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1.0 INTRODUCTION

By: Tim Bolton and Osefan Aito

1.1 What is Pandemic Influenza?

Influenza is a contagious virus that circulates on a yearly basis causing regular outbreaks of respiratory and gastrointestinal illness. Typically, individuals are able to recover from the illness in quick order. Certain segments of the population such as older people, young children, and people with certain health conditions may experience further complications. In some cases the disease can be fatal. As a result, influenza is an ongoing public health concern (Wilfred Laurier University [hereafter WLU], 2007).

A pandemic is defined as a global outbreak of an illness. A flu pandemic occurs when a new influenza virus emerges for which people have little or no immunity, and for which there is no vaccine. The disease spreads easily from person to person and causes serious, often life-threatening illness and can sweep around the world and across the country within a few months. (Cornell University [hereafter CU], 2008). See Table 1 in the appendix section for a comparison of seasonal flu and pandemic influenza. While it is impossible to predict exactly when the next pandemic will occur, many experts believe such an event is overdue. So, the question is not if pandemic influenza will occur, but when (WLU, 2007).

1.2 History of Pandemic Influenza

From historical records it is known that pandemic strains of influenza emerged three times in the 20th century; in 1918 Spanish flu, 1957 Asian flu and 1968 Hong Kong flu. The pandemic of 1918-1919 caused between 20 and 40 million deaths worldwide. Researchers, such as Johnson and Mueller have suggested that these estimates may be substantially lower than the real toll, as much as 100 percent understated (Johnson and Mueller, 2002). While the pandemics of 1957 and 1968 were not as severe as the Spanish flu, they still resulted in a significant loss of life (Toronto Public Health [hereafter TPH], 2007). All three of these pandemics resulted in massive economic and social
disturbances. A modern pandemic has the potential to be even more devastating because of ease and speed of global travel. This means that pandemic influenza would spread faster and infect more people than any disease outbreak in human history.

1.3 Current Threat of Pandemic Influenza

In 2006, U.S. Secretary of Health and Human Services Michael Leavitt described the dilemma of pandemic planning, “Pandemics happen. Let me acknowledge this is a hard thing to talk about. Anything we say in advance of a pandemic happening is alarmist; anything we say afterwards is inadequate” (CU, 2008).

Currently, health officials are concerned with the continued spread of a highly pathogenic and contagious avian virus called H5N1, often described as the avian or bird flu. The H5N1 strain represents a significant worldwide threat. Since 2003, it has been diagnosed in growing numbers of people in Asia, Europe, and Africa. As of September 18, 2008, there have been 387 people who have fallen ill from H5N1. The disease has killed more than 60 percent of those who have been diagnosed. The majority of these cases are believed to have been caused by exposure to infected poultry. The concern is that H5N1, or another emerging virus, could evolve into a strain capable of sustained human-to-human transmission (CU, 2008).

New cases of poultry to human transmission are not expected to diminish substantially in the short term, and it is likely that the H5N1 infection among birds has become endemic to areas such as Southeast Asia. In these areas human infections will continue to occur. So far, no sustained human-to-human transmission of the influenza A (H5N1) virus has been identified (CU, 2008).

1.4 Pandemic Influenza is Different from other Emergencies

An influenza pandemic is much more than just a problem for the health care system. In reality, it is a societal problem that is best managed by the coordinated participation and cooperation of governments, businesses, institutions, organizations and citizens. Since pandemic influenza could potentially cause a great deal of illness and death, with a major impact on societal function, all levels of society will need to prepare for the
possibility of an outbreak (University of Manitoba [hereafter U of M], 2007). Universities will need to plan in different ways from other emergency preparedness plans they have developed. This is because there are a variety of characteristics that make pandemic influenza emergencies different from other emergencies. These include rapid worldwide spread, overloaded health care systems, inadequate medical supplies, and economic and social disruptions (CU, 2008).

**1.4.1 Rapid Worldwide Spread**

When a pandemic influenza virus emerges, its spread around the globe will be inevitable. This rapid escalation of infection is attributed to the fact that the incubation period of influenza is short, and it can be transmitted when individuals show no symptoms of illness, making quarantine strategies relatively ineffective. Given the ease and speed of international travel, a pandemic virus could spread in a matter of weeks across borders to various areas in the United States. The same pattern would be expected for Canada. Infection rates could be as high as 30 percent of the population in one or more waves, each lasting 6 to 8 weeks (CU, 2008).

**1.4.2 Overloaded Health Care Systems**

People will have little or no immunity to a pandemic influenza virus. This means that a large percentage of the world’s population will require some form of medical care. No country, including the Canada, is likely to have the staff, facilities, equipment, supplies, and hospital beds needed to cope with the large numbers of people who will suddenly fall ill. Mortality rates will be determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerabilities of affected populations, and the effectiveness of preventive measures (CU, 2008).

**1.4.3 Inadequate Medical Supplies**

Since the pandemic virus will likely be a new strain of influenza, it will take several months to deliver an adequate supply of an effective vaccine can be developed, produced, and distributed. Antiviral drugs are likely to be in short supply and may have limited
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efficacy. Reliance on antiviral drugs, such as Tamiflu, should be used with caution.
Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.
A pandemic will create a shortage of masks, medications, hospital beds, ventilators, and
other medical supplies. Surge capacity may be created at non-traditional sites, such as
schools and universities, to cope with demand (CU, 2008).

1.4.4 Economic and Social Disruptions

Travel disruptions, school and business closings, and cancellations of events could
have major impact on communities. There will be three levels of absenteeism that should
be expected: absenteeism based on illness, care takers for ill individuals and individuals
fearing for their own safety. Widespread illness will disrupt services, distribution of
supplies, and social infrastructure. Because pandemic flu will affect the entire world,
governmental agencies at all levels will be overwhelmed and unable to provide the level
of support that would be available in most other emergency situations (CU, 2008). In
addition, there will be competition for resources between institutions. This is contrasted
to other emergencies in which institutional cooperation and resource sharing would be
expected. This will be a major concern and will likely be best addressed with the use of
resource contracts. However, resource contracts may be abandoned by suppliers in the
event of pandemic influenza, since resources will be distributed to priority areas for
example, hospitals.

1.5 Purpose of a University Pandemic Plan

Why should post secondary institutions prepare for a pandemic? These institutions
have made plans for a number of types of crises, but have not generally undertaken plans
for a community health emergency such as an influenza pandemic. This may be attributed
to resource limitations within Universities; University’s may have difficulty managing
the challenges of such an event without advance planning and preparation. Inability to
manage these issues could result in significant operational problems, lost instructional
time, temporary closure of the institution resulting in financial impacts and loss of
reputation (U of M, 2007).
Perhaps the most compelling argument for University Pandemic planning is a legal one. There is no existing case law for liability in pandemic situations. There are many ongoing cases against government and non-government bodies in regards to their actions in epidemic situations. There is no existing case law for liability in continuation of services for educational services. York University (hereafter YU) is currently involved in class action for their failure to provide services during a strike. Legal pandemic responsibility can be civil or criminal and potential court action may take place against the institution or individuals. Without a plan, the university and its management do not have a minimum of due diligence to defend themselves with.

### 1.6 Pandemic Levels and Appropriate Responses

The World Health Organization (hereafter WHO) is the main directing agency for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends. WHO has established six pandemic phases to track the relative risk and effects of a pandemic at various levels (see Table 1.1). Each alert phase coincides with a series of recommended activities to be undertaken by WHO, the international community, national and local governments, and industry. Changes from one phase to another are triggered by several factors, which include the epidemiological behaviour of the disease and the characteristics of circulating viruses (WHO website, [http://www.who.int/csr/disease/avian_influenza/phase/en/index.html](http://www.who.int/csr/disease/avian_influenza/phase/en/index.html)).

**Table 1.1: WHO Pandemic Phases**

<table>
<thead>
<tr>
<th>Inter-pandemic phase</th>
<th>Low risk of human cases</th>
<th>Higher risk of human cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>New virus in animals, no human cases</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pandemic alert</td>
<td>No or very limited human-to-human transmission</td>
<td>3</td>
</tr>
<tr>
<td>New virus causes human cases</td>
<td>Evidence of increased human-to-human transmission</td>
<td>4</td>
</tr>
<tr>
<td>Pandemic</td>
<td>Evidence of significant human-to-human transmission</td>
<td>5</td>
</tr>
<tr>
<td>Efficient and sustained human-to-human transmission</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

York and Cornell Universities have established action plans for each level of the WHO’s pandemic alert phases. In addition, Cornell University developed further subdivided levels that classify the relative risk to students and staff and outline appropriate University actions at each level (CU, 2008). This can be seen on Table 1.2 and Table 1.3. These two tables provide a good example of what a pandemic plan in action could look like. For more information regarding related plans refer to appendix C. Plans that adopt inter-level assessment are the most likely to succeed, because the severity of outbreak at each level is variable; therefore, so to must the plan be similarly variable. Aligning such actions with the WHO Alert Phases will ensure internal coordination as well as the University’s required responses to public health messages and directives that are likely to be timed according with these phases (YU, 2007).

Table 1.2: Cornell University Event Levels
### World Health Organization (WHO) Phases (Virus Driven) vs Cornell Event Levels (Information Driven)

<table>
<thead>
<tr>
<th>World Health Organization (WHO) Phases (Virus Driven)</th>
<th>Cornell Event Levels (Information Driven)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.</td>
<td>0 No new influenza subtypes have been detected in humans</td>
</tr>
<tr>
<td>2 No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.</td>
<td>1A Human infections with a new viral subtype, little to no human-to-human spread.</td>
</tr>
<tr>
<td>3 Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.</td>
<td>1B If pathogenic avian flu virus has been identified in birds in the U.S., perceived risk would be escalated. <em>This phase may or may not occur and would be independent of a pandemic flu outbreak.</em></td>
</tr>
<tr>
<td>4 Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.</td>
<td>1C Small cluster(s) with limited human-to-human transmission; spread is highly localized (overseas), suggesting the virus is not well adapted to humans</td>
</tr>
<tr>
<td>5 Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).</td>
<td>2 Large cluster(s) of human-to-human transmission(s) have been identified in an affected region. Lethality of virus will suggest category (i.e., severity) of possible pandemic.</td>
</tr>
<tr>
<td>6 Pandemic phase: increased and sustained transmission in general population.</td>
<td>3A Highly contagious pandemic influenza virus is spreading from human-to-human overseas, signalling a breach in containment efforts.</td>
</tr>
<tr>
<td></td>
<td>3B Receipt of information that pandemic flu is in North America.</td>
</tr>
<tr>
<td></td>
<td>3C People in the Ithaca area have been diagnosed with pandemic flu</td>
</tr>
<tr>
<td></td>
<td>4 Case incidence is decreasing, indicating the slowing of the pandemic wave. Assessment, recovery, and preparation for subsequent wave(s).</td>
</tr>
</tbody>
</table>

Adapted from: CU
1.7 Planning Principles and Assumptions

A series of assumptions are needed for any institutional emergency plan, pandemic emergency plans are no different. However, the assumptions will be different from emergency to emergency. Details such as possible infection rates, outbreak duration and external (outside of the University) effects will all need to be considered in a pandemic emergency plan. For example, experts assert that the rate of infection may be up to 50 percent. Also, the experts predict that there will be two or three waves of pandemic influenza activity over a period as long as two years (TPH, 2007). For a list of assumptions used in this document refer to Table 1.4. Also, refer to the external relations section (section 2.0) for additional planning information.

Table 1.4: Pandemic Assumptions

<table>
<thead>
<tr>
<th>Category</th>
<th>Assumption</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>Not if a pandemic is coming, it’s when</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pandemic will be H5N1 (or similar)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No immunity, high risk of contraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High mortality rate</td>
<td>1 in 522 to 1 in 2870</td>
</tr>
<tr>
<td></td>
<td>1 to 3 day incubation period</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 to 10 day recovery period</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anti-viral may or may not be effective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High absenteeism (illness, caring for family members, fear of illness)</td>
<td>15 to 50 %</td>
</tr>
<tr>
<td></td>
<td>Anyone can be affected</td>
<td>Decision makers may be incapacitated</td>
</tr>
<tr>
<td></td>
<td>6 to 8 week waves, 2 to 3 waves</td>
<td>Over 1 to 2 year period</td>
</tr>
<tr>
<td></td>
<td>Some areas have higher risk</td>
<td>Based on density, traffic</td>
</tr>
<tr>
<td></td>
<td>Some populations more vulnerable</td>
<td>Based on age, health etc.</td>
</tr>
<tr>
<td></td>
<td>May be no access to food, cash or banking services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All systems hit</td>
<td>No area unaffected</td>
</tr>
<tr>
<td></td>
<td>Supply and transit disruptions possible</td>
<td>May have resources limited by outside factors</td>
</tr>
<tr>
<td></td>
<td>Health region/Ministry may take control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government direction/resources may be delayed, limited or absent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cohesion between campuses</td>
<td>FNUC, Luther, Campion and all other units</td>
</tr>
<tr>
<td></td>
<td>People may seek outside support</td>
<td>From Government, NGOs etc.</td>
</tr>
<tr>
<td></td>
<td>Outside people may seek University support</td>
<td>For eg. surrounding neighbourhoods Should respond as resources are available</td>
</tr>
</tbody>
</table>
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| Resources |
|-----------------|-------------------|
| No vaccine immediately available | |
| Antiviral will have high demand, low supply | |
| Some services will be essential, others can be co-opted, cross trained or dismissed | Food services, facility services etc. |
| Different levels of response | Eg, flexible class shut down levels |
| External agreements exist | Power/water provision, extra food sources etc. |
| Special care required for special cases | Eg, animal research, hazardous materials, intellectual property protection |
| Resources are in place | Drills have been done, procedures are known |

Adapted from YU and CU pandemic plans

1.8 Incident Management System

The Incident Management System (IMS) is a common model for command, control and coordination of incident responses in emergency situations. IMS is widely accepted by response agencies across North America and is the standard organizational structure and management system used to align both private sector and government response organizations (YU, 2007). Refer to appendix C for an example of YU’s hierarchical construction of such a system.

The IMS is composed of a series of sections or cells that make up the general staff that may be needed to respond to an emergency. These sections can be described as functions units (YU, 2007). Sections 3 through 8 will outline some actions that may be taken by each of the functional units.
2.0 EXTERNAL RELATIONS

By: Tim Bolton and Michael Sherar

2.1 Need for Information Concerning External Relations

In many ways a university is a self sustaining institution. However, there still exists dependence with outside organizations that provide it with services such as power, water and waste removal. In order to fashion a thorough pandemic plan these services will need to be considered.

2.2 SaskPower

2.2.1 SaskPower’s Assumptions

A pandemic is a disaster that affects everyone, including essential service providers. Many of these providers have established pandemic plans to address the possible threat. As mentioned previously, to create a pandemic plan a list of planning assumptions must be created. SaskPower has developed a plan that expects to operate with 25 percent to 50 percent staff absences for periods of two to four weeks. The absence period could be more at the height of a severe pandemic wave, and lower levels of staff absence for a few weeks either side of the peak. In addition, they expect a pandemic wave may last six to twelve weeks. They are planning for two or more waves of varying severity to pass through the province over a period of twelve to eighteen months. There will be regional and global disruptions, which will affect supply chains, service providers and customers in a variety of ways. Normal SaskPower operations are likely to be altered and the overall organization within SaskPower could be severely impacted by acute staffing shortages (SaskPower, 2007).

2.2.2 SaskPower’s Objectives

Although normal functioning of SaskPower may be affected, the Crown Corporation has determined they will be able to accomplish the following during a pandemic:
SaskPower is able to continue business operations during two or more six to twelve week waves of pandemic influenza in the Province of Saskatchewan (assume at least two waves).

SaskPower is able to deal with ongoing disruption at a lower level for eighteen to twenty-four months for the life of the global pandemic.

SaskPower is able to restore business operations and functions to their normal state, rapidly, in the post-pandemic period.

SaskPower employees and suppliers have a ready reference to pandemic related information and procedures to ensure their personal safety and the safety of their families.

SaskPower management has a detailed reference to help them in operational decision making in each phase of the pandemic event.

2.2.2 Consequences for the University

Given SaskPower’s level of preparedness, it would be reasonable to assume the university can continue to draw power from the provincial grid without significant interruptions. Regular power usage should be sustainable, although it would be advisable for the university to minimize electricity usage for the duration of the pandemic.

2.3 City of Regina

Like SaskPower, the City of Regina is responsible to provide essential services to its residence. These services will be relied on by the University of Regina in the event of a pandemic. The City has a designated pandemic planning committee that drafted a pandemic plan. The plan will ensure that Regina can maintain essential services during a pandemic including:

- street and road maintenance
- solid waste collection and disposal (i.e., garbage)
- water supply and distribution
- sewage disposal
PANDEMIC PREPAREDNESS PLAN

H5N1 and Beyond

- traffic control
- cemetery service
- maintenance of City-owned facilities
- transit services
- fire suppression and rescue
- police services
- financial services

The City’s response in each of these areas will be based on the type of work required in each season and priority needs decided by the Pandemic Planning Committee. The City may also be called upon to support the emergency response effort of the Regina Qu’Appelle Health Region and follow-up with recovery plans (City of Regina, 2008a).

2.3.1 Consequences for the University

The University will be able to rely on the city of Regina for typical municipal services for the duration of the pandemic. Some of these services may be under increased usage during the pandemic, such as police services. It would be prudent for the University to survey the situation regularly and attempt to fill in gaps in service if necessary. Protocols to reduce the waste output or water usage during a pandemic situation may be appropriate, depending on the situation.

2.4 Regina Qu’Appelle Health Region (RQHR)

Like other Saskatchewan health regions, the RQHR is responsible for planning the local response to a pandemic according to provincial and national guidelines. The RQHR is planning health services delivery during an epidemic. They will be responsible for developing triage systems and creating detailed plans to reallocate resources or reduce non-essential services during a pandemic. These resources include disseminating antivirals and vaccines, as they are available (RQHR, 2007). Also, the Region is working with local partners (e.g., emergency responders, mortuary services) now before the pandemic arrives to ensure a coordinated response when it strikes (City of Regina, 2008b).
The RQHR will be responsible for regular delivery of health services during this time. They will also be responsible for directing the public health initiatives. This would include, but not be limited to, quarantining of facilities, direction of emergency services and coordination with outside agencies on an intra-provincial basis.

RQHR will be responsible for placing health care professionals in the locations where they are most needed. This may or may not include the University of Regina’s Allied Health Centre.

2.4.1 Consequences for the University

The RQHR has a sufficient medical plan in place; the distribution of medicine, antivirals and vaccinations is thoroughly covered. The health region is also adequate prepared for the removal of bodies, the quarantine of areas and the surveillance of contagion. The focus of the University of Regina’s pandemic preparedness plan should be on the provision of services and maintenance of facilities during a contagious medical crisis.
3.0 ALLIED HEALTH CENTRE

By: Osefan Aito and Tim Bolton

3.1 Introduction

3.1.1 Issue Investigated

The University of Regina (U of R) Allied Health Centre (AHC) located on the second floor of the Center for Kinesiology, Health and Sport opened on September 1, 2004. They provide an array of services not only to the university community, but also to the City of Regina. Their services range from Physicians, Nurses, and Physiotherapists to Massage Therapists. The AHC is not currently mentioned in the U of R’s Pandemic Emergency Preparedness Guide.

3.1.2 Importance of Issue

It is important to consider the role the AHC will play in the unfortunate event of a Pandemic or an outbreak of serious contagious disease. The U of R has hundreds of students that reside within campus that might need the inspection and services provided by the AHC. These students may not have access or knowledge of where to seek medical advice elsewhere in the city. For these reasons and more that will be discussed further in the section, it is imperative the AHC is considered to be a crucial component within the U of R’s Pandemic Emergency Preparedness Guide.

3.2 Current Status

3.2.1 No Contingencies

Reading through not only the U of R’s Pandemic Emergency Preparedness Guide but the Emergency Management Plan and the U of R Emergency Response Procedure Manual no contingencies have currently been made regarding the AHC.
3.3 Findings

3.3.1 Example of Cornell University Guidelines

While most university pandemic plans do not state what specific health services they have available, Cornell University provides specific guidelines to follow in the case of an emergency situation.

Gannett Health Services is the primary health care provider for Cornell students. In the case of pandemic, Gannett plans to modify delivery of medical care services to optimize limited use of resources. They intend doing this by expanding operations up to twenty four hours, seven days a week as needed and as staffing allows, although it might require supplemental staffing or cross-training. They would suspend non-urgent services (e.g., such as physical therapy, travel and allergy clinic, stable chronic problems). Facility resources would be focused on care for acute illnesses and injuries, including suspected influenza. Access to Gannett would be limited to sick and injured individuals only, using only a single specified entrance, with Cornell Police support if necessary. Use phone triage and separate waiting areas (potentially including off-site locations) for non-respiratory illness or injury. Isolation and care for sick individuals who cannot be isolated at home at a designated facility, staffed by trained and equipped personnel, for 5 to 14 days after onset of symptoms. Health information would be provided for individuals in voluntary quarantine and work with campus partners to assure support (food, etc.). Inventories of supplies would be maintained for providing medical care during a pandemic, including medications, intravenous fluids, disinfectants and personal protective equipment. Plans are in place to coordinate with Cornell University Hospital for Animals for additional supplies (such as masks and gloves), equipment, and personnel.

3.4 Options

Based on the CDC Medical Checklist for a Pandemic Influenza, pandemic plans from Cornell University, University of Toronto, Harvard University, IPFW University, and University of Waterloo the following options are presented on how to structure and develop a plan for the U of R Allied Health Center. The Health Region would, in an
emergency, have the authority to order health care providers to specific tasks and locations.

3.4.1 Structure for Planning and Decision Making

A planning committee could be created to specifically address pandemic influenza preparedness for the centre. Within this committee a person should be assigned responsibility for coordinating preparedness planning for the centre; known as the pandemic influenza response coordinator. The members of the AHC planning committee with their exact position and training should be documented.

It should be noted that the AHC provides many different services to the community with medical personnel educated as Administrators, Physicians, Nurses, Orthopedic Surgeons, Physiotherapists, Chiropractors, Psychologists, Massage Therapists and Podiatrists. Many of these staff could be utilized in cross-training.

3.4.2 Development of a Written Pandemic Influenza Plan

The University of Regina Pandemic Influenza Preparedness Guide is currently under extensive revision and should include a section specific to the AHC and its potential contribution in the case of a pandemic. The AHC could obtain copies of relevant sections of the University of Regina Pandemic Influenza Preparedness Guide as well as copies of available provincial pandemic plans. The finalized plan for AHC would describe the organizational structure and response plan to support the campus population and compliment the larger effort by RQHR.

3.4.3 Plan for Surveillance and Detection of Pandemic Influenza

Responsibility should be assigned to a committee member for monitoring public health advisories (federal and provincial) and informing members of the pandemic influenza committee and the pandemic influenza response coordinator when pandemic influenza is nearing our geographic area. A system should be created to monitor and review influenza activity in patients cared for by clinical staff (i.e., weekly or daily number of patients calling or presenting to the centre with influenza-like illness) and
among staff. A system should also be in place to report unusual cases of influenza-like illness and influenza to the local or provincial health department.

### 3.4.4 Communication

For an effective form of communication during a pandemic within the AHC, key public health points of contact for pandemic influenza should be identified and arrangements made for telephone, facsimile, or email messaging. There should be contacts for the U of R emergency response officials, RQHR, Sask Health, and a point person for external communication. If one does not already exists, a list should be created of healthcare entities and their contacts (e.g. local hospitals, social service agencies, emergency medical services, relevant community organizations) with whom the center plans to maintain communication and coordination of care during the pandemic. The pandemic response coordinator should be in close contact with the University of Regina’s pandemic influenza planning committee to obtain information including notification when updated plans are created. Existing patient databases could be used to channel information to the community.

### 3.4.5 Education and Training Program of all Personnel

A person should be designated to coordinate education and training to ensure all personnel within the AHC understand the implications of and control measures for a pandemic influenza. The facility should be a center for inquiry about a Pandemic Influenza. Information regarding self-care, availability of medical and mental health services, and where to receive other community support should be easily assessable. Language and reading-level appropriate materials on pandemic influenza (available through local, provincial and federal public health agencies) appropriate for professional, allied and support personnel should be identified and a plan is put in place for obtaining these materials. Education and training should include information on infection control measures to prevent the spread of the pandemic influenza. The roles of medical and nursing personnel in providing health care guidance for patients with pandemic influenza should also be established.
At the time of pandemic, not all staff members will be able to perform their duties, as their clients will cancel or be called to reschedule (e.g. Physiotherapists, Massage therapists and Chiropractors). These medical personnel will need to be educated and cross-trained in areas where they can be of assistance during a pandemic. They can be trained in areas such as administering needles, circulating masks, distributing hygiene materials, taking blood pressure, and checking heart rates.

3.4.6 A Plan for Triage Management of Patients

In a pandemic of moderate severity, 30 percent of the campus population, approximately 300 people, will probably become sick. A system should be in place for phone triage of patients to determine who requires a medical evaluation to limit center visits to those that are medically necessary. The plan should be developed to manage patient care, include temporarily canceling non-essential medical visits and designating separate blocks of time for non-influenza and influenza-related patient care.

3.4.7 An Infection Control Plan

Before people can be diagnosed as having the influenza virus, it is imperative the staff is alerted to symptoms of pandemic influenza (e.g. temperature above 38 °C, history of travel, shortness of breath, etc.). A specific waiting room location should be designated for patients with symptoms of the virus that is separated from other patients awaiting care. (This might not be possible in a small waiting room, so the use of masks should be anticipated). The fitness and lifestyle center or gymnasiums could be used for this purpose.

In planning of a respiratory hygiene and cough etiquette guidelines, it is important steps are taken to ensure there will be signage directing patients to notify reception personnel if they have symptoms. There should be signage on respiratory hygiene/cough protocol instructing symptomatic persons to use tissues to cover their cough and perform hand hygiene. Distribution of masks to symptomatic patients who are able to wear them (adult and children sizes), facial tissues, receptacles for their disposal and hand hygiene material should be available in waiting rooms and examination rooms. Implementation of respiratory hygiene/cough etiquette should be exercised during seasons when influenza
and other respiratory viruses are circulating in the community. A policy should be adopted that requires protection of reception and triage personnel at initial points of patient encounter.

### 3.4.8 An occupational health plan

There needs to be a liberal and non-punitive sick leave policy for managing personnel who have symptoms of or documented illness with pandemic influenza. This policy should consider, the handling of staff that becomes sick at work, when the staff returns to work after recovering from the pandemic influenza, when personal who are symptomatic, but well enough to work, and personnel who need to care for their ill family members. A system will need to be in place to test personnel before they report for duty. The system chosen should be tested during a non-pandemic influenza period as well. Those who are at increased risk of influenza complications (e.g., pregnant women, immuno-compromised healthcare workers) should be placed on administrative leave or have their work location altered. Counseling can be provided by the on-site psychologist and trained staff during a pandemic.

### 3.5 Issues Related to Surge Capacity

There should be a plan for dealing with an influx of patients and staff, and supply shortages during a pandemic. Staff should be encouraged to develop their own family care plans (e.g., if you have minors or seniors). It should be determined the minimum number and categories of personnel necessary to keep the center open on a given day. An estimate should be taken of how many consumable resources at hand (e.g., medications, IV fluids, disinfectants, masks, gloves, hand hygiene products, long sleeve gown etc). Included in this plan should be the protocol of how to close the center if need be.
4.0 RESIDENCE

By: Juliet Nmezi and Sarah Surkan

4.1 Introduction

In the event of a pandemic outbreak, the current number of students in residence who will not be able to leave the university is 1015 (Eric Exner, Pers. Comm. 2009). The University would have to provide them with the necessities of life during pandemic influenza. The present home stay program will be able to accommodate some international students during the pandemic. The home stay program is run through the English as a Second Language (ESL) department and might be able to assist some international students who would not be able to return home. Through the home stay program, families could accommodate these students in the period of a pandemic outbreak.

The residences at the University of Regina need to continue to operate at normal levels during a pandemic. If it is necessary to shut down the University, then those students who can leave the residences would do so. An important assumption for base planning is that not all students who are ill with influenza must be hospitalized. Therefore, the residences would house those students who do not require hospitalization. A safe assumption is that one third of the residence population will become sick during a pandemic outbreak, the same percentage as with the general population.

4.2 Residence Operation during Pandemic Phases

The Center for Disease Control (hereafter CDC) has protocols for the classification of each pandemic phase which the University of Regina residence services could follow. The following paragraphs describe the relationship of pandemic levels to residence services that could apply to the University of Regina.

4.2.1 Pre-Pandemic Phase

During the pre-pandemic phase, residences services should develop and test facilities. Residence services should provide a written internal communications protocol. Assuming
one is not already in place, a call tree should be established with the Student Housing & Pandemic Planning Committee (IPFW, 2007). This would ensure a thorough dispersal of information.

4.2.2 Pandemic Phase

The control team should provide a clear sense of direction to the staff to guarantee sustained provision of services. Residences services should also provide proper care for the residents and staff. They should also maintain security in facilities that are both in use and those that are shut down. Communication is the key during this phase. The regular and timely release of information about pandemic responses and progress is crucial. It should be made available to all key staff, stakeholders (this includes general public and media) and family of the residents should also be considered.

4.2.3 Post Pandemic

Residence service should inform all key stakeholders about status of operations and inform all residence and family about the outcomes of the pandemic. Also, they should provide education and counseling to support recovery efforts for students, staff and faculty. In the post pandemic phase, it is advisable to prepare student residences to open two days before classes resume. This will give students and staff time to prepare for the school session. Housing staff should be called back to duty as soon as campus re-opens (IPFW, 2007). Should there be any missing resident students a detailed report should be provided to the Dean’s office.

4.3 Current Status

The University of Regina has a detailed emergency response plan. Currently the University of Regina does not have a detailed plan for campus residences during a pandemic outbreak. Residents live in close quarters and are limited in their ability to leave campus during emergency. This makes them especially vulnerable to contagious diseases. Thus, it would be prudent to outline a specific disease-related emergency response plan.
4.4 Findings

Many other Universities and Colleges have outlined certain criteria to support campus residents during an outbreak. For example, the University of Manitoba will try to remain open and try to operate as normal as possible during a pandemic. However, they have committed to close when the health of staff and students is at risk. They estimate that during a pandemic they are able to supply housing and basic health care needs for approximately 200-300 students and/or staff. The University also stresses the same guidelines for isolation listed below (U of M, 2007).

The University of Waterloo’s plan stresses the promotion of good hygiene, including proper hand washing and covering coughs. This will both prevent and mitigate the spread of disease during a pandemic (University of Waterloo (hereafter U of W), 2006). Their focus is the education of students and to prepare them for a pandemic situation. They have established websites that the students can access detailing the specific pandemic plan, including expectations and responsibilities. They also have stockpiles of masks and gloves, but they do not have a specific protocol for their distribution (U of W, 2006).

4.4.1 Communication Plan

The ability to communicate with staff and student populations in residence during a pandemic can improve the situation on campus during a pandemic outbreak. The University of Manitoba has capabilities to communicate through email, and a dedicated emergency telephone line (U of M, 2007). This is a good communication strategy that could be easily adapted.

Signs and posters are an excellent method to supplement information to residents. International students who cannot read or write English could still understand the key messages on posters. Posters could be placed in washrooms, dormitory rooms, hallways, computer rooms and lounges where they can easily be read. Communication between students and their parents during this period should be facilitated as much as possible. This will eliminate worries and keep the parents updated. Some contingencies could be made to maintain contact between students who remain on campus and their families around the world.
4.4.2 Infection Control and Prevention Plan

It is crucial to maintain a hygienic environment for residents during a pandemic event to prevent or reduce the spread of disease in the campus population. The University of Regina Residence Services could appoint a health service team to take responsibility for the health and safety of students and staff in residence. Such a team could include:

- Clinical staff
- Non-clinical staff
- Staff working off site (Paramedics, transporter)
- Faculty Supervisor
- Volunteers
- Residence assistance

(University of California, Berkley (hereafter UCB), 2007)

Hand sanitizers and masks could be provided in key areas to insure use. Special cleaning protocols could be adopted for the following:

- Surfaces and patient rooms
- Equipment and medicines
- Non-patient care areas
- Waste management
- Respiratory protection: Use of surgical mask, at a minimum, while visiting
- Workers and family/guest quarantine
- Worker furlough and quarantine (UCB, 2008)

4.4.2.1 Social Distancing

Social distancing is an important tool to prevent and control infection. It is covered thoroughly in SaskPower’s pandemic plan:

“Following proper hand and respiratory hygiene, the next best way to protect employee health is to minimise or eliminate close proximity or contact with others. This is referred to as “Social Distancing” and is one of the generally recommended measures to minimise the chance of contracting influenza should a pandemic occur” (SaskPower, 2007).
4.4.3 Residence Activity Restriction

Social distancing protocols will probably limit social activity in residence during a pandemic event. Students could be required to stay in their designated rooms for the duration of major waves of infection. Visitor restrictions could be put in place during a pandemic. Restrictions could include measures such as mandatory respiratory protection or limited gathering size.

4.4.4 Operational Plan

Coordination between all branches and faculties is vital. Students who fall ill could be quarantined in residence facilities. collaboration with Luther and Campion College, First Nation’s University and SIAST is important to control the spread of infection and in order to protect students and staff (IPFW, 2007).

4.4.5 Continuity Plan

The continuity plan for residence is based on the principle that services to the residence and staff should be available for the peak waves during a pandemic. Continued services and communication should also be provided as circumstances allow. It is possible for staff to fall sick at any given period of this phase. Therefore, it is advised that staff be cross-trained to ensure adequate coverage. This will mitigate the consequences of absenteeism on services.

4.5 Options and Recommendations

4.5.1 Student Evacuation

The decision on University closure due to a pandemic could be at the discretion of public health officials. The President of the University can also close the campus if warranted. The University should be closed prior to peak infection rates. Plans for border closings and transportation restrictions should be closely monitored. It is crucial that
every effort be made to prevent foreign students from being stranded. Also, early in the pandemic outbreak students studying abroad should be recalled. The University should have clear protocols in place to deal with closed borders during pandemics.

4.5.2 Student Housing

Healthy students with other accommodations should evacuate. However, there are some international students who will be unable to leave campus. College West Residence could be open to these students to reside in until the pandemic is under control or they are able to find other accommodations. College West Residence is preferred as the majority of the suites are two-floors and have six bedrooms, two bathrooms, and full kitchens.

The other residences can be used to provide basic care for ill students. The North and South Residences on campus could be used as they are able to house the largest number of people while allowing sufficient separation between the students. The North and South towers have numerous types of suites, but the first floor is preferable, if possible. Containing the students to the first level will allow easier accessibility for medical staff and easy mobility if the student requires hospitalization. The housing should begin in either the North tower or the South tower. Once the first floor of the North tower is completely occupied by ill students, the second floor of the same tower should be used. It is in the best interest of the university to contain the ill students to one residence as much as possible. These residences are also recommended due to the bed to bathroom ratio. It is important that the ratio remains relatively close in order to lower the risk of infection as well as keep the ill students as comfortable as possible.

There are several considerations for isolation when caring for ill students in residences:

- If possible, students should be placed in a single room
- If a single room is not possible, separate the ill students by at least one meter
- Anyone within one meter of the ill students are required to wear a mask and gloves
- In shared rooms, students are to lay head to toe relative to the other students’ beds
• In larger rooms, use sheets/curtains to create physical barriers between the beds
• Provide the best possible access to washrooms and clean them often
• Ensure that ill students have access to food, water, and medications
• Send ill students to hospitals if required and if possible

Guidelines for isolation of ill students in the residences:

<table>
<thead>
<tr>
<th></th>
<th>1 Person Ill</th>
<th>2 – 10 People Ill</th>
<th>More than 10 People Ill</th>
<th>Majority of People Ill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolate in separate</td>
<td>Accommodate</td>
<td>Accommodate together on one floor or in a separate section of the building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>room</td>
<td>room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isolate in shared</td>
<td>Accommodate</td>
<td>Accommodate together throughout the entire site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>room</td>
<td>together in common area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accommodate together in one end of floor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accommodate together in large shared space</td>
<td></td>
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</tr>
</tbody>
</table>

4.5.3 Communication

There are many international students at the University of Regina that may not speak enough English to fully understand what a pandemic really means. During the pandemic period, it is important that everyone is on the same level of communication. We recommend that ESL and ISSO should come together to find specific ways in which every student is able to comprehend the situations and communicate with others.

4.5.4 Education

During orientation week, residences should receive proper education about the pandemic plan and how it affects them. They should also be familiarized with the expectations and procedures that are involved with the pandemic emergency plan. Each dormitory or suite could be supplied with full first aid kits including gloves and masks.
5.0 FOOD SERVICES

By: Lisa Urban & Keisha Sharp

5.1 Introduction

Food is one of the most important areas of survival to consider when it comes to planning for a pandemic. In the case of a pandemic, the food services industry will be greatly affected. We assume that the university will be housing approximately 1015 international students unable to return home. Other issues related to food in a pandemic include border closures affecting the transportation of food coming from the United States, employee reduction due to illness, and no support coming from other distributors or the city of Regina because they will also be experiencing food scarcity. The greatest concern within food supply is that food may run out before the community is able to recover from pandemic. Jim McIlmoyl confirms that the city of Regina currently has a two day food supply. During a pandemic both the U of R and surrounding organizations and cities will all be facing shortages quickly. The University must be prepared to provide food services to over one thousand people expected to be housed on campus for up to several months. It is important for a community such as the U of R to be fully prepared to deal with this type of situation.

5.2 Current Status

The U of R currently does not have a pandemic preparedness plan for the food services department. Aramark is prepared to follow the preparedness plan of the U of R. The following is a list of the current status of the U of R:

- A 3-4 day fresh produce food supply on site at any given time.
- A 5-day non-perishable supply.
The U of R emergency management plan has identified 3 levels of emergency however, only general guidelines are provided with regards to emergency coordination of food.

### 5.3 Findings

In our research through other university pandemic preparedness plans, we were unable to find detailed food distribution plans. Some of our findings are listed below:

- Fewer self served foods (U of W, 2006).
- Plan for 120 L of water per person per day (U of W, 2006).
- More pre-wrapped/pre-portioned foods (RCMP, 2008).
- Special emergency training required for all food services staff.
- Always maintain sufficient food supply for the workers who cannot leave campus (IPFW, 2007).
- Food stored in ways to maximize safety, such as refrigerate fresh produce (IPFW, 2007).
- High levels of communication between residents and food services to plan appropriate meal and proper ways of distribution (IPFW, 2007).
- It is highly unlikely that the influenza virus will be present on chicken meat in Canada (Canadian Restaurant and Foodservices Association [hereafter CRFA], 2006).
- The chances of catching the influenza virus through preparation are low since cooked chicken does not transmit the avian flu virus because it is not a food born disease (CRFA, 2006).
- In the event that an avian influenza virus is present in chicken meat, it would be destroyed during the cooking process (internal temperature of 72°C Celsius is sufficient to kill avian influenza virus) (CRFA, 2006).
5.4 Options

Because of the RCMP Training Academy’s experience with outbreaks of Norwalk Virus they have developed useful protocols listed below that the University of Regina can adopt into their pandemic planning. They involve:

- Taking extra precautions in regards to sanitization.
- Serving and food preparation cutlery is sanitized and changed more often.
- Extra precautions to sanitizing tables and serving areas.
- Closing the Riddell centre to eliminate human to human contact decreasing the risk of spreading of the virus (social distancing).
- Using residence facilities to provide food services to residents. For example, designating rooms for meal consumption or food storage.
- If a residence wing is used as a quarantine facility, then pre packaged meals and cutlery should be issued by a trained staff member.
- Bottled water should be made available to students and water flow to fountains should be cut off to avoid contamination.

5.4.1 Governance

Governance includes identifying key roles within the food services organization in the event that a pandemic occurs. This requires identifying who is in charge of making decisions and communicating to others within the organization (CRFA, 2006). These responsibilities include:

- Making strategic decisions.
- Communicating updates to those within and outside the organization.
- Assigning tasks to develop plan.
- Coordinate trained staff.

5.4.2 Continuation of Services
Maintaining food services requires the identification of crucial services that food services should work towards maintaining at all times during a pandemic (CRFA, 2006).

- Determine essential and non-essential services during a pandemic.
- Identify the core people required to keep food services running in order to feed the residents stranded on campus.
- Identify the threshold point of loss of staff in order maintain food distribution.
- Rank critical vendors on a scale of importance.
- Identify internal dependencies, such as equipment, in the case that food services is relocated to the residence.

5.4.3 Financial Concern – Aramark

Food services are more likely to survive during and after the pandemic if they prepare a proper financial plan (CRFA, 2006). The CRFA recommends that food providers consider opening a line of credit large enough to support the of mass food orders required in a short amount of time.

5.4.4 Products and Supplies

Transportation Canada officials estimate that in the event of a pandemic, transportation systems will be down by 30 percent for 6-8 weeks. It is inevitable that there will be product shortages (CRFA, 2006). To prepare for such an event, Aramark could:

- Identify priority foods to accommodate international students and staff who remain on campus.
- Create emergency purchase orders for core items that can be executed when appropriate trigger point is evoked (e.g., when the pandemic level rises to level 5).
- Develop emergency delivery procedures to minimize human contact.
5.4.5 Human Resources

The health and safety of service employees is required in order to protect student and staff customers (CRFA, 2006). To maintain the health of its employees and assure the continuation of services, food suppliers could:

- Design and develop an employee database that will be needed during the pandemic to track key information about employees and their families. This may help to prevent the spread of the influenza.
- Suggestion for employee contact/pandemic tracking list see Appendix D.
- To mitigate the impact of absenteeism, employees could be cross-trained to open the possibility of relocation if required.
- In order to minimize illness between the staff and prevent the spread of influenza among co-workers these precautions should be met:
  - Proper hand washing (see Appendix E).
  - Covering nose when coughing or sneezing (see Appendix F).
  - Keeping hands distant from mouth, nose and eyes.
  - Avoiding contact with at risk individuals including those with influenza-like symptoms.
  - Enforcing rules among all staff along with educating them about the importance of adherence to these rules.

- Establish policies for employees who have been exposed to pandemic influenza
  - Employee screening checklist (see Appendix G).
  - Notification Form for suspected influenza case at work (see Appendix H) directed to those designated as the “leader”.

- Determine which protective materials to stockpile such as masks, protective gloves, and cleaning supplies.
- Making communication an essential function could include:
  - Educate employees on what a pandemic is.
Develop programs and materials on pandemic fundamentals such as signs and symptoms, modes of transmission, and response strategies.

- Conduct staff training on preparedness, initiatives, and response plans.
- Ensure that communications are culturally and linguistically appropriate for those who are preparing the food and those who are depending on it.
- Any staff with the symptoms described in Appendix G will not be able to come to work until they are cleared by a doctor (CRFA, 2006).

5.4.6 Communications

Communication is a key component to any pandemic plan. All management must be prepared to clearly communicate their plans to their staff (CRFA, 2006).

- Establish an emergency communications plan that includes key contacts, chains of communication, and processes for tracking and communicating business and employee status.
- Provide prompt and reliable pandemic information.

5.4.5 Readiness Procedures

Readiness procedures include all steps taken in order to prepare the best possible pandemic plan (CRFA, 2006). To ensure that food service staff are prepared for a pandemic, employees could:

- Have the entire plan reviewed and approved by occupational health and safety officials.
- Distribute the plan to all key personnel identified.
- Regularly review the plan to maintain accuracy, relevance and effectiveness.
- Develop a recovery phase that will facilitate resuming normal services.
5.5 Conclusion

Given the guidelines above, the Food Services Department could take into consideration the development of a phase step program that coincides with the program already implemented by the World Health Organization. This will help organize actions so that the best possible outcomes result. For an outline of the phase program, refer to Appendix E.
6.0 FACILITIES MANAGEMENT

By: Miranda Brown and Alicia Slywka

6.1 Introduction

On a day to day basis, Facilities Management at the University of Regina conducts essential operations and services, which maintain the physical functions of the University. Emergency Management Plans at the U of R contributes to an infrastructure designed to troubleshoot various levels of emergency, including those that directly and indirectly affect Facilities Management. Pandemic planning with respect to facilities management occupies a different realm of emergency planning infrastructure. This is because a pandemic has the ability to simultaneously impact the continuity of all facility services, particularly in areas of employee absenteeism and supply chain disruption. To establish reasonable control over the impact a pandemic has on facility services, a pandemic business continuity plan is critical in maintaining and restoring facility services. The following chapter is an investigation into the functions of essential services in facility management during a pandemic.

With regard to planned emergency preparedness, the U of R’s Emergency Response Procedures Manual has established levels of escalating emergency to address the University’s vulnerability and the course of organized action required to respond appropriately during an emergency (U of R, 2008a). The University documents infectious diseases in the Emergency Management Plan as a potential hazardous situation (U of R, 2008a). However, recall that pandemic preparedness planning differs significantly from standardized procedural emergency planning. This is because the University will experience several intervals of six- to eight-week waves of influenza, which will severely debilitate labour pools and simultaneously cripple essential university facility services.

6.2 Human Resources

Pandemics usually occur during six- to eight-week waves, for this period of time it is entirely reasonable to expect the absence of approximately 20-35 percent of work forces
This situation creates a significant challenge in operating essential facility services in efficient and timely manners. Overlap of training can be beneficial in areas such as custodial services and ground maintenance services; however, some facility services that are more complex in nature, such as mechanical services, demand qualified employees to ensure their safe operation and maintenance (SaskPower, 2007).

Pandemics also create potentially infectious work environments; thus, keeping workers safe is critical in maintaining the continuity of facility services. The regular use of protective equipment such as masks, gowns, and gloves during critical pandemic phases, will reasonably reduce infection rates among employees (SaskPower, 2007). Custodians must also execute pandemic cleaning protocols, which will maintain hygienic environments for staff and students.

### 6.2.1 Current Status

The Pandemic Emergency Preparedness Guide developed by the University of Regina, documents significant depletion of Facility Management workforce during pandemic periods, as a serious organizational risk. Some of the main features of employee absenteeism include: fear of infection within the public sphere, family commitments, school or day-care closures, personal illness, quarantine, or death. The provision for developing specific arrangements for employee absenteeism is further complicated by the loss of specialized workers, who have unique skills and qualifications. Contingencies of employing back-up staff and cross-training techniques are suggested by the University as an efficient solution for some of the Facility Management sectors; however, this solution may not be conducive for long periods of time, due to increasing volumes of employee infection rates. The University has also suggested contingencies for the development of an absenteeism tracking system, which will provide some organizational infrastructure in the management of staff (U of R, 2005).

Reducing the rates of transmission between employees and those interacting with a potentially infectious student population is an occupational health and safety responsibility (U of R, 2005). The protocols regarding regular fittings for personal protective equipment for employees are not made sufficiently clear in the University’s
6.2.2 Findings

As previously mentioned, pandemics will have a significant impact on employees. There are several issues that must be considered when taking into account people employed by the University. The first of these is absenteeism. During a pandemic absenteeism rates can vary anywhere from 20-50 percent when dealing. When universities are making pandemic plans, they should take into account the diversity of reasons for employee absenteeism.

6.2.2.1 Institutional Practices

As a company essential in providing electrical services during a pandemic, SaskPower (2007) has established an outline of employee’s rationales for being sick, of which include:

- Some employees may need to stay at home to care for the ill.
- People may feel safer at home by keeping out of crowded places such as public transport, or workplace common areas.
- Some employees may be fulfilling other voluntary emergency roles in the community.
- Some may need to stay at home to look after school-aged children as schools may be closed. (p.16-17)

In the Cornell University Pandemic Plan, it was suggested that the institution take on a flexible and facilitating role in planning for employee absenteeism. In taking this approach, Cornell anticipates that departments will be flexible, allowing employees in times of a pandemic to work from other locations, have flexible work schedules, and have alternate work assignments (CU, 2008). Organization of facility services during a pandemic also relies on the willingness of staff to provide assistance where it is necessary or appropriate. Cornell for example, relies on the flexibility of staff to step beyond their regular responsibilities to provide support to other sectors during times of uncertainty.
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The World Health Organization (WHO) recommends that for businesses to plan for 50 percent absenteeism, so to be prepared for the worst case pandemic scenarios (SaskPower, 2007). Expecting this kind of absenteeism beforehand would allow the University to designate which services necessary and cross-train workers as required. Cornell’s pandemic plan has also outlined cross-training as an essential step in pandemic planning. Before a pandemic reaches its peak, essential functions and job roles must be identified, and cross-training must be provided, so that essential jobs and functions are handled (CU, 2008).

SaskPower developed three different scenarios of absenteeism. These scenarios can be reviewed in Appendix I. The Toronto Pandemic Influenza Plan makes the same assumptions about the rates of absenteeism. These strategies suggested for handling staff shortages include the following: redeployment of staff from non-urgent activities; and drawing on additional workers such as recent retirees, students, or volunteers (TPH, 2007).

6.2.2.2 Employee Protocols

Pandemic planning should include health and safety protocols for the remaining facility staff. For these employees, it is necessary to provide equipment such as gloves, masks, and gowns to avoid illness while providing their facility responsibilities. These actions are most critical for ensuring the safety of custodial employees who work in environments with direct exposure of infected students. There are several ways that influenza can be transmitted. One way of potentially preventing transmission is by wearing masks. The Canadian Pandemic Plan for the Health Sector states for general public utilization, surgical face masks only need to be worn before immunization and if antivirals are not readily available. It also states that masks will be of no use if the pandemic has entered the community (Public Health Agency of Canada, 2006). In 2006, the WHO suggested that wearing of masks by the general public be primarily based on situational risk; however, these suggestions are recommendations rather than universal requirements (SaskPower, 2007). Specialized masks on the other hand, are more appropriate for Facilities Management employees working in highly infectious environments; since these masks would provide additional protection from contracting
the influenza virus. SaskPower’s suggests that basic surgical masks be available to all workers who need them; as well, sufficient supplies of N95 masks should be made available to all facility employees working in high risk environments (SaskPower, 2007). N95 masks require fit-testing prior to a pandemic outbreak; this is a consideration the University of Regina should take into account if they plan to provide high risk employees (i.e. custodians cleaning up bodily fluids). SaskPower has diligently outlined recommendations for mask fit-testing and the acquisition of other necessary personal protective equipment, such as face shields, gowns, and gloves (SaskPower, 2007). Please refer to Appendix J to review this example.

6.2.2.3 Education on Protocols

Another area of concern for human resources in Facilities Management includes the provision of educational tools on pandemic protocols. Providing essential protocol information to employees is crucial at any time, but especially during a pandemic. To ensure that employees are well informed and prepared to work in a safe and efficient manner, regular and consistent pandemic updates encompass university responsibilities to their employees (Vanderbilt University [hereafter VU], 2007). There are several examples from other institutions on how to conduct informant protocols efficiently. YU suggests the establishment of communication systems to keep students, staff, and faculty informed on pandemic progress, prior to more severe outbreaks (YU, 2007). SaskPower’s pandemic plan includes a detailed rubric of employee training protocols (please refer to Appendix K for this example). Email lists and/or phone trees are contingencies made in the Toronto Pandemic Influenza Plan to efficiently inform employees of pandemic developments (TPH, 2007).

6.3 Hygiene Protocols

During a pandemic, cleaning protocols will take on a high level of importance because their role in mitigating the spread of infection. Intensive cleaning practices will have to be employed including adequate supplies of sanitizer and soap on campus (VU,
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2007). Pandemic cleaning protocols are also necessary in the periods between the six-to eight-week waves of influenza (SaskPower, 2007).

6.3.1 Current Status

Specific protocols for workplace hygiene were not clarified in the University of Regina Pandemic Emergency Preparedness Guide. It is difficult to determine exactly how Facilities Management will implement intensive cleaning regimens and what types of disinfectant products will be used during that process. Facilities Management plays a very critical role, as they provide labour and materials essential to maintain a hygienic environment. With a reduced workforce and strain on supplies, the function of this facility service may be seriously debilitated in the event of a pandemic. The University of Regina does specify communication and educational goals with staff, students, contractors, customers, and visitors, to reduce the transmission of influenza (U of R, 2005). This would be beneficial to the pandemic preparing process as educational materials and clear communication enable individual responsibility and awareness with a goal to minimize influenza transmission.

6.3.2 Findings

Intensive cleaning regimens are critical during pandemics. These procedures must be thorough and extensive, in order to prevent influenza transmission among Facilities Management staff, as well as prevention among other students, staff and faculty. The RCMP Training Academy (Depot) in Regina has had extensive experience with maintaining hygienic environments during Norovirus outbreaks (RCMP, 2008). Experience with these outbreaks has prepared the RCMP Depot with an organized custodial infrastructure they could easily translate into cleaning procedures during a pandemic influenza outbreak (RCMP, 2008). Further information on Depot hygienic protocols can be found in Appendix L. In addition to the hygienic guidelines provided by Facilities Management, extensive personal hygiene protocols, such as proper hand washing and cough etiquette, have been identified by some corporations, particularly SaskPower and Canadian Manufacturers & Exporters Association in their pandemic and business continuity plans.
6.4 Supply Chain Disruption

Access to key service providers, contractors, and supplies will be debilitated for long periods of time (SaskPower, 2007). All distributors and external contractors will be affected with the same issues as Facilities Management at the University of Regina. Those organizations that are able to function during a pandemic will experience great demand from many sectors for their services; so, their services cannot be expected in a timely or efficient manner (SaskPower, 2007).

6.4.1 Current Status

Supply chain disruption will have a critical effect on the provision of cleaning materials, facility equipment and mechanical resources. Facilities Management may not be able to acquire supplies, such as cleaning materials, masks, gloves, and gowns because these products will be in extremely high demand from other businesses and institutions (VU, 2007). The University of Regina recommends that Facilities Management inquire about the level of preparedness established among their suppliers (U of R, 2005). Facilities Management is also required to identify alternative suppliers or products, in the event that regular suppliers cannot deliver their services (Uof R, 2005). To establish some control over increased supply constraints during a pandemic, Facilities Management is encouraged by the University to consider increasing their inventories of critical materials such as custodial supplies and mechanical and other resources (U of R, 2005).

6.4.2 Findings

Since supply chains are especially vulnerable during a pandemic. High volumes of employee absenteeism and border closures will limit availability and efficiency of trade between local, national, and international businesses and institutions (VU, 2007). The Toronto Pandemic Influenza plan recommends the following procedure to address supply chain disruption during a pandemic outbreak:

*Colleges and universities should purchase from local suppliers wherever possible, make plans for regular shipments, and stockpile six to eight weeks of critical supplies (those required to maintain service operations). In addition to critical*
supplies, your facility should have an adequate supply of disposable tissues, hand sanitizers, and hand-washing supplies. (TPH, 2007, p. 11).

The most ideal scenario, however, for dealing with supply chain disruption is to implement resource acquisition according to monitored pandemic progress; which means increasing the stockpile of essential goods as pandemic risk increases (VU, 2007). This is because local suppliers cannot be relied upon to replenish inventories since they may not have sufficient capital to meet the demand; and local suppliers will likely experience the same employee absenteeism rates, since a pandemic will be a societal rather than an isolated phenomenon.

6.5 Mechanical Systems Maintenance

Diminished availability and productivity of qualified employees to safely operate mechanical systems, such as power-generators and boilers are potential outcomes of a pandemic. Should mechanical systems require complicated maintenance or repair during a pandemic, assistance from external contractors will not be a simple phone call away.

6.5.1 Current Status

The Emergency Response Procedures Manual of the University of Regina provides extensively organized procedures in the event of mechanical systems or electrical systems failure. The level of their organization is commendable because the procedures they have developed to restore mechanical and electrical functioning include extensive contact networks between Facilities Management, external contractors, and other sectors of the University. As well, the action plans for major systems failures are efficiently outlined (U of R, 2008a). On a pandemic level, the University recognizes that the supply of skilled and qualified staff to maintain mechanical systems will be depleted; however, the University does not provide specific details as to how management of these facility services will be organized and implemented during a pandemic.
6.6 Issues with Quarantine

Quarantine of infected individuals creates specific problems for Facility Management regarding exact locations of quarantine, safe continuity of custodial services to the isolation areas, and proper ventilation of clean air. Recycled air may be a miniscule risk in the transmission of disease. But this factor could change in H5N1 and related pathogens.

6.6.1 Current Status

The responsibilities of Facilities Management for quarantining students and staff on campus are not specified in the University’s Pandemic Emergency Preparedness Guide (2005). This is a critical area for further investigation because there may be concerns with ventilation, issues regarding the safety of staff to carry out pandemic cleaning protocols in quarantined areas, and dealing with the quarantine of an entire building.

6.6.2 Findings

The functions of building ventilation systems during a pandemic are a considerable concern for any academic institution that houses students on its campus. The concern arises because of the possibility of re-circulated air containing air-borne contaminants. In addition, the capacity of the building to provide constant outside fresh air to quarantined patients may be limited (VU, 2007). Quarantining individuals or entire buildings will minimize the severity of the outbreak (VU, 2007). Isolation rooms should also be sanitized and prepared by custodial staff ahead of time (RCMP, 2008). Both Cornell and Vanderbilt Universities have demonstrated in their pandemic documents, planned buildings for isolation and considered the impact on building ventilations systems (CU, 2008 & VU, 2007).

6.7 Options

A brief summary of reasonable options is provided here to aid the organization of pandemic preparedness planning at the University of Regina. Education and thorough
preparedness can be considered some of the best defences that Facilities Management can employ. This is because education and preparedness together can create awareness of protocols and procedures, as well, they contribute to the transition into organized plans for action to restore and maintain facility service continuity during a pandemic. Options could include:

- Preparation for the worst case scenario of absenteeism by developing absenteeism plans organized around different absenteeism rates
- Development of sensitive and flexible work schedules and work locations
- Encourage regular education for staff on the current pandemic protocols required for their sector in Facilities Management. This could be achieved through pamphlet distribution or half-day workshops that combine education with mask fittings
- Cross training of staff where it is possible to aid flexibility during times of peak staffing shortages
- Having at least two employees delegated to each of the essential facility services
- Maintaining a constant supply of masks, gloves, and gowns for employees who remain working; as well, ensure that employees receive regular fit testing of personal protective equipment. This option could be engaged once the WHO has announced the occurrence of more globally imminent levels of pandemic influenza transmission
- Stressing the importance of critical hygiene protocols to facility staff in order to reduce the risks of transmission, please refer to Appendix C
- Providing accessible hand sanitizing stations around the University campus
- Preparing to isolate students, faculty and staff
- Placing hand sanitizers at computer desks
7.0 CAMPUS SECURITY

By: Stephanie Lockhart and Randi Schmeichel

7.1 Introduction

The security of people and facilities is essential to normal operation and campus life. Security during a pandemic will take on even greater importance. The University of Regina has emergency plans in place, and the members of security all have assigned roles in case of an emergency. The University has planned for such emergencies as bomb threats, fires, or floods. However, very little has been discussed in concern of a pandemic. How will security manage when influenza breaks out?

An influenza pandemic will last weeks if not months longer than any other crisis that campus security could deal with. The University of Regina is still going to have to function as a business; the campus can not be fully evacuated. Security is the backbone to any business and with out security workers, the business would be in turmoil.

Because some buildings will remain open; security workers will protect anyone who remains on campus. Campus security will to prevent mishaps, break-ins, and keep a keen eye on the maintenance of the building, especially during off hours. Buildings that may become evacuated will still have to be secured, and the buildings that are still functional with the people at work, will still need to be cared for.

7.2 Current Status

We have examined the University of Regina Emergency Management Plan and the university has made the following plans regarding security. There will be a director of campus security, someone who is a member of the Emergency Management Committee in a planning role. The director, formally known as the Incident Commander, will provide direction, communication and coordination. Responsibilities of the incident commander in conjunction with security staff, commissionaires and other resources will:

- Immediately respond to the scene of the emergency with sufficient forces to undertake security, crowd and traffic control
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- Ensure that only essential personal are at the scene of the emergency and have the authority to restrict access to anyone deemed non-essential

- Provide initial assessment and notification to VP Administration

- Select the location for a command post

- Establish immediate communication links to the emergency

- Act as liaison with attending police services as required

- Ensure that all emergency response agencies attending the scene have clear and open routes in and out of the scene

- Direct Facilities Management staff for placement of barricades and signage

- Direct, supervise and conduct any required evacuations

- Protect life and property

- Prevent crime

- Ensure security of Emergency Operations Centre

- Assign or reconcile priorities within Campus Security

- Coordinate activities of Campus Security with other units and agencies involved or as directed by the Director of Emergency Operations

- Provide assistance as required by the Emergency Management Committee

7.2.1 Responsibilities

In the Emergency Management Plan, Campus Security in conjunction with Facilities Management is responsible for the following:

- Receiving notification of fire alarms, and ensuring that fire/ambulance/police are notified.
• Attending the location of the fire alarm to provide assistance as necessary on aspects such as traffic and crowd control and communications
• Directing Fire Department and other emergency response vehicles to the appropriate location as required
• Liaising with the Fire Department and the Chief Building Warden at the command post to ensure effective communication
• Upon request of the fire department and under their escort attend to areas of the building where the alarm has occurred to assist with security matters
• Maintaining a log for all fire alarm system problems, out-of-service situations, and unsafe situations and reporting them to the Emergency Procedures Coordinator and Assistant Director Production, Facilities Management
• Providing a report to Assistant Director Production, Facilities Management and the Emergency

7.3 Findings

In our research on campus security during Pandemic events, the plans of YU, U of M, and U of T provided the most comprehensive discussions of security arrangements.

7.3.1 Adaptations from SaskPower

The following options taken from the SaskPower could be applied to the U of R Pandemic plan:

• Become apart of the National Security Policy
• Assume that the students will respect the security and not vandalize the property
• Become familiar with health crisis issues
• Identify all operational points
• Have alternative security procedures in place
• Cross train all workers to possibly cover in security... i.e., faculty professors trained for security jobs
• Discuss the plan thoroughly with employees
7.3.2 Adaptations the University of Manitoba

The following considerations for the University of Manitoba security plan could be of use the U of R:

- In the event of a pandemic, the security offices will be shut down, with one (each department) patrol officer on duty 24/7
- Constant radio communication can be maintained
- Large portion of officers’ duties will be dedicated to residential issues
- Non-emergency calls to the University will not be made because of staffing shortages
- An appropriate Emergency Operations Center meeting area will be assigned in the event of a pandemic to coordinate all operations between the University and City of Regina
- Security services will coordinate with other university departments to address issues as they arise
- Security services staff will be equipped with safety equipment and first Aid training. Any further training can be arranged as needed in the event of a pandemic.

7.3.3 Adaptations from York University

York University’s includes the following features in its security plan:

- Security is responsible for perimeter establishment and control, traffic control, access control, public order, and crime scene preservation as applicable
- Directs all evacuation and sheltering efforts on or off campus
- Manages policing and security functions by supporting the Incident Commander

7.3.4 Adaptations from Toronto Public Health

Toronto Public Health includes these aspects that could apply to campus security here:

- Insurance of secure storage of medications, food supplies, and medical equipment
• Provide security for traffic flow in and out of the facility

7.3.5 CUPE Strike
During the CUPE strike of 2007, the maintenance of campus security was extremely stressed. All security members are a part of CUPE, therefore, private security had to be called in. This was a prime example of how security management had to utilize other resources. (Patton, P, 2009). This is comparable to a pandemic crisis because of the time factor, and the employee absenteeism.

7.4 Options
The University of Regina has a plan mainly for general emergencies. Some Pandemic specific contingencies are provided here:

• The security team should have identified a ‘team’ leader or coordinator. Having someone in charge at this time will provide for better preparation of an actual pandemic. Also it is important that in case of illnesses, it is recommended that at least 2 people be trained for this position to accommodate for a 50 percent absenteeism rate

• It is recommended that closed circuit TV’s/security cameras are distributed widely on campus. There are security cameras in some areas of the campus; however, some of the more important areas are not under surveillance. Remote surveillance could allow campus security to be maintained by fewer individuals. Three options of where to install cameras are listed below:
  1. Install one camera at the main entrance to the building; (e.g. Riddle Center, Main Kinesiology, Main Education Building, Main Classroom building, College West, Language Institute). However, only having cameras installed in main doorways could leave secondary entrances unsecured.
  2. Install cameras at every entrance, and stairwells. This will provide full coverage, and allows security to view the people who enter and exit the buildings. Stairwells are also a place where mishaps may occur, so having cameras around the stairwells may easily prevent any disturbances.
3. Installing cameras everywhere within the University of Regina. Every hallway, every stair well, every entrance, every classroom will have cameras.

- The University of Regina should inform retired or volunteer security members that if they are willing, to be on call in case of a pandemic. Having retired or volunteer members being available could offset absenteeism of campus security personal.

- Cross training faculty members will also provide extra security personnel if the need arises. An example would be training professors in the area of campus security.

- The University of Regina security should have, at minimum, general communication with the local police, fire, ambulance. Doing so will aid in any new ‘emergency’ during a pandemic event.

- Online news letters could be sent out regular in regards to what is going on, providing current status, focusing specifically on pandemic planning.

- Quarterly meetings to refresh, review, and reflect on how the security is dealing with pandemic training and planning.

- Performing pandemic exercises every 6 months in regards to what the security would do with only half their staff available during pandemic. This will have campus security ready when influenza pandemic strikes.

- Providing campus security’s main phone number throughout campus for easy accessibility to those in need of help.
8.0 Information Technology-
COMMUNICATIONS

By: Tracy Martin and Ray Ewanchuk

8.1 Introduction

In March 2009, the University of Regina announced an active case of tubercle bacillus (TB) infection in. This case creates a “teachable moment”, providing an opportunity to address and possibly strengthen the U of R’s Pandemic Plan. It highlights the fact that our university has potential gaps in the areas of communication, information technology, and policy. There is a difference between an Emergency Response Plan and a Pandemic response. According to Pandemic communication specialist, Peter Sandman, “it is worldwide, intense and local; there is nobody outside the pandemic to send help; every community is on its own”. This chapter focuses on pandemic plans across the country and provides some option for the University.

8.2 Current Status

8.2.1 Communication

In the recent reporting of the TB infection case, the information in the intended message was not fully received, conveyed, or understood. As well no direction was given. Having an effective and transparency communication strategy creates “a strong, centralized communications strategy [which] is important in order to present effective messages during a pandemic” (CU, 2008). According to Sandman, “the proper risk communication response is to guide the adjustment reaction by first validating the impulse to act and then suggest wiser precautions people can take” (Sandman, 2005). Without transparency, there is no confidence in the message or the messenger.

The following passage from Saskpower’s pandemic preparedness plan outlines the importance of an effective communication strategy during a major disease outbreak:
As the threat of the pandemic grows, it is likely that a variety of SaskPower stakeholders will rapidly escalate their demands for information. In the midst of a pandemic, good communication can rally employee and supplier support, calm nervous customers, provide much needed information, encourage cooperative behaviours and help save lives. Poor communication can fan emotions, disrupt business operations and undermine confidence. It is likely that the spread of pandemic fear will outpace the spread of the actual disease itself. In such situations gaps in accurate information are likely to be replaced by rumour and gossip. It is vital that people feel that SaskPower spokespersons are communicating openly and honestly. Doing so establishes employee and public trust and confidence in our organization’s ability to deal with a pandemic, and to bring about a satisfactory conclusion. Through effective communication, SaskPower can engage our employees and other stakeholders in rational discussions and ultimately help our Corporation and individuals make more informed and better decisions (Saskpower, 2007 p 22).

8.2.2 Information Technology

Webmail is the Universities core medium for communicating on campus to staff, faculty, and students. Business announcements, information, and appointments across campus are mainly conducted through webmail. Staff must know how to conduct business across campus using the U of R’s information technologies (IT) infrastructure. New technologies, especially the growth of text messaging, have created a new vulnerability to the University’s Emergency Communications Policy. Many students see texting as their primary medium for communications. The gap between emergency officials and their intended audience widens because language barriers, lack of access to the U of R’s computer labs, technology barriers, and lack of training on the existing systems for students and faculty.

The U of R adopts business continuity with the current communications providers: Sasktel, Access, and Conary hardware vendors supplying telephone and internet services. The Universities business continuity, during a potential influenza Pandemic, is also adopted by its existing community. Confidence within this community resides in the
capabilities of the IT infrastructure and staff. There is a need for table top and field testing on the U of R’s current system and its capacity to maintain business continuity. The areas to be tested, according to CU, are: “UPS systems, servers, storage devices, cable TV distribution equipment, Voice Systems, [interface occupation of over head monitor] equipment (PBX), two way radio systems, Banner, and HVAC equipment” (CU, 2008).

8.2.3 Policy

It is critical that consistent messages be received throughout the U of R community. It is also important to develop a communication tree and ensure it is updated regularly. Pre-recorded or “canned” messages will be readily available and consistent with other response agencies and Saskatchewan Health. Regular tests should be undertaken, monitored, and evaluated to ensure that communication, IT, and policies are current and effective.

8.3 Findings

The findings from various sources within the U of R’s departments, IT, Distance Learning, English and as Second Language, and the Emergency Response Procedures Manual showed limited information on Pandemic preparedness. The perceived lack of disclosure from these departments raises concerns: A current communications tree; infrastructure training and testing; communication about the community and external resources; access to canned prevention information might improve the situation. The U of R and IPFW view communications continuity on the campus as a primary information campaign (U of R, 2008).

In addition IPFW uses templates to lay out the IT services process and procedures, which are available in Appendix Q. These protocol sheets are the tools to aid staff, faculty, and students during a influenza pandemic. Both internal and external communication strategies developed by SaskPower could be adopted by the University.

It is important to establish regular communication protocols that include a determined flow chart It is necessary to provide up to date Health messages and situation updates provided by Saskatchewan Health and the RQHR. As well it is necessary to prepare
general messages ahead of time to students and staff about what University services they can expect to receive during the emergency. This would enable the student population to prepare, help themselves, and volunteer to help others in the community.

The Canadian Manufacturers & Exporters influenza plan includes a combination of visual posters to reduce the focus on English interpretation to eliminate language barriers. In its communication strategy this is an important factor for the U of R community. The International Student Success program teaches students with limited English instruction in: speaking, reading, and writing. During a Pandemic the U of R needs to accommodate and ensure that students are safeguarded. To be fully effective, visual and protocol posters would help reduce language confusion carriers, Appendices O and P provide examples of influenza prevention posters which would help address these barriers.

Peter Sandman offered the following risk communication observation: “when someone first learns about is a new and potentially serious risk, the natural, healthy, and useful reaction may be an over-reaction. That over-reaction is called an adjustment reaction, which a term he uses for the process of adjusting to the new risk” (Sandman, 2005).

This adjustment reaction is a natural emotional response: a pandemic is a worrisome with a high-risk threat affecting families and entire communities. Time is needed to gather and digest information in order to take action, prepare, and ensure safety and security during a pandemic. Feeling alarmed, upset, and scared is perfectly normal according to Sandman.

8.4 Options

Every system, institution, and government agency will be overwhelmed because of the widespread nature of a Pandemic event. This will result in a shortage of needed resources (CU, 2008). It is important to:

- Create awareness about the serious nature of the pandemic threat
- Inform community members about ongoing health mitigation measures such as free flu shots and the availability of hand sanitizers
- Generate campus community involvement in pre-pandemic planning
• Educate the campus community about the pandemic plan and every member’s potential role in responding to the crisis.
• Provide timely and effective information during a pandemic that will help reduce illness, save lives, and maintain essential University operations.
• Prepare for the next wave of influenza. Recovery procedures and business continuity must begin. Even as the first peak of infection subsides. This includes: updating IT infrastructure; evaluation and restructuring to address gaps in: communication, IT systems, procedures, and policies.
• Activate communications plan to direct callers inquiries from: parents, relatives, public, and media.

Cross-training in preparation for a pandemic event, consideration should been given to the following characteristics:

• Automatic, knee-jerk reactions that is sometimes preferable to conscious ones in crisis situations because they are quicker.
• Understanding that the adjustment period occurs early, and needs to be acted upon to prevent fear from spreading faster than false or real crisis.
• Adjustment reaction is a temporary phenomenon that eases the transition to whatever is next.
• The adjustment reaction is excessive mostly because it is technically premature. It may be a little out of proportion. The level of reaction may well become standard, even mandatory.
• Adjustment reactions should not be disproportionate. People may need guidance on how best to act on their fear, and on which precautions are wisest.
• Adjustment reaction is an emotional and logistical rehearsal. People who have gone through an adjustment reaction are better prepared to cope with the crisis when it comes.
• Rehearsals prepare people not to overreact to an actual crisis because of a successful adjustment reaction.
• It is critical to revise key messages based on new information
The level 1 emergency around the TB event demonstrated potential limitations to the distribution of current information. This period which is referred to as a teachable moment offers an opportunity to the U of R to adjust. Instead of criticizing or ridiculing people’s adjustment reactions to emerging crises, smart crisis communicators encourage the adjustment reactions, legitimate them, ally with them, and guide them (SaskPower, 2007).
9.0 LIABILITY AND RESPONSIBILITY

By: Michael Sherar

9.1 Introduction

The first thoughts surrounding pandemics are usually medically based. How will it spread? How will vaccinations be distributed? The second wave of questions usually concerns business continuity. What services will be available? How much of our lives will continue unaffected? The final concerns surround recovery phases. How long until everything’s back to normal? How do we bring our production back to full capacity? What are often lacking are the questions of ethical and legal responsibility. What are we required to do? What should we do? How do we protect those entrusted into the university’s care? This section considers the legal implications for the university of a pandemic.

9.2 Risk

As explained in earlier chapters, a pandemic is fundamentally different from most other types of emergency response situations. The same is true of the legal risks. Pandemics expose institutions to a great variety of legal liability. A pandemic outbreak can expose an institution to class action, civil liability, criminal charges and regulatory non-compliance fines against both the institution and/or individuals.

These are only the effects directly caused by the pandemic itself. There are a host of indirect consequences that must be recognized in order to be adequately prepared.

9.2.1 Negligence

The term negligence for this section refers to the legal definition. Negligence is defined by Canada’s Supreme Court as:

“Conduct is negligent if it creates an objectively unreasonable risk of harm. To avoid liability, a person must exercise the standard of care that would be expected of an ordinary, reasonable and prudent person in the same circumstances. The measure of
what is reasonable depends on the facts of each case, including the likelihood of a known or foreseeable harm, the gravity of that harm, and the burden or cost which would be incurred to prevent the injury.” (Ryan v. The City of Victoria (1999 1 SCR 201).

His Honour Mr. Justice Allen M. Linden describes negligence in terms of an “ABC” rule, which goes as follows:

“A plaintiff in a negligence action is entitled to succeed by establishing three things to the satisfaction of the court: (A) a duty of care exists; (B) there has been a breach of that duty; and (C) damage has resulted from that breach.” (Linden, 1997)

**9.2.2 Occupational Health and Safety**

As an employer the university is obligated to provide a safe work environment for its workforce. This does not only mean they are responsible to create a work area free of hazards, but to also made aware of their legal rights and responsibilities and of the risks or hazards they are likely to be exposed to. As discussed previously in this document, some staff will be essential. Due to the dangers posed by an outbreak the lives of these employees literally sit in the hands of the university’s plan.

Even before the outbreak of disease, workers must be thoroughly briefed on their roles and responsibilities during a pandemic situation. Workers are certainly responsible for their own safety, but the university must also take a leading role. A worker can easily increase their vulnerability during a pandemic situation. They can mishandle waste, enter a quarantined area, or ignore recommended social distancing protocols. If the worker has not been properly briefed on the proper procedures, the university could be found guilty of negligence. This puts them vulnerable to potentially costly torts.

The first step to avoiding this type of legal exposure is a clear and consistent plan. A document outlining practices and procedures is a strong piece of evidence towards stating the university acted as any reasonable person would in identical circumstances. By
communicating a viable strategy, the onus is shifted to the employee to be responsible for their own health by complying with university policies in regards to pandemic situations.

**9.2.3 Students**

In a pandemic, students would face many of the same dangers that employees do. However, they are at a lower risk. Because they do not need to handle waste, they access only public areas of the university and so on student face a diminished risk in a pandemic situation. Once infection levels became too high, classes would likely be suspended and the students who leave campus cease to be under the aegis of the university in regards to prevention of illness.

In a pandemic or continuous disease outbreak students pose an entirely type of liability risk. The suspension of classes, or even key services, can delay a student’s academic progress significantly. This risk occurs with many other emergency situations, especially strikes. The risk of business discontinuity is particularly great with a pandemic. No other disaster can cause the social distancing that a pandemic requires, which can make gathering for class impossible. The suspension of student services, especially classes could be a liability nightmare. York University currently faces a class action lawsuit (Juroviesky and Ricci LLP, 2009) due to a faculty strike. Students are suing for reimbursement of tuition, punitive damages and loss of income for the delay of their education. This is a very new area of law and there is no precedent. The case against York rests heavily on the university’s lack of preparedness.

A pandemic could easily cause a semesters worth of cancelled or discontinued services. Once again, without a clear university approved mandate, the liability could rest solely on the individual who declared classes suspended (Rosenblatt, 2006). The university enters into a legal contract, agreeing to provide education and accreditation, with the students. Failure to deliver on said contract is a clear legal matter. The students would have a very strong case to request refund of tuition, if not the punitive and restorative settlements the students of York are requesting. The outcome of the case against YU will be a landmark decision that will make risk assessment it easier to assess risk, but until the case is settled there is uncertainty. The university must proceed with
caution and should set up a clear guideline for business continuity to minimize the risk of liability among senior managers and the legal action that may result.

9.2.4 Bill C-45

Pandemics are especially problematic because they open up the possibility for criminal charges on those responsible for proper measures. It moves the claims beyond simple civil matters into criminal charges of negligence. Bill C-45, a section of the Criminal Code of Canada was designed for protection of workers under Operational Health and Safety (OHS) regulations. It is now section 217.1 of the Criminal Code and reads as follows:

"2.17.1 Every one who undertakes, or has the authority, to direct how another person does work or performs a task is under a legal duty to take reasonable steps to prevent bodily harm to that person, or any other person, arising from that work or task."

This section could be applicable to students as well as employees. The direction of how to perform a task is the definition of education. Now that it is possible for universities to be held liable as would any authoritarian body (University of Alberta, hereafter UA, 2007), it is especially crucial for senior university administrators to take extensive measures. These claims are usually directed at individuals in authority. Without a pandemic plan in place, any individual directing action on behalf of the university could be found solely liable for the consequences of an epidemic at the university (Rosenblatt, 2006). These charges could lead to large fines and/or jail time. It would be prudent risk management for any decision maker at the university to have a code of conduct to shift the burden from the individual to the institution.

9.3 Legal Defense

The university must seriously prepare itself for the possibility of legal action. For lawyers, there is an old maxim “disasters trigger claims” (McMenamin, 2007). In any emergency situation, there is substantial financial loss and people would want restitution.
The university must address the proper course of action if sued and analyze the consequences thereof.

### 9.3.1 Force Majeure

The most common defense for any sort of emergency situation is *force majeure*. *Force Majeure* is French for "greater (or major) force". These clauses are designed to forgive liability if some unforeseen event beyond the party’s control which prevents it from performing contractual obligations. Typically, *force majeure* refers to natural disasters or other "Acts of God" such as war. *Force majeure* has recently been applied to the failure of third parties—such as suppliers and subcontractors—to perform their obligations to the contracting party.

It is important to remember that *force majeure* clauses are intended to excuse a party only if the failure to perform could not be avoided by the exercise of due care by that party. The basis of *force majeure* is due diligence. In order to avoid negligence liability under the use of *force majeure*, the party must prove that it acted in the way a reasonably prudent and cautious person would have done in identical circumstances. Without a specific pandemic plan in place, it would be impossible for the university to use *force majeure* as a legal defense.

#### 9.3.1.1 Failures of Force Majeure

In today’s litigious world, it takes an “Act of God” to recognize something as an “Act of God”. The Boeing corporation was found responsible and had to pay damages to victims families for the September 11th terrorist attacks (*In re September 11 Litigation*, 280 F.Supp.2d 279 (S.D.N.Y. 2003)). Even government and non-profit organizations are not safe behind *force majeure*, as there have been a class action suit for $600 million brought against the province of Ontario and the government of Canada as a result of the SARS epidemic in Toronto (*REKO LLP*, 2005). Hurricane Katrina lawsuits total over $1 billion dollars against private corporations, the United States Army corps, and a host of government and non-governmental organizations (Gonzales, 2008).
Force majeure requires an absence of human agency in order to be defensible in court. However, what defines human agency? A person may not be responsible for a lightning strike, but he or she is responsible to ensure that everything is properly grounded in case of a lightning strike (Central Ga. Elec. Membership Corp. v. Heath, 4 S.E.2d 700 (Ga. Ct. App. 1939)). Each of the above examples is just as unpredictable as an H5N1 pandemic would be for the University of Regina. However, the lawsuits all have legal merit due to a lack of preparedness on the defendants’ parts. Without a strong plan in place, the university is vulnerable to charges of negligence and liability.

9.4 Consequences

The aftermath of a pandemic event is thoroughly covered by most pandemic plans. This recovery period is a time to restore business connections, resume services full time and attempt to re-assess operations in the post-pandemic landscape. What is often overlooked is the wave of lawsuits as people attempt to recover losses incurred during the pandemic from those they deem responsible.

9.4.1 The University as a Defendant

The sad truth of the legal system is that although it attempts to be unbiased and honest, it is plagued with bias. Trial law is a mixture of psychology, public relations and popularity contests. The verdict often rests in the hands of people shown to have conscious and unconscious biases, leading to less than equitable outcomes. This is especially difficult when it comes to establishing a defense for the university. Universities are institutions and institutions are unsympathetic defendants. According to works by Schuller and Ogloff (2001) they are viewed as impersonal, cold and, most unfortunately, having deep pockets. Universities are second only to loathed institutions such as tobacco companies, big box stores such as WalMart, insurance companies and banks as the least sympathetic defendants (ibid). Universities also suffer because most jurors are less educated than the average Canadian, so it has been proposed that they are more vindictive in decisions against what they perceive as elitist institutions (Greene et al, 2002).
9.4.2 Sympathetic Plaintiffs

In the event of post-pandemic trials universities will be faced with a further challenge; the sympathetic nature of their plaintiffs. There will be three main groups of plaintiffs: students suing for discontinuation of services, employees suing for illness and students suing for illness. Juries tend to sympathize with young people and the unwell. They tend to award larger settlements and are more receptive to claims.

There is not much in current precedent for these types of lawsuits. This is risky as the legal proceedings can go on for much longer, invoking additional expense. Also it increases the potential for very large settlements in favour of the plaintiff.

YU is currently involved in a class action lawsuit for discontinuation of services during their faculty strike. Their lack of preparation has been cited as the inability for them to invoke force majeure, as discussed above. Should the university be forced to discontinue services they could quite easily be liable for not only the tuition fees collected but lost time wages, punitive damages and legal fees. Without a clear precedent it is difficult to predict the consequences of such legal action brought against the university.

Illness of employees has a rich legal history and is covered under the Occupational Health and Safety (OHS) legislation in Saskatchewan (Government of Saskatchewan, 2008). Unfortunately, it includes not only stiff penalties for employers deemed negligent and it could easily extend into criminal charges under bill C-45, discussed earlier.

9.4.3 Insurance

Joseph P. McMenamin, a lawyer specializing in health and pandemic law, has written much in regards to the role of insurance for pandemic situations. From his work in Pandemic: Not Just a Public Threat, he summarizes the insurance issue thusly:

“Many businesses maintain insurance against all sorts of risks, including business interruption. Query, however, whether business interruption insurance will cover losses attendant to pandemic. Many potentially applicable policies are conditioned on destruction of plant and equipment. Infections, of course, however hazardous to humans, have no such effects. The insurance industry is taking the position that
coverage generally does not apply. On the other hand, insurers typically argue that they are not liable for harms caused by airline hijackings, either, yet some courts have rejected that position. Should a pandemic arise, coverage litigation between companies and their carriers is likely.” (McMenamin, 2007)

### 9.5 Pandemics and Civil/Human Rights

Though documentation on the legal implications of a pandemic is limited, interesting concerns have been raised. Many question the legitimacy of, during a pandemic situation, the application of human rights legislation towards the infected. Considering a medical condition as a disability is not unheard of. Blindness, paraplegia, and obesity can all be caused by medical conditions and are readily accepted as disabilities. Even infectious diseases have precedence, as HIV/AIDS is almost universally considered to apply under human rights acts. Could influenza be added next? There is no current movement to do so, but the mechanism certainly exists. In Ontario, the human rights commission extended the definition to include discrimination against those who have, or are perceived to have SARS (UA, 2007). The caveat was that discrimination must be for reasons unrelated to health and safety precautions prescribed by medical and public health officials.

Though it may seem a stretch to prescribe a contagious condition as disability, it could become a very real issue during a sustained pandemic. In a university context, students may be pressured against coming to school when sick. However, all one must do is look around the university close to exam time to see hundreds of students nursing serious coughs and colds. Students who attend classes and exams may be unwell, but they consider the cost of missing school to be too great. Now, where does the university stand on their rights? The university must decide if students have more right to the education they paid for or whether their rights to be free from a possible infection supersede. This is a decision must be made before an outbreak occurs. By setting forth a clear, consistent policy prior to an emergency situation they can avoid costly and time-consuming legal action in the future.
9.5.1 Privacy

A much more familiar issue to legislation around illness is privacy. The university has already had experience with privacy versus public health with other contagious outbreaks, such as the case of tuberculosis in March of 2009. They comply with the current duty to warn legislation and work with a coherent and cohesive communications strategy to minimize leaks and protect the privacy of the individual while working towards the goal of public health. However, the university must have a clear policy with regards to a full blown pandemic situation. As per the University of Calgary’s Ethical and Legal Cornerstones for Pandemic Planning, it should be explained to all employees the level of privacy they can expect and their obligation for disclosure.

9.6 Legal Protection and Options

The university and decision makers who act on the institution’s behalf have a clear interest in acting in a responsible and ethical way to protect the workforce and students. Because a pandemic has yet to occur in the modern litigious age, there is no legal precedent and many questions are unanswered. Even the lawyers who specialize in minimizing tort exposure have no guaranteed answers. There remains one clear fact; without a formalized plan the university lacks any valid legal defense against charges it was unprepared for a pandemic. It is impossible to claim they acted as a reasonable individual would have when the actions were last minute and without cohesion. A plan provides the individual with the security of being university sanctioned. They can point to the document as a benchmark for reasonable actions. Although the university has a very comprehensive plan for general emergencies, more and more schools across North America have specific pandemic documents. The definition of negligence is to do what a rational person would do under identical circumstances. If a specific pandemic document is becoming the norm elsewhere, the university may become legally obligated to have one, regardless of how well prepared they are in the general case.

The imminent risk of a pandemic is small and the risk of many of the scenarios described in this chapter is even smaller. However, the consequences of those scenarios are enormous. A pandemic plan is a simple, cheap way to help diminish that risk. The odds are it will never come into use, particularly for some of the more obscure and
hypothetical legal scenarios described. But by the same token, one doesn’t only put on their seatbelt when they expect to crash.
10.0 Conclusion

By: Miranda Brown and Michael Sherar

10.1 Future Direction

This document has provided some options for the improvement of the University’s pandemic planning strategy. However, it is by no means comprehensive. There remain many areas that lack coverage and will require specific investigation. A pandemic outbreak may cut off on-going research undermining research continuity. This could cause loss of intellectual property, damage to existing equipment or facilities or even permanently discontinue current projects.

Areas such as this will require specific thought and planning. Should a specific pandemic plan be adopted, there should be a University-wide review to ascertain overlooked areas or departments.

10.1.2 Provincial Laboratory

The construction of the provincial laboratory on Research Drive will alter the structure of any emergency response plan. Once it is completed there will have to be a complete overhaul of all safety precautions and measures. A pandemic plan would be no exception. Any plan will have to be adapted for the increased exposure an onsite lab would provide. The University of Regina will have to make specific contingencies regarding the provincial laboratory and its role in a future pandemic situation. The main campus will be limiting services and facing complete shut down. The provincial lab will be increasing its provision of services and expanding its role. It could easily become the center of the province’s response to a pandemic event. The University will have to prepare for this situation and have appropriate infrastructure, protocols and procedures in place.

10.1.2 Campus-wide Coordination

Should a pandemic plan be adopted, it would be in the University’s best interest to work at adopting cohesive, coherent, and consistent plans with the affiliated campuses. The campuses share students, land and resources. Weaknesses in one campus could lead to disaster in the others. The campuses will have to work together towards containment and prevention of infection.
10.2 Final Thoughts

This document aims to provide the first line of defense against a pandemic outbreak. Although the University has a thorough emergency response plan currently in place, a pandemic is an entirely unique situation. Many universities across North America, Europe and Asia have adopted specific pandemic preparedness plans. Pandemics ignore political and geographic jurisdictions. It is important that the University of Regina maintain the same commitment to pandemic preparedness as the rest of the world. The University is a leader in many academic and non-academic areas; it would only take the next step in planning to be one in terms of the health of its students, employees and the public.
References:


Patton, P. (March 26, 2009). *Personal communication*.


Appendices: Tools for Pandemic Planning

1.0- Introduction Appendices

Appendix A: Difference between Seasonal Flu and Pandemic Influenza

<table>
<thead>
<tr>
<th>Ordinary Flu</th>
<th>Pandemic Influenza</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seasonal flu happens every year</td>
<td>An influenza pandemic happens only two or three times a century.</td>
</tr>
<tr>
<td>Seasonal flu is usually around from November to April – and then stops.</td>
<td>An influenza pandemic usually comes in two or even three waves several months apart. Each wave lasts about two months.</td>
</tr>
<tr>
<td>About 10% of Ontarians get ordinary seasonal flu each year.</td>
<td>About 35% of Ontarians may get the influenza over the course of the full outbreak.</td>
</tr>
<tr>
<td>Most people who get seasonal flu will get sick, but they usually recover within a couple of weeks.</td>
<td>About half of the people who get influenza during a pandemic will become ill. Most will recover, but it may take a long time. And some people will die.</td>
</tr>
<tr>
<td>Seasonal flu is hardest on people who don't have a strong immune system: the very young, the very old, and people with certain chronic illnesses.</td>
<td>People of any age may become seriously ill with influenza during a pandemic. This depends on the virus.</td>
</tr>
<tr>
<td>In a normal flu season, up to 2,000 Ontarians die of complications from the flu, such as pneumonia.</td>
<td>During an influenza pandemic, Ontario would see many more people infected and possibly many more deaths.</td>
</tr>
<tr>
<td>There are annual flu shots that will protect people from seasonal flu.</td>
<td>There is no existing vaccine for an influenza pandemic. It will take four to six months after the pandemic starts to develop a vaccine.</td>
</tr>
</tbody>
</table>

Source: TPH, 2007
### Cornell Event Levels and Response Stages

<table>
<thead>
<tr>
<th>Cornell Event Level</th>
<th>Planning Scenario</th>
<th>University Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1A</strong></td>
<td>Human infections with a new viral subtype are reported. Little to no human-to-human spread. Current phase 06/08</td>
<td>University pandemic planning is integrated with central emergency planning. Transparent and well-timed communication will reinforce confidence in university leadership. Early emphasis on personal and family emergency planning will be vital.</td>
</tr>
<tr>
<td><strong>1B</strong></td>
<td>If pathogenic avian flu virus has been identified in birds in the U.S., perceived risk would be escalated. <em>This phase may or may not occur and would be independent of a pandemic flu outbreak.</em></td>
<td>Exposure risks would be mainly related to poultry workers and those with direct contact with waterfowl. Person-to-person spread would not be anticipated. Cornell could anticipate: Confusion regarding avian flu vs. pandemic flu. Some anxiety on campus. Community concerns re: Cornell poultry, ornithology, veterinary activities. Need for precautions in the Vet College, CALS, and Lab of Ornithology. Increases in Vet Hospital clinical and diagnostic volume. Increase in volume at Gannett of time-intensive patient and community concerns. Increase in demand for Cooperative Extension leadership statewide. Numerous media inquiries regarding pandemic readiness.</td>
</tr>
<tr>
<td><strong>1C</strong></td>
<td>Small cluster(s) with limited human-to-human transmission; spread is highly localized (overseas), suggesting the virus is not well adapted to humans.</td>
<td>First outbreak clusters are likely to occur outside of the U.S. First impact to Cornell will likely be travelers abroad or those with family in affected region. Widespread awareness of growing risk of pandemic and questions about Cornell’s preparedness. Increasing anxiety on and off campus. Escalation of parent concerns. Actual or anticipated impact on study abroad programs. Exposure risk for students, staff and faculty in affected countries. Need for screening, monitoring, and potential quarantine for travelers coming from affected areas. Shortages of key supplies due to increased demand.</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Large cluster(s) of human-to-human transmission(s) have been identified in an affected region. Lethality of WHO will announce a pandemic alert, signalling potential and severity of spread. Intense media coverage, fuelling widespread anxiety. Calls to many Cornell</td>
<td>Convene Central Emergency Management Team/ Committee. Activate EOC. Launch pandemic emergency</td>
</tr>
<tr>
<td><strong>3A</strong></td>
<td>A highly contagious pandemic influenza virus is spreading from human-to-human overseas, signalling a breach in containment efforts.</td>
<td>If containment efforts are breached, global spread is inevitable and will happen within weeks. Media coverage will be intense, raising awareness and fears. Gannett, SAS, University Communications and other critical functions will be severely strained. Flights to and from initial outbreak countries will be cancelled and then severely restricted; Cornellians may have trouble getting out or in. International and domestic travel will be severely disrupted. Reports of student evacuations at peer institutions may begin at this stage. In all but a mild pandemic, Cornell may evacuate students before travel is severely restricted to minimize the number of students on campus when the pandemic reaches central New York. A significant number of students, including many international and graduate students, may remain in campus and off-campus housing and will require an array of services. Faculty and staff will be very concerned about their own health, their families and jobs. Cornellians from or connected to people in affected countries may be the first to experience deaths of family and friends, as well as loss of financial support.</td>
</tr>
<tr>
<td><strong>3B</strong></td>
<td>Pandemic flu is in North America.</td>
<td>We can assume spread to all areas of the U.S. within days to weeks. Supplies of antiviral medications may be inadequate. SAS must respond to students’ needs and requests for information. Gannett will have high volume of clinical cases, requiring 24/7 services, supplemental staffing and suspension of non-urgent services. Anxiety will climb as cases and deaths are reported. Public health authorities will instruct citizens to stay home and avoid crowds.</td>
</tr>
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</table>
| 3c | People in the Ithaca area have been diagnosed with pandemic flu. | NYS and/or Tompkins County Health Department will close schools and daycares and ban public gatherings based on criteria such as the severity of the virus, geographic spread of the pandemic, and guidance from federal agencies. Local, state, national government agencies would be overwhelmed. Local health care, public health, and social services resources will be quickly inundated. Workplace absenteeism will increase due to illness, family needs, fear. Supplies will be interrupted by national and regional workforce shortages. Gannett’s clinical volume will be exceptionally high, requiring 24/7 services, supplemental staffing, and suspension of non-urgent services. Cayuga Medical Center demand will exceed capacity, resulting in back flow of patients to Cornell and community providers. Local physicians and pharmacies will be overwhelmed.

In a severe pandemic, Cornell could expect:
- illness in 30% of students still in Ithaca (estimate ~ 2000), and 30% of faculty and staff (~2700).
- ~50% of students who become ill (~1000 students) will require outpatient medical care at Gannett; some faculty, staff, student spouses and children will seek services at Gannett if they have no other options.
- as many as 10% of people who become ill (~200 students) will need hospitalization.
- as many as 2% of those who become ill may die (~40 students, ~50 faculty and staff) Need for mental health care, religious services, and support will be extensive as people face threat, illness, death, loss, uncertainty about the future.

University operations and research will be prioritized, modified, and/or suspended, depending on availability of adequate infrastructure support. Essential operations should continue with the appropriate number of employees to perform essential functions for the duration of the pandemic. Essential operations will require supplemental staffing. Additional cross-training will be carried out. Flex-place and flex-time arrangements and social distancing will be implemented. |

| 4 | Case incidence is decreasing, indicating the slowing of the pandemic wave. Assessment, | The central NY area will likely experience 2 or 3 flu pandemic “waves,” each lasting a period of weeks and separated by weeks. The severity of the pandemic could lessen | President/Provost will determine when classes will resume. Provost will issue guidelines for resumption of classes and decisions about how interruption of |
recovery, and preparation for subsequent wave(s). or worsen in second and third waves. Communications networks will be strained by previous wave(s), but will be essential for continuing the flow of information. Essential supplies may have been depleted. Grief, fear, disruption, and diminished resources will complicate recovery efforts and preparation for subsequent waves of illness. People who were infected in previous waves will have immunity, reducing the number of people seeking health services, missing work, caring for family. Those who have developed immunity will be important in subsequent waves in roles that involve exposure to people who are infected and ill. Cornell facilities will be a key asset to the community for mass clinics for immunizations, as they become available. Resumption of activities at the end of a pandemic will take careful planning and coordination at a time when human and financial resources will be depleted.

classes will impact grades and schedules. Units will implement business recover plans. Preparations for a possible subsequent pandemic wave should be made.

Adapted from: CU, 2008
Appendix C: York University Incident Management System Organization Structure

EMERGENCY POLICY GROUP
(aka Core Crisis Team)
- Policy decisions
- Priorities
- Strategy

EMERGENCY OPERATIONS CENTRE
- Overall coordination
- Resource support
- Operational planning
- Communication

EMERGENCY MANAGEMENT GROUP
- Duty Officer (Admin Officer, TBA)
- Senior Duty Officer (Admin Officer, TBA)

Planning & Analysis
Chief: Sr. EO Planning & Admin.
Academic: Acting VP Academic
Students: AVP Student
Community:
Facilities: Campus Planner

Operations
Chief: AVP Facilities & Services
Security: Operations Manager
Research: Acting Dir. Research Services
CNS: Director IT Infrastructure
ITS: Director IT Services
Care Shelter: Director Human & Food

Logistics
Chief: AVP Finance
Procurement: Director, Procurement
HR: Director HR Services
NGO Support: Community Relations Officer
Transport: Manager Transport Services
Food: Manager, Food Services

Finance/Administration
Chief: Comptroller:
Insurance: Manager Insurance
HR/ER: Director Payroll
Budget: Manager Budget
Audit: Internal Audit

POLICE, FIRE
EMS/AMBULANCE

Incident Commander: Director Security Services

Source: YU, 2007
# 5.0- Food Services Appendices

**Appendix D: Pandemic Tracking List**

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION</th>
<th>ILL (DATE SYMPTOMS FIRST NOTED)</th>
<th>SUSPECTED ILL (DATE)</th>
<th>ABSENT FROM WORK (DATE)</th>
<th>RECUPERATED &amp; RETURNED TO WORK (DATE)</th>
<th>HAS LOST FAMILY MEMBER (SPECIFY)</th>
<th>SPECIAL NEEDS (SPECIFY)</th>
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Source: CRFA, 2006
Appendix E: Industry Responses

Sequencing of Industry Responses to Sample Scenarios Based on WHO Pandemic Phases

The following chart provides sample responses and actions to sample scenarios based on the World Health Organization’s pandemic phases:

### INTERPANDEMIC PERIOD

<table>
<thead>
<tr>
<th>WHO Description of Phase</th>
<th>Canadian Context (sample scenarios)</th>
<th>Sample business actions and responses</th>
</tr>
</thead>
</table>
| **Phase 1**              | No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animal, the risk of human infection or disease is considered to be low. | • Obtain management commitment and resources needed to develop and maintain a pandemic preparedness plan and program.  
• Appoint a planning co-ordinator.  
• Assemble a planning team.  
• Develop planning objectives, i.e. maintaining business operations, employee protection, etc.  
• Assign responsibility for tasks needed to coordinate the development and maintenance of a plan.  
• Establish a planning framework and schedule.  
• Undertake business impact analysis. |
| **Phase 2**              | No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease. H5N1 virus common in bird populations throughout the world. WHO issues advisory about the risk of H5N1 virus mutating to human-transmissible strain. | |

### PANDEMIC ALERT PERIOD

<table>
<thead>
<tr>
<th>WHO Description of Phase</th>
<th>Canadian Context (sample scenarios)</th>
<th>Sample business actions and responses</th>
</tr>
</thead>
</table>
| **Phase 3**              | Human infection(s) with a new subtype, but no human-to-human spread, or, at most, rare instances of spread to a close contact. | • Set priorities for food production and services.  
• Document required resources including critical staff, information, equipment, utilities, computer and communication systems, supplies, etc.  
• Develop plan and procedures to address supply and staff shortages.  
• Determine whether your suppliers have undertaken reasonable contingency planning to address pandemic issues.  
• Identify alternative suppliers and products as back-up.  
• Consider increasing inventories of critical supplies.  
• Establish management team to focus on human resource issues, including workplace safety and protection; communication within the organization; tracking the health status of employees; tracking employee availability; how to suspend non-critical operations; the reassignment of staff to critical jobs.  
• Set clear policies and emergency employees procedures to minimize illness and to prevent influenza spread prior to pandemic.  
• Develop comprehensive contact lists.  
• Establish an emergency operations centre.  
• Establish a pandemic monitoring and information collection system.  
• Develop communication plans that address audiences to be contacted, messages to be delivered, tools to be used and feedback mechanisms.  
• Provide information and training to staff on measures to minimize influenza transmission. |
| **Phase 4**              | Small clusters with limited human-to-human transmission but spread is localized, suggesting that the virus is not well adapted to humans. A half dozen sudden deaths of villagers are attributed to H5N1 virus in 2 Southeast Asia countries. | |
| **Phase 5**              | Larger clusters but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk). H5N1 is responsible for a dozen more deaths in 4 Southeast Asia countries. The people who died had no known exposure to infected poultry, or connection with the areas where H5N1 spread is suspected. The WHO issues a regional pandemic alert for Southeast Asia. | |
## PANDEMIC PERIOD

<table>
<thead>
<tr>
<th>WHO Description of Phase</th>
<th>Canadian Context (sample scenarios)</th>
<th>Sample business actions and responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 6</strong></td>
<td>Pandemic spreads rapidly from Southeast Asia to Europe, Africa and India. WHO issues world-wide pandemic alert. International trade and travel is at a standstill. Containment efforts in affected countries are abandoned. First Canadians diagnosed with H5N1 virus in Vancouver. Vancouver Medical Officer of Health directs the closing of all schools, universities, day care centers and other public gathering places and advises public to avoid crowded places. Employee arrives at your restaurant with symptoms consistent with H5N1.</td>
<td>• Alert staff to change in pandemic status. • Update pandemic plan. • Conduct training exercises to practice, educate, motivate and test plans and procedures. • Make adjustments to plan based on results of training exercises. • Activate staff travel restrictions. • Activate measures to minimize introduction and/or spread of influenza in workplace (e.g. notices, workplace cleaning, social distancing, etc.). • Activate internal communication plan using templates prepared in advance (provide information on the situation, any public health messages. Give direction on what employees can do. Strive to reduce anxiety/your/panic.) • Activate external (non-media) communication plan using templates prepared in advance (i.e. suppliers, customers, other restaurants in proximity, police, etc.). • Activate media communications plan with prepared spokesperson. • Document all activities and decisions. • Activate contact tracing of all employees. • Reduce employee interaction with customers. • Ensure meticulous hand hygiene and environmental cleaning. • Activate policies for employees who have been exposed to influenza or are suspected to be ill. • Cease non-essential services and activities. • Determine feasibility of keeping restaurant open or partially open (limited menu, reduced hours). • Activate excess capacity procedures. • Activate plan for employees needing help when laid off. • Activate emergency communication plan. • Activate process for recovered/relapse staff members to return to work if restaurant operational.</td>
</tr>
</tbody>
</table>

Over 150,000 people have been infected by the H5N1 virus across Canada and it is estimated that another one million people will be infected over the next 6 weeks with the peak expected in 2-3 weeks. The federal Minister of Health prohibits public gatherings.
<table>
<thead>
<tr>
<th>WHO Description of Phase</th>
<th>Canadian Context (sample scenario)</th>
<th>Sample business actions and responses</th>
</tr>
</thead>
</table>
| Return to interpandemic period (phase 1 or 2) | No new cases of H5N1 have been diagnosed in your community for 3 weeks and the Medical Officer of Health advises that the crisis is over. | • Implement recovery plan (e.g., stress counseling, recruitment and training of replacement workers, communication with customers and suppliers).
• Conduct full debrief process.
• Review and update risk and impact assessment.
• Revise your business pandemic response as necessary. |

(a) The distinction between phase 1 and phase 2 is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction is based on various factors and their relative importance according to current scientific knowledge. Factors may include pathogenicity in animals and humans, occurrence in domesticated animals and livestock or only in wildlife, whether the virus is enzootic or epizootic, geographically localized or widespread, and/or other scientific parameters.

(b) The distinction between phase 3, phase 4 and phase 5 is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include rate of transmission, geographical location and spread, severity of illness, presence of genes from human strains (if derived from an animal strain), and/or other scientific parameters.
Appendix F: Correct Hand Washing Procedure (Sample Poster)

Step 1: Wet hands with warm running water
Step 2: Apply soap
Step 3: Lather
Step 4: Scrub hands and arms for at least 20 seconds
Step 5: Rinse well under warm running water
Step 6: Apply soap and lather again
Step 7: Rinse well under warm running water
Step 8: Dry hands and arms with a single-use paper towel and shut tap off with paper towel

Source: CRFA, 2006
Appendix G: Infection Awareness Poster

STOP THE GERMS!
Tips to keep germs from spreading

Coughing and sneezing etiquette
- Cover your nose and mouth with a tissue when you cough or sneeze.
- If you don’t have a tissue, cough or sneeze into your upper arm.
- Turn your face away from others around you.
- Put used tissues into a waste basket.
- Wash your hands with soap and water after coughing or sneezing.
- Use an alcohol-based hand sanitizer when hand washing is not possible.
- Avoid touching your mouth, nose or eyes.
- Stay home from work or school if you are sick.

CLEAN HANDS
Important steps to keep you safe

Wash hands with soap and water thoroughly and often.
- Wash them for at least 20 seconds.
- Rinse them with clean water.
- Turn off the faucet with a paper towel, not with your clean hands!
- Dry your hands with a paper towel or use an air dryer.

Always wash hands
- after using the restroom
- after sneezing, coughing or blowing your nose
- before handling food and often during food preparation
- after handling raw meat, poultry, seafood and eggs
- after changing diapers
- after handling pets
- after handling trash
- after touching anything that's dirty or contaminated

Source: CRFA, 2006
Appendix H: Screening Checklist for Detection and Management of Suspected Pandemic Influenza Cases

1. Avoid direct contact with the person if possible (manage the process over the telephone).
2. Immediately isolate the person (have person move to a room away from other employees).

Ask the person if they have any of the following symptoms:
- High fever (or feel feverish and hot)
- Headache
- Fatigue and weakness
- Sore throat, cough, chest discomfort, difficulty breathing
- Muscle aches and pains
- Been overseas recently
- Been in contact with someone diagnosed with influenza

Yes, two or more of symptoms as described above

Employee should be considered as possible case of influenza.
Assemble emergency management team.

Contact local health authorities to report illness and to obtain guidance and direction.
Fill in Influenza Notification Form (attached).
Record names and contact details of all employees who came into contact with employee.

Provide surgical mask immediately or advise employee to cover his/her mouth with tissue when coughing or sneezing if a mask is not available.

Seal the area where the employee was working and arrange for immediate routine cleaning and disinfection.

Unlikely to be influenza
- Reassure
- Advise to call again if concerned or visit their GP.

Source: CRFA, 2006
**Appendix 1: Notification Form for Suspected Influenza Cases at Work**

**Details of Affected Staff**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Worksite:</th>
<th>Location of Isolation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Title:</td>
<td>Date of Birth:</td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Telephone No:**

(W) (H) (M)

**Symptoms noticed:**

- [ ] Fever
- [ ] Headache
- [ ] Dry cough
- [ ] Cold
- [ ] Body aches
- [ ] Fatigue
- [ ] Others, details: ____________________________

Time of fever on-set: ____________________________

Time of isolation: ____________________________

**Travel history over the past 8 days:**

Countries visited: ____________________________ Flights taken: ____________________________

Where referred:

Contact List (See separate page)

**Details of Reporter**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Job Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone No:</td>
<td></td>
</tr>
</tbody>
</table>

(W) (H) (M)

Source: CRFA, 2006
6.0- Facilities Management Appendices

Appendix J


Scenario 1. Six-week wave duration and 25 % attack rate.

Proportion of work days lost due to pandemic influenza, 6 week outbreak, 25% attack rate

In this scenario, the duration for the pandemic wave is 6 weeks with a clinical attack rate in the general population of 25 %. In this scenario approximately 6,193 workdays are lost due to personal illness, time off to care for sick family members, and compassionate leave to care for ill family members and death. Based on the CDC assumptions, the distribution of the lost workdays will appear as per the chart above. In week one, some infected workers are already experiencing either personal or family illness. During the week the proportion of lost workdays increases from 7.3 % to 8.7 %. Based on a potential attending workforce of 2,769 employees\(^1\), this would mean that 452 employees would report absent at the start of the week and 539 would be absent by weekend. In week two there is a more dramatic increase in the proportion of workdays lost from 8.7 % to 12.8 %, meaning that by the end of week two, 793 employees would be unavailable for work. At the end of week three, the wave peaks with the highest proportion of lost workdays at

\(^1\) Total number of employees as reported in SaskPower Diversity Report to the SHRC for YE 2006.
15.3%, which is equivalent to 948 lost workdays or an absenteeism rate of 34%. In week four, the wave begins to subside and the number of absent employees is reduced to 793 by weekend and declines further to 539 at the end of week five and to 452 by the end of week six. Over the six week wave the average absenteeism rate would be 23%, or on average one in four employees would not be at post for the duration.

**Scenario 2. Eight-week wave duration and 35% attack rate.**

**Proportion of work days lost due to pandemic influenza, 8 week outbreak, 35% attack rate**

In this scenario, the duration for the pandemic wave is 8 weeks with a clinical attack rate in the general population of 35%. In this scenario SaskPower will lose approximately 8,670 workdays due to the reasons noted in Scenario 1. Based on the FluWorkLoss algorithm, the distribution of the lost workdays will appear as per the chart above. In this model, week one begins with the number of infected workers already experiencing either personal or family illness that is slightly lower than scenario one. During the week the proportion of lost workdays increases from 5.1% to 6.1%. Based on a potential attending workforce of 2,769 employees this would mean that 442 employees would report absent at the start of the week and 529 would be absent by weekend. In week two there is a more dramatic increase in the proportion of workdays lost from 6.1% to 10.2%, meaning that by the end of week two, 884 employees would be unavailable for work. The wave continues to build and at the end of week three the proportion of workdays lost hits 16.2% or 1,404 workdays lost, equivalent to an absentee rate of 51%. Week four, peaks with the highest proportion of lost workdays at 19.3%, which is equivalent to 1,673 lost workdays, or an absentee rate of 60%. In week five, the wave begins to subside and the number of absent employees is reduced to 1,404 by weekend and declines.

2 While clearly dramatic, a 60% absenteeism rate is the planning maximum used by some other organizations including Ontario Power Generation in their pandemic model.
further to 884 at the end of week six, to 529 by the end of week seven, and 442 by the end of the eighth week. Over the eight-week wave the absenteeism rate would begin at 16% and climb to a maximum absenteeism rate of 60%. The average absenteeism rate for the eight-week duration would be 33% meaning that on average, only two out of three employees would be available for deployment.

Scenario 3. Twelve-week wave duration and 35% attack rate.

In this scenario, the duration for the pandemic wave is 12 weeks with a clinical attack rate in the general population of 35%. In this scenario, SaskPower will lose approximately 8,670 workdays but the impact will be distributed over a twelve week period. Based on the FluWorkLoss assumptions, the distribution of the lost workdays will appear as per the chart above. In this model, week one begins with the number of infected workers already experiencing either personal or family illness that is significantly lower than scenario two. During the week the proportion of lost workdays increases from .8% to 1%. This would mean that 69 employees would report absent at the start of the week and 87 would be absent by weekend. In week two there is an increase in the proportion of workdays lost to 4%, meaning that by the end of week two, 347 employees would be unavailable for work. During weeks 3, 4 and 5, the wave continues to build and at the end of week three the proportion of workdays lost hits 7.8% or 676 workdays lost, at the end of week 4 the proportion of workdays lost is 10.2% or 884 absent employees, and by week 5 the proportion of workdays lost is 13.2% or 1,144 absentees. The wave peaks at the end of week six with the proportion of lost workdays at 15.2%, which is equivalent to 1,318, lost workdays or an absenteeism rate of 48%. In week seven, the wave begins to subside and the number of absent employees is reduced to 1,144 by weekend. It declines
further to 884 at the end of week eight, to 676 by the end of week nine, and 347 by the end of the tenth week. In weeks eleven and twelve the number absent drops further to 87 and 69 respectively. Over the twelve-week wave the absenteeism rate would begin at 3% and climb to a maximum absenteeism rate of 48%. The average absenteeism rate for the twelve-week wave would be 21% meaning that on average, one in five employees would be missing in action.

Each of these scenarios present significant human resource challenges. By implementing the recommendations in this plan, SaskPower will face the challenges of a pandemic and will prevail in its business mission.

(SaskPower Influenza Pandemic Preparedness & Business Continuity Plan, 2007).

Appendix K: Protective Equipment
3.14 Personal Protective Equipment

Personal protective equipment can play a key role in controlling the spread of infection and in preventing personal infection. However, personal protective equipment is only one layer in SaskPower’s multi-layered pandemic response strategy. Any decision making processes regarding the application of personal protective equipment in a specific situation should consider the precautionary principle whenever there is uncertainty as to its applicability.

Facemasks and Respirators

In 2005, many health experts were advising that masks and respirators were not necessary for general wear during a pandemic, and were recommending that respirators should only be worn by health care providers, who may be working in close proximity with influenza patients. Then in 2006, after monitoring the very serious nature of H5N1 illness in humans, WHO shifted their stance to “apparently no controlled studies assess the efficacy of mask use in preventing transmission of influenza viruses……………..WHO has recommended that mask use by the public should be based on risk, including frequency of exposure and closeness of contact with potentially infectious persons; routine mask use in public places should be permitted but not required. This recommendation might be interpreted, for example, as supporting mask use in crowded settings such as public transport.”3

Finally, in July, 2007, the U.S. Food and Drug Administration (FDA) and the CDC came out strongly endorsing both facemasks and fitted respirators for general use in the event of a pandemic.

Facemasks are loose-fitting, disposable masks that cover the nose and mouth. These include products labeled as surgical, dental, medical, procedure, isolation, and laser masks.

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3(Nonpharmaceutical Interventions for Pandemic Influenza, National and Community Measures, World Health Organization Writing Group, EID, January 2006,
Facemasks help stop droplets from being spread by people wearing them. They also keep splashes or sprays from reaching the mouth and nose of the person wearing the facemask. They are not designed to protect you against breathing in very small particles. However, if you believe you may be infected, facemasks are very effective in reducing the spread of respiratory droplets you exhale, or produce by coughing and sneezing. Facemasks should be used once and then thrown away in the trash. Immediately wash your hands with soap and water or alcohol-based hand sanitizer after removing a facemask.

A respirator (for example, an N95 or higher filtering facepiece respirator) is designed to protect you from breathing in very small particles, which in the case of a pandemic, might contain viruses. The ‘N’ indicates non oil-based particles and the ‘95’ indicates that the masks is effective in stopping 95% of particles that are .3 microns or larger. These types of respirators fit tightly to the face so that almost all air is inhaled through the filter material. Respirators may make normal breathing difficult, and can be used for a maximum of only about one day before they must be discarded after becoming wet or dirty. Persons with heart or lung disease or other circulatory or respiratory health conditions, may have trouble breathing through respirators and should consult their doctor before using a respirator. In some N95 models there is a one-way exhalation valve to ease the effort in exhaling (center row, right). The valve automatically seals on the inhalation cycle so inhaled air is forced through the filter material. These respirators may be more appropriate for people with respiratory difficulties.

To be effective, N95 respirators must be specially fitted for each person who wears one. This process is called fit-testing. Some SaskPower workers will already have experience using fitted respirators as they are used in work settings where dust and small particles are encountered. Other SaskPower workers will have to go through an orientation to the N95 respirator and be trained in fit-testing. The 3M Company and other manufacturers offer a wide range of respirators that meet the N95 standard and are identified as such with the N95 designation printed on the mask. All of these masks are acceptable and will be of equal filtering quality if properly fit tested.

Like surgical masks, N95 respirators should only be worn once and then thrown away in the trash. Immediately wash your hands with soap and water or alcohol-based hand sanitizer after removing a respirator.
SaskPower Facemask & Respirator Strategy
SaskPower will stock a supply of disposable surgical or procedure facemasks for short-term use by persons who develop respiratory symptoms (which may be due to pandemic flu) in the workplace, as abrupt illness onset in the workplace is likely in some cases, and wearing a facemask greatly reduces the possibility of infecting others.

SaskPower will stock a supply of N95 disposable respirators and recommends their use by employees who wish to reduce their chance of becoming infected while assisting ill, or potentially ill, persons in departing the office or with travel home or to a health provider.

SaskPower will stock a supply of N95 and P95 and P100 disposable respirators for use by employees and recommends their use based on job hazard and risk assessment.

Gloves
Latex, nitrile or rubber gloves should be worn if contact with potentially virus-laden surfaces is anticipated, and hand hygiene is not available or practical. Persons who clean work space during pandemic waves should be aware of the risk of indirect contact (fomite) transmission, and wear vinyl, latex, or rubber gloves, and practice strict hand-washing and refrain from touching mouth, nose, and eyes. SaskPower workers will have to go through a short training session covering glove selection and proper donning and doffing procedures.

SaskPower Glove Strategy
SaskPower will stock a supply of latex, nitrile and rubber gloves for use by employees and recommends their use as a barrier to infection, based on job hazard and risk assessment.

Faceshields
To date, research has not produced a single responsible reference that recommends the general wearing of faceshields to prevent infection. WHO, CDC, PHAC do recommend the wearing of faceshields by health workers who are working with known infected individuals on a continuous basis. However, they also note that masks, if properly worn, are likely to be the most effective intervention. SaskPower does not recommend faceshields for general use. Use should be determined by job hazard analysis and risk assessment. Faceshields are recommended for use as a barrier to infection by cleaning staff who may encounter sources of splash infection.

Glasses and Goggles
To date, research has not produced a single responsible reference that recommends the general wearing of glasses or goggles to prevent infection. WHO, CDC, PHAC do recommend the wearing of goggles with indirect venting or glasses that are tight fitting and essentially make contact around the entire eye orbit, by health workers who are working with known infected individuals on a continuous basis. However, they also note that masks, if properly worn, are likely to be the most effective intervention. SaskPower does not recommend glasses or goggles for general use. Use should be determined by job
hazard analysis and risk assessment. Glasses and goggles are recommended for use as a barrier to infection by cleaning staff who may encounter sources of splash infection. (SaskPower Influenza Pandemic Preparedness & Business Continuity Plan, 2007).
Appendix L: SaskPower Hygiene and Education


3.9 Education and Training

Education and training are critical to SaskPower’s pandemic readiness. A significant learning objective is to understand personal responsibility in protecting individual health and the health of others. Education, beyond awareness, will be aimed at knowing the steps to take to reduce the spread of respiratory illness, (i.e., hand hygiene, respiratory hygiene, social distancing, stay home when ill, etc.). This education is designed to reinforce the absolute importance of these fundamental steps in preventing and controlling illness. Training topics will include:

- Pandemic Overview
- Respiratory Hygiene
- Hand Hygiene
- Workplace Hygiene
- Personal Protective Equipment
- Wellness Monitoring
- Social Distancing
- Telework
- Supplier Readiness
- Workforce Management for Supervisors and Managers
- Pandemic Plan Testing and Improvement

SaskPower Education and Training Strategy

SaskPower shall ensure that employees are trained in all parts of this plan that apply to them, prior to the operational need for the new training information and skills, and so that employees are fully prepared to participate in the Corporation’s preparedness and response objectives.

3.10 Pandemic Overview Training

SaskPower has developed pandemic awareness training material and intends to deliver the material to all employees. The pandemic overview sessions also provide an opportunity to make SaskPower employees aware of this plan and to encourage them to read the plan before it is required. At this time, some sessions are completed, and others are scheduled for the next few months. The targeted completion date for all employees is Q1, 2008.

3.11 Respiratory Hygiene

Respiratory hygiene is a fundamental part of disease control for pandemic influenza as well as for seasonal flu. SaskPower will benefit by communicating the preferred methods to cover coughs or sneezes before the annual flu season, and certainly prior to a pandemic event.
Appropriate methods of communication are instructional videos, currently in use, and focused messages for the website, and posters that can be displayed at the workplace. These methods will be used to convey basic respiratory hygiene measures such as:

- good respiratory hygiene is essential in preventing transmission of the flu virus.
- cover the nose/mouth when coughing or sneezing.
- use disposable tissues to contain respiratory secretions.
- dispose of tissues in the nearest waste receptacle after use.
- if disposable tissues are not available then the head should be turned to face the upper arm and the cough or sneeze should be directed into the fabric of the sleeve.
- perform hand hygiene after contact with respiratory secretions and contaminated objects/materials.

**SaskPower Respiratory Hygiene Strategy**

SaskPower’s respiratory hygiene strategy consists of three preventive actions and one containment action:

1. During a pandemic, SaskPower will ensure that supplies of disposable tissues and waterless hand sanitizer are readily available to all workers.
2. SaskPower will ensure that all workers have access to procedure or surgical masks if they are ill or if they interact with someone who may be ill, and will be supplied with appropriate respirators to protect their respiratory health, based on job hazard and risk evaluation.
3. Employees that are required to work away from facilities with properly equipped washrooms will be supplied with at a minimum, disposable tissues, waterless hand sanitizer, and zip-seal bags to contain any used tissues to be discarded later.
4. During a pandemic, persons coming into SaskPower facilities presenting influenza like symptoms will be asked to put on a procedure mask (i.e., with ear loops) or a surgical mask (i.e., with ties) to contain respiratory secretions, and may be asked to leave the facility.

**3.12 Hand Hygiene**

Hand hygiene is possibly the simplest and single most important method for preventing influenza infection. Flu virus can survive on hard, non-porous, surfaces for up to 48 hours, or longer depending on the environment. If bare hand contact is made with these surfaces, virus particles may be transferred onto the hands, and from the hands on to other objects or to the face. Recent surveys of hand hygiene practices, indicate that less than 85% of people attempt good hand hygiene and even a lesser per cent achieve it.

Appropriate methods of communication are instructional videos, currently in use, and focused messages for the website, and posters that can be displayed at the workplace. These methods will be used to convey basic hand hygiene measures such as:

- good hand hygiene is essential in preventing infection from the influenza virus.
• proper hand hygiene should be practised after using the washroom, before and after preparing food or eating, immediately if the hand is used to cover the nose/mouth when coughing or sneezing (although this is not recommended).
• washing with soap and water is as effective as using hand sanitizers and may be more effective if the hands are visibly soiled or soiled with food particles.
• washing with soap and water or using hand sanitizer are most effective when proper technique is used.

SaskPower has incorporated three videos into a practical demonstration and exercise to convey the importance of hand hygiene and proper technique.
The three videos cover:
• When to wash hands.
• Proper use of soap and water.
• Proper selection (must contain 60% or greater, alcohol) and use of waterless hand sanitizer.

In initial presentations, this training has been well received. To complement this training, communication pieces will be issued that stress the importance of good hand hygiene and a poster campaign will be implemented.

SaskPower Hand Hygiene Strategy
SaskPower’s hand hygiene strategy consists of three preventive actions:
1. During a pandemic, SaskPower will ensure that either hand washing facilities or sanitizing supplies are readily available to all workers.
2. SaskPower will ensure that all workers have access to hand sanitizer products based on job hazard and risk evaluation.
3. During a pandemic, persons coming into SaskPower facilities will be asked to sanitize their hands before proceeding.

3.13 Workplace Hygiene
SaskPower business is conducted in a diversity of work environments consisting of offices, open floor administrative areas, retail contact areas, enclosed light and heavy industrial spaces, outdoor workspaces, vehicle interiors, and customer owned businesses and dwellings.

For work environments over which SaskPower does not have control, SaskPower’s pandemic workplace hygiene strategy has two objectives:
1. Identify modified service delivery methods to eliminate potential transmission points of influenza pathogens.
2. Apply appropriate barriers to infection.

For work environments over which SaskPower has control, SaskPower’s pandemic workplace hygiene strategy has four objectives:
1. To use cleaning/sanitizing materials and methods appropriate to the specific work environment, including consideration of the devices, apparatus and equipment in that environment.
2. To use cleaning/sanitizing materials and methods that are recommended or required by Saskatchewan Health.
3. To use, as far as is possible, cleaning/sanitizing materials and methods that do not adversely impact on the workers that must use the workspace.
4. To use, as far as is possible, cleaning/sanitizing materials and methods that do not adversely impact on the environment.

Given the range of work environments SaskPower operates in, it is not possible to prescribe specific cleaning/disinfecting practices that would be suitable for all environments. However, following are some of the measures SaskPower will adopt where applicable:

- Inspect and replace HVAC filters regularly. If filters are to be reused, they should be cleaned with a disinfectant of a type and in the concentration recommended by the filter manufacturer.
- Clean shared devices such as telephone sets or keyboards after each shift.
- Increase the cleaning regimen for all common areas, counters, desktops, door handles, railings, sinks, washrooms, consoles, etc.
- Select and use cleaning materials containing proven virucidal ingredients.

The following are proven virucides acceptable for use. Selection of the specific chemical should be based on the cleaning task and the environment, giving consideration to the four SaskPower workplace hygiene objectives.

- Diluted household bleach (1:50 bleach to tap water ratio) with 1000 parts per million (PPM) of useable bleach.
- Sodium dodecyl sulphate.
- Lipid solvents (e.g., detergents).
- Exposure to propiolactone.
- Other disinfectants: chlorhexidine, ethanol, formalin, iodine compounds, phenolics, and quaternary ammonium compounds.
- Citrus cleaners when used in dilutions recommended by the manufacturer for hospital or laboratory cleaning.
- Other commercially available virucidal cleaners when used in accordance with manufacturers instructions.

Important cleaning considerations:

- Viral inactivation with chemicals is only effective after physical removal of bulk contamination.
- The hazards associated with chemical decontaminants can be avoided if instructions for their use are followed closely and appropriate PPE is worn.
- Always use the safest method possible when disinfecting areas known to be, or suspected of being, contaminated with the virus. For example, if feasible, sealing...
off workspace for 48 hours following the departure of an ill member of staff may be a safer alternative to promptly cleaning the area.

Some individuals may be sensitive to chlorine or other chemical smells and may prefer to use citrus based cleaners. It is important to note that citrus cleaners typically require a longer wet contact time (up to 10 minutes) for effective virucidal action. The table below compares bleach, alcohol, and citrus cleaner.

**Comparison of Three Effective Cleaners**

<table>
<thead>
<tr>
<th><strong>Disinfectants</strong></th>
<th><strong>Recommended use</strong></th>
<th><strong>Precautions</strong></th>
</tr>
</thead>
</table>
| Sodium hypochlorite: (bleach) 1:50 dilution in tap water of 1000 parts per million of available chlorine. | Disinfection of material contaminated with body fluids. | Should be used in well ventilated areas.  
Protective clothing required while handling undiluted bleach  
Do not mix with strong acids to avoid release of chlorine gas.  
Virucidal effect is immediate on wet contact.  
Corrosive to metals.  
Concentrated fumes may cause respiratory tract burns.  
Concentrated fumes may cause eye damage.  
Corrosive to eye tissue if splashed. Requires immediate first aid.  
Corrosive to skin. Requires immediate first aid. |
| Alcohol: e.g. Det-Sol 5000 or Diversol, to be diluted as per manufacturer's instructions. e.g. Isopropyl 70% or higher, ethyl alcohol 60% or higher. | Smooth metal surfaces tabletops and other surfaces on which bleach cannot be used. | Flammable and toxic. To be used in well ventilated areas.  
Avoid inhalation.  
Keep away from heat sources, electrical equipment, flames, and hot surfaces.  
Virucidal effect is immediate on wet contact.  
Allow surfaces to dry completely, before use.  
Causes intense eye irritation if splashed. Requires immediate first aid.  
Causes skin dryness and irritation with repeated exposure. |
Citrus Cleaner:

- Smooth metal surfaces, tabletops and other surfaces on which bleach cannot be used.
- Non flammable and non toxic.
- Virucidal effect requires prolonged period of sustained wet contact.
- May cause eye irritation if splashed.
- May cause skin irritation in high concentrations.

**Other Precautions**

*In some of SaskPower’s work settings, additional steps should be considered to reduce the amount of cleaning chemical use. Some of these measures include:*

- applying silicon or plastic film membranes or covers over keyboards that are shared, so that they can be easily cleaned with the minimum amount of cleaning solution, or,
- supplying keyboards or headsets to workers who have to use shared workstations, so that their personal keyboard or headset can be plugged in to the shared workstation at the beginning of the shift, and removed at shift-end.

**SaskPower Workplace Hygiene Strategy**

*During an influenza pandemic, SaskPower will apply appropriate measures for the regular cleaning of, and if necessary the disinfection of, all workplaces and workspaces with the goal of maintaining, as far as is practicable, an influenza-free environment.*

(SaskPower Influenza Pandemic Preparedness & Business Continuity Plan, 2007).
CUSTODIAL SERVICES
1. Immediately sanitize each all communal areas with Viox 5 (ie: Washrooms, Railings, Doors). (This is also done on a weekly basis)

2. Bleach is used on floors in public washrooms.

3. Prepare all rooms for quarantine of all ill students. A list is provided by ?. All isolation rooms are sanitized daily and then cleaned completely after the student is cleared by clinic

4. Keep an updated list of rooms in need of sanitizing from ?.

5. Remove all bedding from infected student rooms.

6. A note is left in the pit area to notify student on how to retrieve new bedding.

7. Sanitize each room from the list of infected students provided.

8. When a student is allowed to leave the quarantine and/or isolation room, the room is cleaned and sanitized to allow for use by another infected student. The contaminated bedding is removed. The room is remade with clean bedding.

9. All bedding is placed in a separate bag marked and tagged Norovirus to be sent to be laundered. All contaminated laundry is delivered to Wes Fitsimmons laundry service.

10. Any staff with Norovirus related symptoms is required to be tested by a doctor and given a doctors note clearing them of the illness before having allowed back to work. Staff is encouraged to refrain from visits to hospitals, senior’s centers, child care facilities, etc… to prevent spreading the illness.

CUSTODIAL SERVICES ILLNESS OUTBREAK PROTOCOL

Preventive measures:
-Wash your hands!
-Use warm to hot water
-Use soap, don’t just rinse
-Make sure to wash finger tips, thumbs and between fingers; not just your palms for at least 20 sec.

Custodial staff duties:
Daily: disinfect all washrooms and body points as outlined in General Washroom Sanitation
Weekly: - disinfect all washrooms and common contact surfaces with mixture of water and Virox 5. (1/16)
- wash all washroom floors with mixture of water and bleach. (1/50)

Cleaning Protocol for illness outbreak:
The following precautions should be followed as outlined to protect yourself when cleaning/
Mandatory: Disposable gloves & shoe covers must be worn when cleaning contaminated areas
Optional: We will also provide disposable face masks & gowns if you chose to wear.

Personal protective equipment should be changed if soiled or torn.

Always use proper hand washing when moving between rooms/pits while cleaning and again once job is completed.

Disposable towels and/or absorbing powder should be used to soak up excess liquid (Blood, vomit, feces).

All collected waste material must be disposed into double plastic bag and sealed.

When cleaning is completed dispose of gloves, face mask, apron in double garbage bag and seal.

***Do not leave these items sitting around. Once job is completed they should be taken directly to the waste bins outside the buildings.***
Appendix N: Differentiating Influenza from a Common Cold

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>INFLUENZA</th>
<th>COMMON COLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>Usual, sudden onset 38-40 degrees and lasts 3-4 days</td>
<td>Rare</td>
</tr>
<tr>
<td>Headache</td>
<td>Usual and can be severe</td>
<td>Rare</td>
</tr>
<tr>
<td>Aches and pains</td>
<td>Usual and can be severe</td>
<td>Rare</td>
</tr>
<tr>
<td>Fatigue and weakness</td>
<td>Usual and can last 2-3 weeks or more after the acute illness</td>
<td>Sometimes, but mild</td>
</tr>
<tr>
<td>Debilitating fatigue</td>
<td>Usual, early onset can be severe</td>
<td>Rare</td>
</tr>
<tr>
<td>Nausea, vomiting, diarrhea</td>
<td>In children &lt; 5 years old</td>
<td>Rare</td>
</tr>
<tr>
<td>Watering of the eyes</td>
<td>Rare</td>
<td>Usual</td>
</tr>
<tr>
<td>Runny, stuffy nose</td>
<td>Rare</td>
<td>Usual</td>
</tr>
<tr>
<td>Sneezing</td>
<td>Rare in early stages</td>
<td>Usual</td>
</tr>
<tr>
<td>Sore throat</td>
<td>Usual</td>
<td>Usual</td>
</tr>
<tr>
<td>Chest discomfort</td>
<td>Usual and can be severe</td>
<td>Sometimes, but mild to moderate</td>
</tr>
<tr>
<td>Complications</td>
<td>Respiratory failure; can worsen a current chronic condition; can be life threatening</td>
<td>Congestion or ear-ache</td>
</tr>
<tr>
<td>Fatalities</td>
<td>Well recognized</td>
<td>Not reported</td>
</tr>
<tr>
<td>Prevention</td>
<td>Influenza vaccine; frequent hand-washing; cover your cough</td>
<td>Frequent hand-washing; cover your cough</td>
</tr>
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</table>

Source: Canadian Manufactures and Exporters, 2006
PROTECTING YOURSELF AND OTHERS AGAINST RESPIRATORY ILLNESS

- HANDWASHING IS THE MOST IMPORTANT THING YOU CAN DO TO PROTECT YOURSELF

- Cover your nose and mouth when coughing or sneezing
  - Use a tissue and dispose of this once used in the waste
  - Always wash hands after coughing and sneezing or disposing of tissues.

- Keep your hands away from your mouth, nose and eyes.

- Avoid contact with individuals at risk (e.g. small children or those with underlying or chronic illnesses such as immune suppression or lung disease) until influenza-like symptoms have resolved.

- Avoid contact with people who have influenza-like symptoms.

- Ask people to use a tissue and cover their nose and mouth when coughing or sneezing and to wash their hands afterwards.

Source: Canadian Manufactures and Exporters, 2006
### Hand Hygiene with Alcohol-based Hand Sanitizer

<table>
<thead>
<tr>
<th>1. Remove jewelry. Apply enough product to open palms.**</th>
<th>2. Rub hands together palms to palms</th>
<th>3. Rub in between and around fingers</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
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<table>
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<tr>
<th>4. Cover all surfaces of the hands and fingers</th>
<th>5. Rub backs of hands and fingers. Rub each thumb.</th>
<th>6. Rub fingertips of each hand in opposite palm</th>
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<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
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7. Keep rubbing until hands are dry.

**The volume required to be effective varies from product to product. Enough product to keep hands moist for 15 seconds should be applied.

Do not use these products with water. Do not use paper towels to dry hands.

**Note:** Wash hands with soap and water if hands are visibly dirty or contaminated with blood or other body fluids. Certain manufacturers recommend washing hands with soap and water after 5-10 applications of gel.

Source: Canadian Manufactures and Exporters, 2006
## Appendix Q: IPFW IT Plans

### Influenza Pandemic: Information Technology Services, Telephone Operations, Shipping & Receiving, & Campus Vendor Plans

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<tr>
<th>IPFW Pandemic Preparedness Plan - ITS, Telephone Operations, Shipping &amp; Receiving, Campus Vendors</th>
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**H5N1 and Beyond**

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# Appendices

## IPFW Pandemic Preparedness Plan - ITS

### Telephone Operations, Shipping & Receiving, Campus Vendors

|-----------------------------|-----------------------|------------------------------------------|---------------------------------------|-----------------------------------------|-----------------------------------------------|----------------|-----------------------------------------------|

### Support Services

- Technical support services: Instructional/Information Technology monitoring and support team for help desk, instructional services, and network services. Provide technical support for information technology services and network access. Support remote and non-standardized help desk services.
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### Contact Information

- Phone: 260-481-6100
- Email: itsplanning@ipfw.edu
- Website: http://itplanning.ipfw.edu/pandemic

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*IPFW Pandemic Preparedness Plan - ITS - A35*