging systems Automated backup systems 	 Pandemic policies and standards Alternate roles and responsibilities Pandemic Crisis Management Team Teleworking procedures Cross-training Testing procedures 	 Contingent outsourcing 800 re-direct and DID forwarding Alternate carriers Alternate providers 	 Personal computers VPN software and certificates Medications

There are also numerous policy issues that must be addressed in rolling out preparedness to deal with a pandemic

Human Capital	 Human Resource policies to reduce risk to the organization and guide employees on what to do and how to do it Privacy policies related to medical information Health benefit changes Vital skill set analysis Communication strategy roll-out Business travel advisories Virtual Workplace Solutions Enabling the workforce to conduct business anywhere, anytime Training and education on the plans, policies, etc. as well as on the skills and abilities required to be successful
Health Care	Vaccination and hygiene educationInteract with health insurers

Response: Rollout and Implementation (cont'd.)

Financial	 Fiscal planning Manage payroll, payables and other obligations Budget for pandemic related extra expenses Monitor response & recovery spend
Regulatory	 Pandemic-related waivers and extensions Interactions and requirements around Federal and Local government
Supply Chain	 Evaluate supply chain preparedness against disruptions Enact an improvement program to protect the supply chain Continually monitor external environment for new threats

Response: Training

- While there may be a need for specialized training for pandemics, but the processes and delivery vehicles can and should be based those currently used for Business Continuity Management
- Where these do not exist, they need to be developed for pandemic response
 - Job functions
 - Technology operations
 - Use of alternate tools, e.g., VPN
- To the extent that outsourcing is a selected strategy, the staff at the outsourcing company must be trained
 - For contingent outsourcing, there will also be a need for on-going testing and re-training

Response: Testing

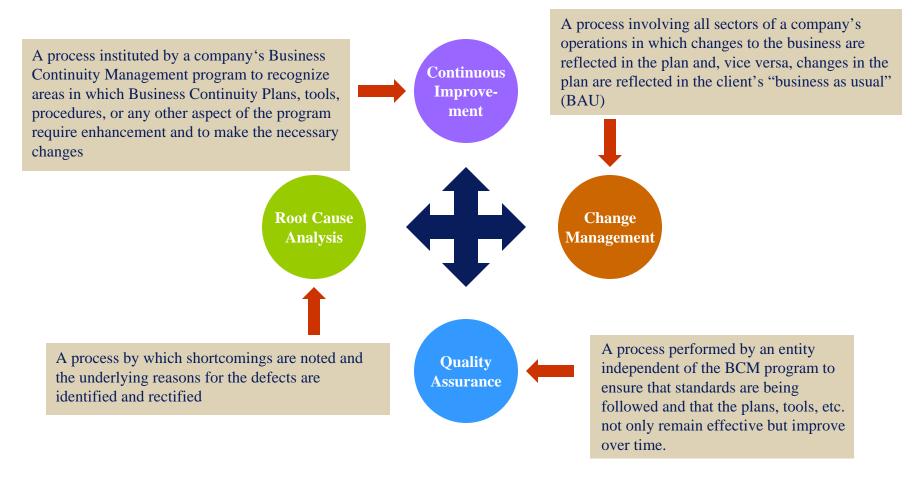
- It is a commonly held belief that the purpose of business continuity testing is validation of the plan
- We believe that the purpose is to identify defects in the plan so that they can be corrected

Response: Testing (cont'd.)

- This is particularly critical for Pandemic Planning, inasmuch as the people who are responsible for improving the plan may not be available when it needs to be executed
- Therefore, we recommend an approach based on numerous scenarios, singly and in combination
 - Executive management unavailable
 - Middle management unavailable
 - Key staff unavailable
 - Interruption in the supply chain
 - Sudden reduced demand for certain products
 - Inability to perform critical business functions
- These tests will differ from regular (and still important) business continuity tests because they will focus on the unavailability of personnel
 - Replacements must be trained prior to the tests
 - The tests should be iterative with different cadres of personnel absent for different tests

Vigilance: Continuous Improvement/ Quality Assurance

There are four interactive aspects of continuous improvement and quality assurance that need to be kept up-to-date both before and during the incidence of a pandemic



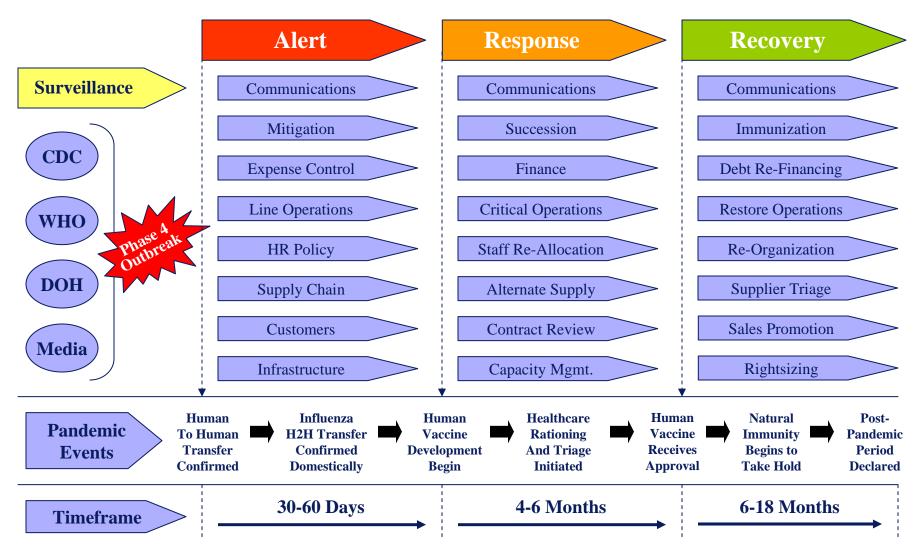
Execution: How will you and your organization react?

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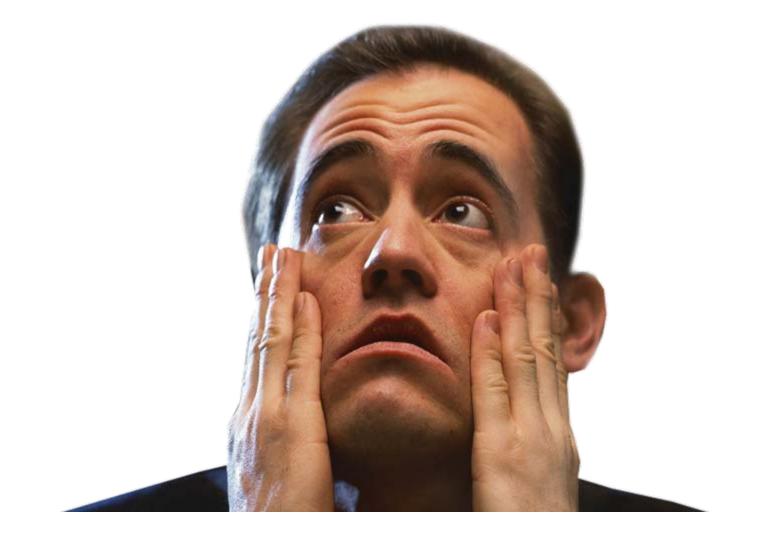


Pandemic Execution Timeline

Pandemic response plans should address key phases of crisis response and execution.



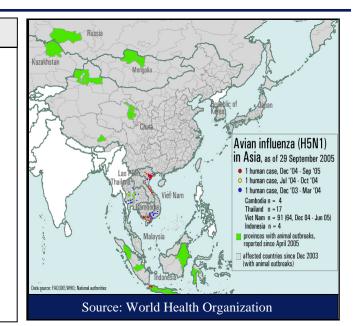
Are You Ready to Begin???



Pandemic Surveillance

Scenario – May 2008

- The World Heath Organization (WHO) Influenza Program continues to report cases of influenza infection being identified in wild bird populations spreading Westward from Southeast Asia. Cases have now been identified in most European countries and in Northern Africa.
- State and local government jurisdictions are displaying varying degrees of maturity in their current level of preparedness.
- Despite some state and local planning initiatives, there is general concern about coordination of governmental response to an influenza outbreak, and similar concerns about public and private sector coordination.



- Who is accountable for pandemic planning within your state and local jurisdictions, and has this accountability and responsibility for response planning widely understood?
- Has your jurisdiction adopted the National Incident Management System (NIMS) as your template for responding to a pandemic? Are you prepared to implement the responsibilities of the NIMS finance function?
- What sources of emergency financing will you have at your disposal in order to fund local pandemic response initiatives?
- How will your government entity make cost/benefit decisions relating to investment in pandemic risk mitigation and response?

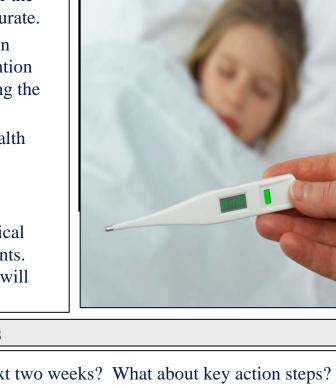
Pandemic Alert

Scenario – October 2008

- Reports that have been coming in from Southeast Asia during the past three weeks of human-to-human transfer of a variant of the H5N1 virus. The WHO has confirmed these reports as accurate.
- While human-to-human transfer has not yet been reported in North America, the Centers for Disease Control and Prevention (CDC) in Atlanta has issued a Health Alert Notice indicating the first such cases can be expected within weeks.
- The CDC has called for an emergency meeting of State Health Officials to discuss the need for a coordinated approach to pandemic response. Similar meetings have been called by state/local emergency responders.
- Health and social service networks have not stockpiled critical medical supplies required to treat a surge in influenza patients. Local supplies of masks, gloves, and ant-viral medications will not meet the surge public demand.



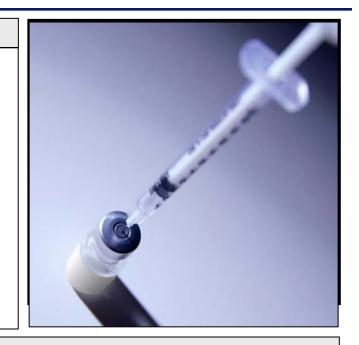
- How will you reallocate financial resources in response to a pandemic event?
- What accounting procedures and fiscal controls currently exist for identifying and tracking pandemic related expenditures to enable later reimbursement?



Pandemic Response

Scenario – April 2009

- Public and private sector organizations are experiencing their highest rates of absenteeism ever, running as high as 35% due to illness and the need to care for family members.
- The CDC has publicly announced that clinical trials for new vaccine developed to treat the variant of H5N1 have been successful. It is expected that vaccines will become publicly available within weeks. Public debate is now breaking out about who should be the first to received this vaccine.
- Health and social service networks are overwhelmed with the number of influenza cases they are receiving, as limited surge capacity exists to help infected patients and their families.
- Health and social service networks are also experiencing disruptions in cash-flow as their billing and reimbursement processes are slowed due to workforce reductions and high demand for services.



- How will you prioritize administrative and financial services in your role as a financial officer during peak periods of absenteeism?
- What are your jurisdiction's priorities for public service delivery? What services will be reduced or eliminated during the height of a pandemic event?
- What will be your response to public and private healthcare and social service institutions that are seeking financial support in order to care for a growing number of influenza patients and address related cash-flow problems?
- What succession plans have been established as key executives within your administrations become ill or do not show up for work?
- What liability concerns do anticipate for your local jurisdictions given that a pandemic can be construed as a "foreseeable event?"
- How do you anticipate that tax revenues in your home jurisdictions will be effected at this point in a pandemic?

Pandemic Recovery

Scenario – December 2009

- Natural immunity has begun to take hold within the general population as multiple waves of influenza infection have come and gone.
- Employees in both the pubic and private sectors have begin returning to work in larger numbers, and absenteeism is now running about a 3-5%.
- Death rates from successive waves of pandemic are riding at about 2% of the general population, including public employees.
- The world economy has encountered a major disruption, but the effects appear to be equivalent to a major recession and not a depression.
- Many public and private sector employees have been laid off or permanently let go from their previous employment situations. Unemployment rates are running anywhere from 7-10% depending on the state/province.
- Life Returns to Normal

• Public attitudes are turning more optimistic about the future.

- What do you anticipate will be the long-term implications on tax revenue and cash-flow within your local jurisdictions?
- How will you allocate state/local resource in response to unusually high levels of unemployment?
- What priorities might you have at this time that can be shared with lawmakers to improve response to future pandemic events?

Effective Implementation: Critical Success Factors

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Pandemic Preparation: Critical Success Factors

- The cost of doing nothing is too high
- Enterprises must thoroughly re-assess their business continuity strategies and apply them to the distinctively different circumstances of a pandemic
- Plans need to be developed/revised to incorporate the effect of a significant and sustained absence of staff, including critical staff members
- Pandemic scenarios should be weighed and considered
- Pandemic planning needs to be incorporated into the Business Continuity Management process
- New strategies must be implemented to communicate plans to employees, vendors and service providers
- Dependence on government and third parties must be analyzed and the risks mitigated
- Operations need to be modified/enhanced to enable continuity with reduced work forces
- Regular maintenance, review and testing of plans is not an option but a necessity

A Final Word: Questions & Answers

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A Final Word & For Further Information

"Plans are nothing... ...Planning is Everything."

-- Dwight Eisenhower

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