

Background: Industry Advisory

Responding to a Pandemic Outbreak

August 12, 2009

Framework for Deciding Pandemic Response Actions Based on Severity

The World Health Organization uses six phases to describe the extent of geographic spread of the virus. However, even at the highest, Phase 6 pandemic, the current H1N1 outbreak has a moderate degree of severity in the vast majority of cases, and does not require that response plans be implemented at the highest levels. It has become apparent that a measure of severity, in addition to geographic spread, is needed to help ensure our response plans are triggered at the appropriate times. Health authorities are being urged to develop such a severity measure.

In the meantime, this Advisory provides a framework for implementing plans under mild, moderate, and severe scenarios.

The following describes the typical actions entities would take to respond to a pandemic scenario, grouped into 5 general categories.

Typical Response Actions	
Monitor Situation	Monitor the global situation, and impacts on the local community and employees. Monitor employee absentee rates. Decide response actions. Train additional staff in preparation to maintain essential operations
Communicate	Communicate with employees, suppliers and customers, stakeholders, other interdependent critical infrastructure sectors, state, provincial, and local health authorities. Consider the impact on employee families.
Control Infection	Limit the spread through personal hygiene, workplace screening and cleaning, personal protective equipment, work from home capability, social distancing (e.g. workplace screening, visitor and travel restrictions, return to work policies), anti-virals and vaccine.
Support Employees	Provide guidance to managers and staff, provide medical and psychological support. Consider the impact on employee families and measures to support them.
Maintain Essential Operations	Defer or cease non-essential work, re-deploy staff. Monitor and adjust response actions as required. Plan for subsequent waves.

Table 1 below maps these response actions against 4 stages that would prompt increasing levels of action as the pandemic worsens:

- Routine
- Enhanced
- Advanced
- Full Activation

Table 1: Typical Response Actions

	Monitor Situation	Communicate	Control Infection	Support Employees	Maintain Essential Operations
Routine	Normal	Normal	Normal	Normal	Normal
Enhanced	Periodic updates from health authorities	Periodic updates to all staff Limited sector-wide notifications from NERC	Consider enhanced procedures	Consider enhanced support for managers to make decisions	Normal
Advanced	Frequent updates from health authorities Monitor employee absentee rates	Frequent updates to all staff Periodic sector-wide notifications from NERC	Confirm anti-viral priorities and consider distribution in consultation with health authorities Confirm vaccine priorities to support essential business	Enhanced support for managers to make decisions re: staff and their families, close contact situations	Essential business plus regulatory requirements only
Full Activation	Daily updates from health authorities Monitor employee absentee rates	Daily updates to all staff Frequent sector-wide notifications from NERC	Decide anti-viral distribution in consultation with health authorities Prepare to support requirements by state, provincial and local agencies/governments to identify critical workers for prioritized distribution of vaccine when available	Enhanced support for managers to make decisions re: staff prioritization	Essential business only

Table 2 below describes how the response actions in Table 1 would be implemented through mild, moderate and severe absenteeism scenarios. The table is intended to help guide decisions to take the right action at the right time. Implementing response actions too early may seem like the prudent thing to do, but it will consume resources that might best be held until they are really needed. It can also reduce overall capability as time goes on. For example, maintenance activities cannot be deferred indefinitely. Implementing response actions too late can also have negative consequences. Employees may be placed at greater risk or may feel neglected, particularly as they learn of other companies taking action.

While Table 2 has been developed with a pandemic scenario in mind, entities may find it to be a useful framework for managing any emergency that could affect the availability of staff needed to maintain continuity of operations.

Table 2 illustrates how the severity scenarios correspond to increasing levels of worker absenteeism, recognizing that absenteeism is influenced by a number of complex factors, such as:

- The likelihood of worker contact with the virus, either in the community or at work (e.g. rate at which the virus is spreading, contagion period)
- Severity of the illness (intensity, duration, extent to which hospitalization is required)
- Mortality rate (provided by the Center for Disease Control as the vertical axis of Table 2)
- Worry and fear
- Social distancing measures (e.g. limiting visitors and non-essential staff in the workplace, school closures, travel restrictions)

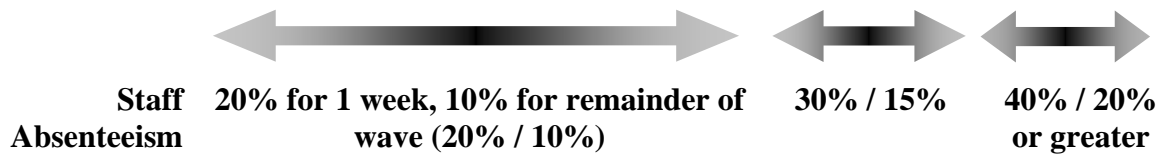
The absentee rates are grouped into 3 scenarios. Health authorities may soon develop a science-based quantitative severity index to measure these scenarios represented by the horizontal axis of Table 2. While this will be helpful, emergencies are managed locally and entities will need to decide appropriate response actions by considering local circumstances affecting their community and the potential impact on workers and their families.

- **MILD:** Absentee rates of up to 20% for a week of the pandemic wave, 10% for the rest of the wave.
- **MODERATE:** Absentee rates of up to 30% for a week of the pandemic wave, 15% for the rest of the wave.
- **SEVERE:** Absentee rates of up to 40% or greater for a week of the pandemic wave, 20% for the rest of the wave.

Table 2: Pandemic Influenza Response Triggers

CDC Mortality Rate (% Case Fatalities)	SEVERE ≥ 2.0%	5	Full Activation	Full Activation	Full Activation	Full Activation	Full Activation
	MODERATE 0.5% - < 2.0%	4	Advanced	Advanced	Advanced	Advanced	Full Activation
		3	Advanced	Advanced	Advanced	Advanced	Full Activation
	MILD < 0.5%	2	Enhanced	Enhanced	Enhanced	Advanced	Full Activation
		1	Routine	Routine	Enhanced	Advanced	Full Activation
				MILD		MODERATE	SEVERE

----- Severity Scenarios -----



Response Actions for H1N1 for Fall 2009

Electricity sector entities are urged to closely monitor communications by relevant health authorities who are in the process of developing guidance specific to H1N1 this fall.

ES-ISAC Communication with Electricity Sector Entities

As the H1N1 situation evolves, the ES-ISAC will monitor the situation and provide updates to electricity sector entities on topics of interest. Health authorities warn that the situation could worsen this fall, and work is continuing to improve their understanding of the virus, and develop additional guidance in areas such as:

- Continuing education to the public regarding actions they can take to limit exposure and care for family members
- Managing stores of cleaning supplies and personal protective equipment
- Guidance to education authorities to help manage school closures
- Anti-viral and vaccine availability and distribution

Reporting to the ES-ISAC

The ES-ISAC relies on information provided by electricity sector entities to monitor any impact the H1N1 situation may have on reliability. Entities are encouraged to report relevant information, either directly to the ES-ISAC, or through their reliability coordinators. This information would be consolidated by the ES-ISAC to provide an informed view as the situation evolves, and will be shared with entities as appropriate without attribution. Of particular interest would be items such as:

- Pandemic influenza response strategies found to be particularly effective, or ineffective
- Instances where absentee rates are beginning to approach levels that could affect essential operations
- Instances where absentee rates have caused maintenance activities to be deferred in a substantial way
- Instances where absentee rates have affected real-time operations (e.g. inability to operate equipment)

Linkage with Health Authorities

This Advisory is not intended to assess the likelihood or impact on public health of an influenza outbreak. **Therefore all disease-related planning assumptions that you use should be based on current information provided by health authorities. This Advisory does not replace or supersede their advice.**

The following links provide helpful advice and are updated regularly:

World Health Organization: <http://www.who.int/topics/influenza/en/>

Center for Disease Control: <http://www.cdc.gov/h1n1flu/>

Public Health Agency of Canada: <http://www.phac-aspc.gc.ca/influenza>

Department of Homeland Security business planning checklist:
<http://www.pandemicflu.gov/plan/businesschecklist.html>

U.S. government Employer and Employee guidance:
<http://www.pandemicflu.gov/plan/workplaceplanning/index.html>

Incident Reporting

To report any incidents related to this alert, contact:

ES-ISAC 24-hour hotline

609.452.1422

esisac@nerc.com