"An Investigation into the Management of the Swine Flu in the Education Sector with a view to Assessing the Policies and Procedures and looking at their Effectiveness in Reducing the Spread of Pandemic H1N1 (Swine Flu)"

By Noelle Sheridan.

This project is submitted in part of the Institute of Technology, Sligo requirement for the award of Masters in Environmental Health and Safety Management.

August 2010.

Project Supervisor: Dr. Tony Partridge

Sligo
An Institiúid Teicneolaíochta, Sligeach

I.T. Sligo
M027681

Declaration.

Declaration of Ownership: I declare that the attached work is entirely my own and that all sources have been acknowledged.

Signed:_____

Date:_____

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Acknowledgements.

I would like to take this opportunity to thank everybody who helped me throughout this project especially:

My family and friends who supported me throughout the completion of the dissertation.

I would also like to thank the team of scientists in the Department of Public Health who worked very hard to obtain facts and figures for cases and rates of Pandemic H1N1 in the North West their help was extremely appreciated.

The main person I would like to thank is my project supervisor Dr. Tony Partridge whose help and guidance was invaluable throughout the entire process.

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Abstract:

This Dissertation examines and contrasts the international, national and local polices on Pandemic H1N1 during the recent (2009) emergency, with a specific focus on the implications for the third level education sector. Plans are reviewed internationally, then nationally and then locally by investigating Pandemic plans of the World Health Organisation (WHO), of the Health Service Executive (HSE) in Ireland and the plan of the Institute of Technology (I.T.) Sligo.

The plans are compared and contrasted to investigate whether Ireland's plans are properly derived from the international guidance and, then, I.T. Sligo Pandemic Plan is compared with the national guidance.

It is shown that Ireland complied with the international guidance when preparing the national Pandemic Plan. It is also shown that, except for one element, the I.T. Sligo plan complied with the national guidance when creating their own Pandemic Plan. I.T. Sligo did not comply with one section of the HSE guidance "Guidance for Third Level Institutions".

The actual implementation of local policy is investigated by looking specifically at the I.T. Sligo plan. I.T. Sligo is a third-level educational institution. Implementation of the plan is demonstrated using different qualitative research methods, these being a comparative analysis, a questionnaire, an interview and a physical examination of four different areas within the institute. An evaluation of the effectiveness of the implementation is presented.

Overall the dissertation demonstrates that I.T. Sligo implemented its Pandemic H1N1 Plan apart from one element of the health care plan this being the telephone triage system as a means of patient assessment which is demonstrated in the I.T. Sligo Health care plan.

The incidence of Pandemic H1N1 in Ireland is contrasted and compared with levels in the North West. The North West contributed significantly to the level of cases in the entire republic. Also, one fifth of all persons that were infected in Ireland, and in the North West, were between the ages of 17-23 years.

This research demonstrates that locally, nationally and internationally we were prepared for Pandemic H1N1 and all the relevant plans were put into action when pandemic H1N1 first emerged. However, the national and local plans had specific areas which could be improved.

ITSligo An Institiúid Teicneolaíochta, Sligeach

Table of Contents

IT Sligo An Institiúid Teicneolaíochta, Sligeach

An Institiúid Teicneolaíochta, Sligeach

IT Sligo An Institiúid Teicneolaíochta, Sligeach

An Institiúid Teicneolaíochta, Sligeach

Sligo An Institiúid Teicneolaíochta, Sligeach

Sligo An Institiúid Teicneolaíochta, Sligeach

List of Tables:

Chapter 2:

Chapter 3:

ITSligo An Institiúid Teicneolaíochta, Sligeach

Chapter 4:

Chapter 6:

List of Figures:

Chapter 2:

Chapter 5:

IT Sligo An Institiúid Teicneolaíochta, Sligeach

Chapter 6:

An Institiúid Teicneolaíochta, Sligeach

Chapter One:

Introduction

ITSligo
An Institiúid Teicneolaíochta, Sligeach

1.0 Introduction:

The overall aim of this dissertation is to investigate, and contrast, the international, the national and the local policies on pandemic H1N1 during the recent (2009) emergency. It also seeks to investigate the implementation of local policy, looking specifically at the Institute of Technology (IT) Sligo, a third-level educational institution.

Overall the different sections will investigate the following:

- A review of International Pandemic Preparedness and Response plans to investigate globally was the World Health Organisation (WHO) prepared and able to respond to Pandemic H1N1.
- A Review of the National Pandemic Plans and the subsequent investigation as whether or not Ireland put their National Pandemic Influenza Plan into action when swine flu reached the country.
- A comparison between international and national plans and then between local Plans to ensure cohesiveness between plans and to ensure that guidance is followed.
- To discuss the National guidance, the national guidance that is specifically aimed at educational institutions for pandemic H1N1 and to discuss whether or not the guidance is effectively used by I.T. Sligo to prepare their plan.
- An overall assessment of the implementation of the I.T. Sligo Pandemic H1N1 plan. This includes an individual assessment of the I.T. Sligo's communication plan, health care plan and an assessment of the physical implementation of infection control techniques within the college.
- To compare, contrast and effectively analyse the numbers of confirmed laboratory cases in the North West of the country with the rest of the republic.
- To investigate the peak time of the pandemic H1N1 in Ireland September right through to December 2009 and to compare the spread of infection versus the severity of the Pandemic itself.

The dissertation follows the following format:

- The literature review will demonstrate the plans in place globally, by the WHO in relation to Pandemic Preparedness and Response. The second part of the literature review will examine Irish guidance in relation to Pandemic preparedness and Response and will also look at national guidance for educational Institutions in relation to pandemic H1N1. The third and final part of the Literature review will go through the entire I.T. Sligo Pandemic Plan for Pandemic H1N1.

- The third section 'Comparisons' will compare and contrast firstly International Pandemic preparedness plans with National Preparedness plans and investigate the similarities between plans to ensure that Ireland followed guidance from the WHO when creating their pandemic plan. Secondly the National guidance is compared between the I.T. Sligo Pandemic Plans to ensure that I.T. Sligo is following national guidance for Educational Institutions.

- Chapter four demonstrates the methodology for the Implementation of the I.T. Sligo Pandemic Plan.

- Chapter five demonstrates the actual implementation of the I.T. Sligo Pandemic Plan.

- Chapter six will examine and discuss the cases and rates of Pandemic H1N1 in Ireland and the North West and make a comparison.

- Chapter seven is the overall discussion that will critically analyse all information discussed in previous chapters and will ensure that the overall objectives (mentioned above) of the dissertation are met.

- Chapter eight demonstrates the overall conclusions that have been made due to this research and recommends actions to be taken to improve International plans, National plans and the I.T. Sligo Pandemic plan.

An Institiúid Teicneolaíochta, Sligeach

What is Pandemic H1N1?

Pandemic H1N1 or Influenza A(H1N1) as it was previously known is an acute respiratory illness. Pandemic H1N1 is an influenza virus that had never been identified as a cause of infections in people before the current H1N1 pandemic. Genetic analyses of this virus have shown that it originated from animal influenza viruses and is unrelated to the human seasonal H1N1 viruses that have been in general circulation among people since 1977.

After early outbreaks in North America in April 2009 the new influenza virus spread rapidly around the world. By the time WHO declared a pandemic in June 2009, a total of 74 countries and territories had reported laboratory confirmed infections. To date, most countries in the world have confirmed infections from the new virus.

The Pandemic H1N1 virus is spread from person to person, similar to seasonal influenza viruses. It is transmitted as easily as the normal seasonal flu and can be passed to other people by exposure to infected droplets expelled by coughing or sneezing that can be inhaled, or that can contaminate hands or surfaces.

(WHO 2010 FAQ's)

Pandemic (H1N1) 2009 can cause problems in people in certain at-risk groups, and these include people with chronic respiratory, heart, kidney, liver or neurological disease; immunosuppression (whether caused by disease or treatment); diabetes mellitus; haemoglobinopathies; people aged 65 years and older; children under 5 years old; people on medication for asthma, severely obese people (BMI $\geq$40) and pregnant women.

(HSE Pandemic (H1N1) update 2009)

To date over 18,000 deaths have occurred worldwide due to pandemic H1N1, In Ireland there has been 26 deaths due to the pandemic and over 4,500 laboratory confirmed cases.

(HPSC 2010 Influenza Surveillance in Ireland Weekly Update week 20)

In October when Ireland reached its peak i.e. the highest level of confirmed cases of pandemic in one week period (week 42) the highest amount of cases were attributed to educational institutions.

(HPSC 2009 Influenza Surveillance in Ireland Weekly Update week42))

IT Sligo An Institiúid Teicneolaíochta, Sligeach

Educational Institutions are of particular importance as they are communal areas where young people meet on a regular basis and the risk of spread of infection is heightened

A large section of this dissertation will review the Institute of Technology's plan for pandemic H1N1 and assess its implementation throughout the college, whilst comparing the colleges plan for Pandemic H1N1 against national guidance to ensure I.T. Sligo followed national guidance.

Previous pandemics that occurred in the 1900's, the most severe being the 'Spanish Flu' which has been estimated to have killed 50 million people and possibly even as much as 100 million people, have shown the devastating effects of Pandemics and reiterates the need for plans Globally, nationally and locally to control spread of an influenza pandemic and reduce morbidity and deaths associated with influenza pandemic throughout the world.

That is why it is vitally important to assess the plans and polices that are in place throughout the World, in Ireland in educational institutions.

An Institiúid Teicneolaíochta, Sligeach

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Chapter 2.0

Literature Review

Chapter 2.0 Literature Review:

2.1 International policies for Pandemic H1N1.

2.1.1 History of WHO Guidance for Preparedness and response.

Since 1999 the World Health Organisation has developed guidance for national authorities when developing their own national preparedness and response plans.

The first guidance document created by the WHO in 1999 was entitled *'Influenza pandemic plan. The role of WHO and guidelines for national and regional Planning'.*

This guidance defined phases of disease progression that could be expected after human infection with a new human influenza virus subtype, outlined measures that would be taken by WHO during these phases, suggested issues that should be considered by national authorities, and provided background information.

(WHO 2005)

However this guidance needed to be updated for a number of reasons one being the

- The animal infection with an influenza virus subtype (H5N1) was recognised that had caused deaths across the world
- Also advances in the understanding of viruses and their biology
- New techniques for vaccine development
- Improved antivirals
- On going revision of the International Health Regulations

(WHO 2005)

Due to all of the above there was a need to update the guidance. In 2005 the 1999 guidance was updated by the WHO and the document was entitled

'WHO global influenza Preparedness plan. The role of WHO and recommendations for national measures before and during pandemic'

An Institiúid Teicneolaíochta, Sligeach

The main changes from the 1999 guidance that were placed in the 2005 guidance were as follows:

- Pandemic phases are re-defined based on the need for changes in public health action,
- Greater attention is focused on early phases when rapid intervention might contain or delay the spread of a new influenza virus subtype in humans.
- More specific objectives and activities at each phase for WHO and national authorities are provided in this guidance.
- Harmonization of the recommended measures with the ongoing revision of the International Health Regulations is also provided in this guidance

(WHO 2005)

In 2009 further guidance was created by the WHO in relation to Pandemic Planning and response this is the most recent guidance document and is entitled

'Pandemic Influenza Preparedness and response. A WHO guidance document'

This guidance was introduced to update the 2005 guidance. There were a number of reasons why the 2005 guidance had to be updated, these being

Since 2005, there have been advances in many areas of preparedness and response planning. For example, stockpiles of antiviral drugs are now a reality and a WHO guideline has been developed to attempt to stop or delay pandemic influenza at its initial emergence.

- There is increased understanding of past pandemics, strengthened outbreak communications, greater insight on disease spread and approaches to control.
- Practical experience has been gained from responding to outbreaks of highly pathogenic avian influenza A (H5N1) virus infection in poultry and humans, and from conducting pandemic preparedness and response exercises in many countries.

An Institiúid Teicneolaíochta, Sligeach

- In 2007, the International Health Regulations (2005) (IHR, 2005) entered into force providing the international community with a framework to address international public health concerns.

(WHO GAR 2009)

This section has given an overview of the history of the World Health Organisations Pandemic Preparedness and Response plans. The following sections are going to go through the important elements of both the 2005 guidance and the guidance in 2009. It is important to conclude from this section and make the point that the guidance in 1999, 2005 and 2009 are very similar in structure. It is clear to see that the guidance needed to be updated due to continued information and surveillance that has been made available as the level of pandemics increase the more guidance and information on surveillance and control will be available. Globally we learn from pandemics.

2.1.2 WHO global Influenza Preparedness plan:

2.1.2.1 Introduction

The previous section discussing the history of WHO guidance documents explained why the 2005 was introduced and subsequently why the 2005 guidance was updated. It may not be clear as to why the 2005 guidance is being reviewed in detail. The answer is simple it is because Irelands National Pandemic Influenza Plan 2007 is based on recommendations from the 2005 WHO guidance. The aim is carry out a review of the 2005 guidance and also to carry out a review of the national pandemic influenza plan (which will be done in the next chapter) and to then compare the international and national plans to ensure that Ireland did follow the advice.

2.1.2.2 Overview of 2005 guidance

The 2005 guidance was created to assist WHO Member States and those responsible for public health, medical and emergency preparedness to respond to threats and occurrences of pandemic influenza.

(WHO 2005 exec summary)

This 2005 plan redefines the phases of increasing public health risk associated with the emergence of a new influenza virus subtype that may pose a pandemic threat,

An Institiúid Teicneolaíochta, Sligeach

recommends actions for national authorities, and outlines measures to be taken by WHO during each phase. This should result in greater predictability of the measures to be taken by the various partners involved, including WHO, during the different phases of the pandemic, and should improve international coordination and transparency in recommended national measures. Guidance is also provided to national authorities for developing their own pandemic plans in line with these phases.

(WHO 2005 exec summary)

Every country is strongly urged to develop or update a national influenza preparedness plan according to the recommendations contained in the 2005 guidance.

Each national authority should play its part towards achieving the international harmonization of preparedness measures, as this is the key to success in reducing the risk of spread of an influenza pandemic.

(WHO 2005 exec summary)

2.1.2.3 Phases of Pandemic 2005:

The phases of pandemic are redefined in the 2005 guidance based on the need for changes in public health action, also due to the health risks of influenza infection in animals. The phases are also redefined to link phase changes more directly with changes in public health response, and also to focus on early events during a "pandemic alert" period when rapid, coordinated global and national actions might help to possibly contain or delay the spread of a new human influenza strain.

(WHO 2005 exec summary)

There are three different levels of pandemic in the 2005 guidance and the six phase structure was split up into these different periods and these are:

- Interpandemic Period (This contains phase 1 and phase 2)
- Pandemic alert period (this contains phases 3,4&5)
- Pandemic period (this contains phase 6)

An Institiúid Teicneolaíochta, Sligeach

Interpandemic period:

This is the period that contains the phases number 1 and 2

Interpandemic Period
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 animals, the risk of human infection or disease is considered to be low.
Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus detect and poses a substantial risk of human disease.

Table 2.1 Explanation of Interpandemic Period: Phases 1 & 2.

Pandemic Alert Period

This period contains the phase's numbers 3, 4 &5.

Pandemic alert period
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.
Phase 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
Phase 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

Table 2.1 Explanation of Pandemic Alert Period: Phases 3, 4&5.

An Institiúid Teicneolaíochta, Sligeach

Pandemic Period

This period contains phase 6:

Pandemic Period
Phase 6: Increased and sustained transmission in the general population.

Table 2.1 Explanation of Pandemic Period: Phase 6.

(WHO 2005)

2.1.2.4 Overarching goals for each phase:

This guidance provided an overarching goal for each phase and these are as follows:

Interpandemic Period:

Phase 1: *'Strengthen influenza pandemic preparedness at the global, regional, national and sub- national levels'.*

Phase 2: *'Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs'*

Pandemic Alert Period

Phase 3: *'Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases'.*

Phase 4: *'Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development'.*

Phase 5: *'Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures'.*

Pandemic Period

Phase 6: *' Minimize the impact of the pandemic'*

An Institiúid Teicneolaíochta, Sligeach

(WHO 2005)

2.1.2.5 WHO objectives and actions:

The WHO sets out an overarching for each phase (which was mentioned above) and then the WHO presents their objectives and actions to meet the overarching aim(s).

The WHO also gives objectives and actions that national authorities should take on board for each phase.

Objectives and actions are divided into five categories:

- Planning and coordination
- Situation monitoring and assessment
- Prevention and containment (non-pharmaceutical public health interventions, vaccines, and antivirals)
- Health system response
- Communications

Interpandemic Period:

Phase 1 national objective:

These are national objectives that are recommended to be put into place to reach the overarching goal which is to strengthen influenza pandemic preparedness at the global, regional, and national and sub national levels'.

The recommendations are quite long and detailed so this will demonstrate a national objective from each category (mentioned in 2.1.4.5) they are as follows:

- To develop and maintain national influenza pandemic contingency plans which are in harmony with international plans.
- To have available up-to-date information on trends in human infection with seasonal strains of influenza.
- To agree in advance a range of containment strategies based on non-pharmaceutical public health actions.

An Institiúid Teicneolaíochta, Sligeach

- To ensure that up-to-date contingency plans and strategies are in place for pandemic response in the health-care sector.
- To ensure that mechanisms exist for routine and emergency communications between health authorities, within and between government agencies, with other organizations likely to be involved in a pandemic response, and with the public.

Phase 2 National Objectives

These are national objectives that are recommended to be put into place to reach the overarching goal which is to minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs.

There is one objective from each category:

- To ensure a heightened response capacity to address possible human cases.
- To identify interspecies transmission at an early stage and transmit this information to WHO and other appropriate partners.
- To assess the national availability of antiviral drugs.
- To ensure that if human infections occur, they will be quickly recognized and that health system will respond appropriately.
- To ensure that appropriate information is shared rapidly among health authorities, other partners and the public.

Pandemic alert period

Phase 3 National objectives

This is an overview of the main national objectives set out by the WHO to ensure that countries have rapid characterization of the new virus subtype and early detection, notification and response to additional cases'.

The following is one objective from each category at phase 3:

An Institiúid Teicneolaíochta, Sligeach

- To ensure that mechanisms exist so that imminent potential human health threats can be recognized and dealt with.
- To be able to exclude wider human-to-human transmission, and to detect this as soon as it occurs.
- To limit morbidity and mortality associated with current human infections.
- To ensure heightened awareness among healthcare workers regarding the possibility of cases and/or clusters of cases.
- To communicate transparently with the public regarding possible outbreak progression and contingencies to be expected.

Phase 4 National Objectives

This is an overview of the main national objectives set out by the WHO to ensure that countries contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.

The following is one objective from each category at phase 4:

- To ensure that systems exist to detect and characterize outbreaks, and assess the risk of escalation into a pandemic.
- To assess the extent of human-to-human transmission
- To limit morbidity and mortality associated with current human infections.
- To ensure capacity is available and used optimally in affected countries.
- To prepare the public and partners for a possible rapid progression of events and possible contingency measures.

Phase 5 national objectives

This is an overview of the main national objectives set out by the WHO to ensure that efforts are made to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures.

An Institiúid Teicneolaíochta, Sligeach

The following is one objective from each category at phase 5:

- To coordinate and ensure maximum efforts to delay or possibly avert a pandemic.
- To determine pandemic risk and exclude spread to other countries/regions and to identify this as soon as it occurs.
- To make massive efforts to contain or delay human-to-human virus transmission and the onset of a pandemic.
- To ensure that health systems are ready to scale up response and implement changes in triage and treatment priorities, and that these actions occur as soon as a country becomes affected.
- To prepare the public and other partners for a likely rapid progression of events, additional contingency measures, and disruptions to normal life.

Pandemic alert period

Phase 6 national objectives

This is an overview of the main national objectives set out by the WHO to ensure that the impact of the pandemic is minimised.

Affected countries should follow the recommendations given in this chapter. Unaffected countries are advised to prepare to implement these recommendations rapidly, especially if they have extensive trade/travel links with affected countries.

The following is one objective from each category at phase 5:

- To provide leadership and coordination of multi-sectoral resources that will: minimize morbidity and mortality; preserve health-care system effectiveness; minimize societal disruption; and minimize the economic impact of a pandemic.

Sligo An Institiúid Teicneolaíochta, Sligeach

- To monitor the epidemiological, virological and clinical features, and the course and impact of the pandemic at the national level, in order to forecast trends and optimize the use of finite resources.

- To minimize morbidity and mortality through the rational use of available pharmaceuticals, e.g. vaccines and antivirals.

- To optimize patient care with limited resources.

- To ensure public access to regularly-updated official national sources and focal points for credible, consistent information related to the pandemic.

2.1.3 'Pandemic Influenza Preparedness and Response: A WHO guidance document' 2009.

2.1.3.1 Introduction

This guidance document entitled 'Pandemic Influenza Preparedness and Response: A WHO guidance document' was developed with an intention to help and give guidance to individual countries when preparing or updating their national pandemic preparedness and response plans.

As discussed in a previous section it is an updated version of the 2005 guidance *'WHO global Influenza Preparedness plan'*

This document should be used as a guide to inform and harmonize national and international preparedness and response before, during and after an influenza pandemic. Countries should develop or update national influenza preparedness and response plans that address the recommendations in this Guidance. This document is not intended to replace national plans which should be developed by each country.

(WHO 2009 'executive summary)

This Guidance serves as the core strategic document in a suite of materials. It is supported by a complement of pandemic preparedness materials and tools.

The main changes that arise in this guidance in comparison to the 2005 guidance are as follows:

1. Retains the six-phase structure but regroups and redefines the phases to more accurately reflect pandemic risk and the epidemiological situation based upon observable phenomena.

2. Highlights the key principles when undertaking pandemic planning including:

- Application of ethical principles to assist policymakers in balancing a range of interests and protecting human rights;
- Integration of pandemic preparedness and response into national emergency frameworks to encourage sustainable preparedness;
- Incorporation of a "whole of society" approach that emphasizes not only the central role played by the health sector, but also the significant roles of other sectors such as businesses, families, communities and individuals.

3. Harmonizes the recommended measures with the IHR 2005 and the concurrent development/revision of WHO guidance in related areas such as pandemic influenza surveillance, disease control measures, rapid containment and communications.

4. Includes suggested planning assumptions, their implications and a selected evidence base to aide planning efforts on a national level.

(WHO 2009 executive summary)

All countries need a pandemic preparedness and response plan in place, this is to ensure that they are pro-active in their approach to managing pandemics i.e. reducing sickness and reducing death to a minimum. They also need a plan in place to ensure that when a pandemic outbreak occurs that the country can run efficiently and effectively as possible.

This is the WHO area of expertise; it gives Ireland and other countries guidance in how to prepare for pandemics.

An Institiúid Teicneolaíochta, Sligeach

This document also shows how the WHO is preparing for a potential pandemic.

The structure of the 2009 guidance is:

- Introduction to the WHO guidance
- Background
- Roles and responsibilities in preparedness and response
- The WHO pandemic phases
- Recommended actions before, after and during a pandemic.

2.1.3.2 Differences between Guidance in 2005 and guidance in 2010

It can be observed that essentially the 2009 document is similar in structure to the 2005 document the similarities being that the WHO gives their individual actions at each phase, and still gives recommended actions to nations at each stage under the different preparedness and response headings. However there are differences between the two documents which are demonstrated below:

- Revision and re-grouping of pandemic phases
- Addition of two entirely new phases (post peak period and post pandemic period)
- There is an entire dedicated section on a 'whole of society' roles and responsibilities in preparedness and response which was absent from the 2005 guidance.

The following sections are going to discuss these in greater detail:

2.1.3.2.1 Roles and responsibilities in preparedness and response:

A whole of society approach has been adopted when countries are preparing for and responding to pandemics. The WHO also documents their duties in pandemic preparedness and response plans. This gives everybody responsibilities for managing and mitigating pandemics.

An Institiúid Teicneolaíochta, Sligeach

An overview of the sectors and their responsibilities are as follows:

- The national government is the natural leader for communication and overall coordination efforts. Central governments should work to put in place the necessary legislation, policies and resources for pandemic preparedness, capacity development and anticipated response efforts across all sectors.
- The health sector (including public health and health care services) provides critical epidemiological, clinical and virological information which, in turn, informs measures to reduce spread of the pandemic virus and its attendant morbidity and mortality.
- The diverse array of non-health sectors must provide essential operations and services during a pandemic to mitigate health, economic and social impacts
- Civil society organizations are often well placed to raise awareness, communicate accurate information, counter rumours, provide needed services, and liaise with the government during an emergency. (This is the section that educational institutions would fall under i.e. this is I.T. Sligo's responsibilities in Preparedness and response.)
- Families and individuals can help reduce the spread of pandemic influenza through adoption of measures such as covering coughs and sneezes, hand washing, and the voluntary isolation of persons with respiratory illness.

(WHO 2009 Executive summary)

The WHO also has duties under this guidance to ensure that there is adequate pandemic preparedness and response internationally. These measures are as follows:

- Coordination of the international public health response under IHR 2005.
- Designation of the current global pandemic phase.
- Selection of the pandemic vaccine strain and recommendation of timing to start pandemic vaccine production.
- Assistance to national pandemic rapid containment efforts.
- Assessment of pandemic severity

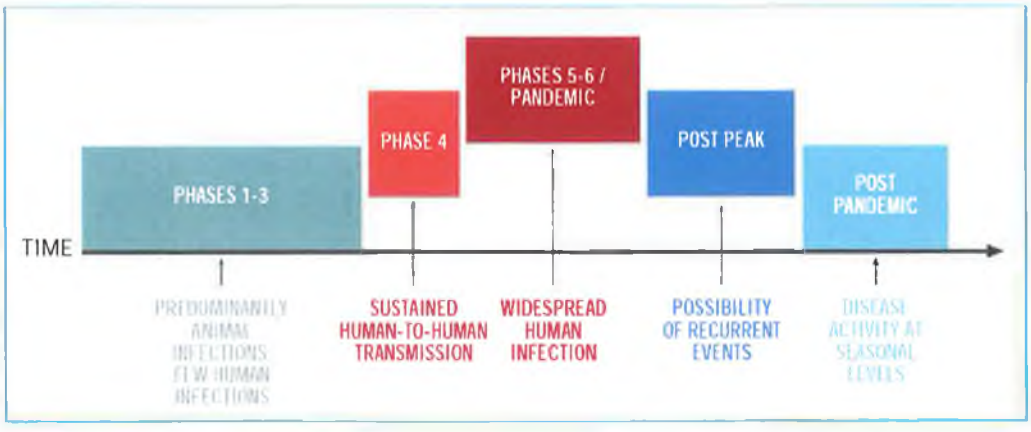
ITSligo An Institiúid Teicneolaíochta, Sligeach

- Global aggregation of key epidemiologic, virologic, and clinical information about the pandemic virus to help national authorities in deciding the optimal response.
- Provision of guidance and technical assistance.

(WHO 2009 Executive summary)

2.1.3.2.2 WHO Pandemic Phases:

The phases are applicable globally and provide a framework to aid countries in pandemic preparedness and response planning. The use of a six-phased approach has been retained to facilitate incorporation of new recommendations into existing national plans. However, the pandemic phases have been re-defined, to facilitate planning at national and global levels, Phases 1-3 and 5-6 have been grouped to include common action points. In addition, the time after the first pandemic wave has been elaborated into post peak and post pandemic periods. When making a change to the global phase, WHO will carefully consider all available information to assess if the criteria for a new phase have been met.



(Figure 2.1 WHO 2009 Pandemic Influenza Phases)

The phases still retains it 6 phase structure of 2005, however difference can be seen between the ways the phases were grouped.

Phase 1-3 are grouped together with one overarching goal for all three phases and this is to strengthen pandemic preparedness and response capacities at global, regional, national and sub-national levels.

Phase 4 is individual and has the overarching goal of containment of the new virus within a limited area or the delay of its spread.

Phase 5-6 are grouped together with a one overarching goal for both phases this is to shift the action from preparedness to response at a global level to reduce the impact of the pandemic.

The post peak period is a new phase of a pandemic introduced in 2009 and is when the first wave of a pandemic is complete. At this stage the WHO and countries are recommended to focus on addressing the health and social impact of the pandemic as well as preparation for a possible future pandemic wave(s).

The post pandemic period is also a new phase to the 2009 guidance and the overarching goal is to restore normal health and social functions while addressing the long-term health and social impact of the pandemic.

The WHO demonstrates their own actions and recommends actions that should be taken by countries under slightly different preparedness and response categories to the 2005 guidance:

1. Planning and coordination
2. Situation monitoring and assessment
3. Reducing the spread of disease
4. Continuity of health care provision
5. Communications

(WHO 2009)

An Institiúid Teicneolaíochta, Sligeach

2.1.4 Discussion of International guidance:

It may seem interesting to discuss both International WHO policy documents, both the 2005 and the 2009 guidance. However it is essential to discuss both plans because Irelands National Pandemic Influenza Plan was created due to the recommendations based in the 2005 guidance. Therefore it is important to discuss elements of the 2005 guidance. It is also important as the 2009 document is similar to the 2005 document. The reason why the 2009 guidance was developed is because the WHO and other agencies are always re-searching and finding new developments in pandemic preparedness and response, methods for containment, vaccines etc. Globally we obtained a lot of information and this will lead to better and more efficient guidance.

Globally and nationally a lot should be learnt from the pandemic H1N1 in relation to preparedness and response. In 2014 the WHO will update their guidance also and that guidance will reflect on areas of improvement from the Swine flu pandemic of 2009/10.

The guidance of 2009 is important as it introduces the 'whole of society' approach and gives clear roles to the government, health sectors non health sectors and individuals and families to mitigate the effects of a pandemic and also shows clear roles the WHO have under pandemic preparedness and response..

Developing capacities for mitigating the effects of a pandemic, including robust contingency and business continuity plans is at the heart of preparing the whole of society for a pandemic.

There are activities that apply to all sectors these are; capacity development, planning, coordination and communication.

All sectors need communication it is essential to mitigating the effects of a pandemic; in Ireland for example the government (Department of Health and Children DOHC) allocate responsibilities and funding for pandemic planning and response and communicate policies and work in conjunction with the Health Service (HSE) in Ireland.

Sligo An Institiúid Teicneolaíochta, Sligeach

The HSE during the pandemic provided information regularly on their website, through television statements and news and provided information to the public, educational institutions and all sectors of society about the Pandemic H1N1. The HSE have a range of documents for the educational institutions which will be discussed later in the research. I.T. Sligo has taken the recommendations from the HSE and provided the information to the students, staff and community alike. This shows that Communication is vital and dominant throughout both International Plans.

The aim of the review of the WHO global pandemic preparedness and response plans of 2005 and 2009 is to demonstrate that the World Health Organisation is capable and providing the information that will actually help reduce the effect of a pandemic on the world.

Ireland and all other 196 countries under the WHO's control are depending on the guidance and the actions from the WHO to reduce the effect of a pandemic. There guidance has to be very detailed and controlled and actually provide information that works to help countries be prepared for a pandemic.

Countries also depend on the WHO to play their part in pandemic preparedness and response.

Chapter 3 will compare Irelands Plan with the WHO 2005 plan to investigate the similarities between plans.

The following chapter is a review the national (Irish) plans in relation to pandemic H1N1.

ITSligo An Institiúid Teicneolaíochta, Sligeach

2.2 National Policies for Pandemic H1N1:

2.2.1 Introduction

This chapter will review Irish plans and policies in relation to minimising the effect of pandemic H1N1 on the country. Before Ireland plans and policies can be evaluated. Firstly each plan and policy will have to be reviewed.

This section will review in turn four different policies and plans that were introduced in Ireland to ensure that when a pandemic reaches Ireland that we are prepared as a nation for a pandemic.

Four plans and policies will be reviewed these being:

- National Pandemic Influenza Plan:
- Pandemic Preparedness for Ireland
- Guidance for Third Level Institutions in Preparing for Pandemic (H1N1) 2009 (Swine Flu)
- "Public Health Guidance Document" for Residential Educational Institutions.

2.2.2 National Pandemic Influenza Plan

2.2.2.1 Introduction

The Health Service Executive (HSE) together with the Department of Health and Children (DOHC) published the National Pandemic Influenza Plan and Pandemic Influenza Preparedness for Ireland - Advice of the Pandemic Influenza Expert Group on January 15th, 2007.

Ireland needs to be ready for any influenza or pandemic that may enter the country and disrupt normal working practices. The Irish government need a plan on how to deal with pandemics if and when they are to enter Ireland. This is exactly what this National Pandemic Influenza Plan intends to do.

The Department Of Health and Children (DOHC) is the main government body that is dealing with Pandemics influenzas and the Health Service Executive (HSE) is Ireland's main agency for health and deals with pandemic influenzas within the country. The Health Protection Surveillance Centre (HPSC) is the main agency in the country for surveillance and information of pandemics and other diseases within the country. All agencies work together to prepare and respond to potential pandemics.

Plans have been developed from the work of expert groups (PIEG) on vaccines and antiviral medicines, surveillance, communications, case management, laboratory operation, personnel and supplies. This was looked at in the previous chapter.

The purpose of the National Pandemic Influenza Plan 2007 is to limit the effects of a potential pandemic, inform the public about pandemic influenza, and explain what the Government and the health services is doing to prepare for a possible pandemic and give information on what members of the public need to do if there is a pandemic.

This plan is based on recommendations from the World Health Organization and the guidance of the Expert group set up by the Department of Health and Children and the HSE to advice on planning for a pandemic.

(HSE Information on National Plan for Pandemic Influenza January 2007)

The overall aims of pandemic planning in Ireland are to

- Reduce mortality (deaths) and morbidity (sickness)
- To minimise the resulting disruption to society.

An Institiúid Teicneolaíochta, Sligeach

The plan is made up of the following sections:

- Section 1: Introduction
- Section 2: Outlines what pandemic influenza is and describes the phases of an influenza pandemic
- Section 3: Explains the difficulty in predicting the potential impact of a pandemic and outlines the current planning assumptions
- Section 4: Describes health service plans for the next pandemic
- Section 5: Outlines the roles and responsibilities of those involved in responding to a pandemic
- Section 6: Covers legal issues relating to pandemic influenza
- Section 7: Identifies the key elements of business continuity planning
- Section 8: Additional information

The sections that are going to be discussed in detail are sections; 4, 5 and 7.

2.2.2.2 Health Service Plans for the next Pandemic:

This plan was created in 2007 as a general plan of what Ireland has to put into operation when the Pandemic H1N1 was introduced what the health service need to do when the pandemic reached Ireland.

The Health Service Plan for when a pandemic reaches Ireland is based around eight key headings that will need to be carried out for the Pandemic H1N1

- Communications strategy
- Telephone hotline
- Responsibilities as an individual
- Surveillance
- Antiviral drugs
- Pandemic vaccine
- Reorganisation of health services and redeployment of health service staff

- Essential supplies.

(National Pandemic Influenza Plan 2007)

This plan that was created in 2007 was based upon the planning assumptions placed earlier in the plan. The planning assumptions placed in the plan will change over time as international understanding of the threat develops.

2.2.2.2.1 Planning assumptions.

In brief the planning assumptions for the 2007 plan are as follows:

A model is used to estimate the number of clinical cases, hospitalisations and deaths that will occur in Ireland during each week of a 15-week single wave pandemic, in the absence of any interventions (without any controls/mitigation measures)

A scenario was adopted for planning purposes based on 1957 and 1918 pandemics

This is an estimated guess from other pandemics and is as follows:

- A cumulative clinical attack rate of between 25% and 50% of the population
- A hospitalisation rate of between 0.55% and 3.70%
- A case fatality rate of between 0.37% and 2.50% (equivalent to the 1957 and 1918 pandemics respectively).

ITSligo An Institiúid Teicneolaíochta, Sligeach

From these rates the following assumptions so Ireland (i.e. worst case scenarios) would be adequately plan for a pandemic are:

	Lower range	Upper range
Numbers falling ill	1, 058, 731	2, 117, 463
Hospitalisations	5, 823	78, 346
Fatalities	3, 917	52, 937

(Table 2.4 Planning Assumptions for the National Pandemic Influenza Plan 2007)

The calculations are based on the Census 2006 Preliminary Report, which puts the Irish population at 4,234,925.

(National Pandemic Influenza Plan 2007)

These estimates are discussed in greater detail in the 'Pandemic Influenza Preparedness for Ireland: Advice of the Pandemic Influenza Expert Group'.

It must be stressed that these are only estimates, not predictions, of the numbers of people who may be infected and who may die in the next pandemic.

If a pandemic occurs, the HSE will be able to use models based on emerging surveillance information to provide more accurate predictions on the severity and duration of the pandemic.

When the pandemic H1N1 was announced in Ireland in 2009 surveillance was increased and discussed in weekly influenza surveillance reports developed by the HPSC and were used to provide more accurate predictions on the severity and duration of the Pandemic H1N1, based around the above planning assumptions and following the guidance from the advice of PIEG.

The measures the health service will put in place when a pandemic influenza breaks out in Ireland i.e. when the swine flu was around in Ireland.

An Institiúid Teicneolaíochta, Sligeach

These are discussed in a specific chapter and are very important.

2.2.2.2.2 Vaccination:

The ideal way to protect the entire country and all the persons within the country is to vaccinate everyone however until the particular strain of virus is detected and can be used to create the vaccine which will take about six months, so there will be no means of vaccination until the first wave of the pandemic.

(National Pandemic Influenza Plan 2007 section 4)

In the first wave of pandemic because there will be no vaccine to protect persons the health service will have to use other measures such as containment and the use of anti-viral drugs to reduce the pandemic within the country. When the vaccine becomes available then the government will buy enough to vaccinate the entire country.

The amount of vaccine will all depend on the severity of the pandemic when it enters into the country, the vaccine will arrive in stages and should be given to persons most at risk first of all persons with underlying medical conditions also health care workers will be protected.

Then it will go to the rest of the country.

(National Pandemic Influenza Plan 2007 section 4)

2.2.2.2.3 Planning Budget

The budget for contingency planning for pandemics in Ireland is decided by the government. The government has spent a lot of money investing in contingency plans for pandemics and national stockpiles of medicines and supplies. In 2006 and 2007 the government spent €19.3 million.

2.2.2.2.4 Framework of the Health Services Plan for a Pandemic

The framework for the health service plans takes on board the worst case scenario i.e. the upper values for the planning assumptions and they predict that if the next pandemic were to be that serious it would have a large impact on the country as a whole. As well as persons falling ill, educational institutions would be closed down, transport would be disrupted, and businesses in all sectors would be curtailed.

An Institiúid Teicneolaíochta, Sligeach

The health service also recognises that health service would be under particular strain if these were to be the conditions.

That is the reason this plan was prepared because Ireland needs to plan for the next pandemic as it will allow the country prepare for the measures mentioned above.

(National Pandemic Influenza Plan 2007)

2.2.2.2.5 Actual Plan:

The plan is split up into eight key elements to ensure that Ireland can reduce the spread of pandemic within the country and there are eight key elements to this plan that will need to be put in place during the first phase of pandemic. The plan is essential as discussed before the vaccination will not be available for at least 6 months after the pandemic occurred so that is why the health service plan is put in place.

1. Communication Strategy

The first element being a communication strategy that will inform persons what they should do if they or a member of their family contracts the pandemic influenza to do if persons in the families have the flu virus. The main elements of the plan are as follows:

- The national pandemic influenza plan (plan being discussed), which will be continually updated
- Leaflet drop to every household before the pandemic reaches Ireland advising of measures persons should take
- Regularly updated website
- Press briefings
- Advertising campaign
- Telephone hotline
- Television and radio updates

An Institiúid Teicneolaíochta, Sligeach

2. Dedicated hotline number

The second element is a dedicated telephone hotline number that will be set up when a pandemic reaches phase 5. This telephone hotline number is developed to reduce the amount of persons entering G.P. or health services and so that persons with flu like symptoms can be cared for at home and therefore reduce the spread of infection.

3. Your responsibilities

The third element of this plan gives responsibilities to members of the public on what to do during a pandemic influenza outbreak. The plan states that the public will be updated on what to do by the HSE during different phases.

The HSE state that persons should keep themselves well informed during the pandemic and prepare by enough food and essential supplies.

It also states that persons with flu like symptoms should stay away from others during the pandemic.

4. Surveillance

The fourth element is informing persons on the surveillance of a pandemic before it enters the country and the surveillance of pandemic when it reaches Europe and eventually Ireland. The index case is the first confirmed case of a pandemic in a country and this is when the containment begins this includes actions such as contact tracing, treatment of the index case and isolation of the index case and his/her contacts. In Ireland the contact tracing and the treatment of contacts will only occur in the early stages of the pandemic.

5. Antiviral medicines

The fifth element of the plan is anti-viral medicines and discusses when and why they will be used in the duration of a pandemic influenza.

6. Pandemic Vaccines.

The sixth element is the pandemic vaccine and informs persons when it would typically be available to persons and who it would be made available to.

An Institiúid Teicneolaíochta, Sligeach

7. Reorganisation of Health Services and Redeployment of Health Service Staff.

The seventh element of the plan is the re-organisation of health services and redeployment of health service staff and this explains what the HSE would have to do to deal with situation.

8. Essential Supplies.

The eight section of the health service plan for a pandemic is essential supplies and discusses the stockpile that Ireland has in existence.

(National Pandemic Influenza Plan 2007)

Those are the eight elements of the HSE plan for when a pandemic reaches Ireland, the plan is already being implemented due to the purchasing of stockpiles of antiviral drugs. Plans will evolve as the international understanding of pandemic influenza improves and as drug treatments become available. Regular exercises will be carried out within the health services to test these plans.

The eight key elements of the plan will be put into effect at various points during the WHO alert and during the pandemic itself.

(National Pandemic Influenza Plan 2007)

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

2.2.2.3 Pandemic Response Roles and Responsibilities

This is a short chapter in the plan that discusses the roles and responsibilities within Ireland in relation to pandemic preparedness and response. It lists all the responsibilities of the six groups responsible for pandemic preparedness and response.

The Department of Health and Children is the lead Government Department in responding to a public health emergency and the Health Service Executive is the lead agency. These two bodies work closely together in preparing Ireland for a response to a pandemic influenza.

The public health emergency management structures include:

- Cabinet Committee as required
- Government Task Force on Emergency Planning
- Interdepartmental Committee on Public Health Emergency Planning
- National Public Health Emergency Team
- HSE Planning and Crisis Management Teams
- Pandemic Influenza Expert Group.
-

(National Pandemic Influenza Plan 2007 section 5)

2.2.2.4 Business Continuity Planning

This is a chapter that strays away for the first time in the plan from the public health response in to an influenza pandemic and focuses on giving advice to businesses on how to ensure that when a pandemic enters into a country that all business can continually operate to their full capacity with limited upset to the business. I.T. Sligo should develop a business continuity plan based on these recommendations. This section is not really associated with continuity of student learning operations, but more so associated with the operation of essential business operations within the college, i.e. all staff within the institute

The plan gives seven steps that should be addressed in the business continuity plans and these are as follows:

1. Identify those essential functions and posts, and perhaps individuals, whose absence would place business continuity at particular risk.

2. Put in place measures to maintain core business activities for several weeks with high levels of staff absenteeism.

3. Identify which services could be curtailed or closed down during all, or the most intense period, of the pandemic.

4. Make sure the business continues to meet its health and safety responsibilities to employees.

5. Identify inter-dependencies between organisations and make sure they are resilient. For example, suppliers delivering services under contract should have arrangements in place to continue to provide their service

6. Consider how customer needs might be different during a pandemic.

7. Support Government and health service efforts to reduce the impact of the pandemic by:

(a) Taking all reasonable steps to make sure that employees who are ill or think they are ill are encouraged not to come to work

(b) Ensuring that employees are aware of official advice on how to reduce the risk of infection during a pandemic. (This will be available as part of the HSE communications plan during a pandemic)

(c) Ensuring that adequate hygiene (e.g. hand-washing) facilities are routinely available.

There is also advice on absenteeism in the workplace due to the pandemic.

The plan states that at the core of business continuity planning should be an estimate of the number of staff likely to be absent from work at the peak of the pandemic.

The plan demonstrates levels of persons that would be absent from work at different clinical attack rates during an influenza pandemic. These figures are extracted from

An Institiúid Teicneolaíochta, Sligeach

the UK Cabinet Office Guidance: Contingency planning for a possible influenza pandemic (2006).

(National pandemic Influenza Plan 2007 section 7)

	Clinical attack rate		
	10%	25%	50%
Large organisation or unit			
% of people ill at peak	2%	5%	10%
% of people ill & carers taking time off at peak	3%	7%	15%
Small organisation or unit*			
% of people ill and carers taking time off at peak	6%	14%	30%
Cumulative total of those ill over whole period of pandemic	10%	25%	50%

**A small organisation or unit can be defined as a group of up to 15 people*

Figure 2.2 Estimates of likely levels of absence from work during an Influenza Pandemic

2.2.3 Pandemic Preparedness for Ireland.

There is a pandemic preparedness plan for Ireland available from the Health Protection Surveillance Centre (HPSC).

This is a list of documents (that is available on the HPSC website) which ensures that Ireland as a whole is ready and prepared for any pandemic that would come into the country in relation to

- Phases of a pandemic
- Epidemiology (medical science dealing with the transmission and control of disease) of a potential influenza and the potential impact for the country.
- Surveillance, detection and situation monitoring.
- Public health response to pandemic influenza,
- Dealing with antiviral
- Vaccines
- Non-pharmaceutical public health interventions in the pandemic alert period and during the pandemic

IT Sligo An Institiúid Teicneolaíochta, Sligeach

- Case management
- Infection control

These are a list of documents available from the HSPC website which make up the document. This is expert guidance from the Pandemic Influenza Expert Group (PIEG) and what the country should do in the event of a pandemic outbreak.

The Pandemic Influenza Expert Group is chaired by Professor William Hall, Director of the National Virus Reference Laboratory (NVRL) at University College Dublin. The Expert Group is comprised of medical experts as well as representatives of relevant organizations including the Irish Medicines Board, NVRL, Department of Agriculture and Food. The Health Service Executive and the Department of Health and Children are also represented on the group.

The expert group monitors national and international research and developments in order to provide clear evidence based advice on pandemic influenza preparedness and research. Members of the group have collaborated with WHO, the European Commission and the European Centre for Disease Prevention and Control (ECDC) to ensure that the guidance is compatible with guidance emanating from both WHO and European Centres.

(DOHC Press release January 2007)

The HPSC is part of the health service in Ireland. The HPSC has six main functions in regards to health and these are:

- Surveillance of some of the major communicable diseases i.e. the (Pandemic H1N1)
- Operational support - providing expert advice to, and responding to requests for support from, departments of public health or hospitals;
- Training for professionals working in communicable disease control;
- Research - identifying and developing best practice in communicable diseases;
- Policy advice - providing advice to government departments and appropriate agencies in relation to the development of standards, guidelines and practices, and promoting the adoption of best practice by different agencies;
- Public information - providing information on infectious diseases to the public and the media

(HPSC website 2009)

'Pandemic Influenza Preparedness for Ireland: Advice of the Pandemic Influenza Expert Group (PIEG), 2008' is the official title of the document. The National Pandemic Influenza Expert Group has been in existence since 1999, when it was established by the Minister for Health and Children.

The guidance that came before this current 2008 guidance was "A Model Plan for Influenza Pandemic Preparedness" was first circulated in 2001 and further revised in 2002. However this guidance that was established in 2008 supersedes all previous publications of the Expert Group.

(HPSC Publication 2008 Introduction 1.2)

This is the document supplied by the Health Protection Surveillance Centre with an aim to provide timely authoritative information on pandemic influenza, and to provide clear clinical guidance and public health advice to health professionals and others involved in pandemic influenza preparedness and response in line with the revised WHO Global Influenza Preparedness Plan now updated to the "Pandemic Influenza Preparedness and Response" as this national guidance was created In November 2008.

The Department of Health and Children (DOHC) and the Health Service Executive (HSE) produced the National Pandemic Influenza Plan 2007 (Which was discussed in the previous chapter). The National Plan is based on the framework recommended by the World Health Organisation for national pandemic plans, and reflects the expert advice contained in this document. It concentrates on the health response to pandemic influenza, but also provides the basis for planning which must take place across all sectors of society.

(HPSC Publication 2008 Introduction 1.3)

The document is very long and very detailed; it is more aimed at the government and health care professionals on what they need to do if a pandemic where to take place and emergency measures that should be in place this report is not so much a guidance document for educational institutions it is more an in depth look at what the government and health service need to do in case a pandemic where to occur.

The government and the HSE will follow advice from this group and will then work on this advice and create more information for the educational institutions.

An Institiúid Teicneolaíochta, Sligeach

2.2.4Guidance for Third Level Institutions in preparing for Pandemic (H1N1) 20 09 (Swine Flu)

2.2.4.1 Introduction:

This is specific guidance set out by the HPSC and the HSE for third level institutes in preparing for Pandemic (H1N1) it is in a checklist format that guides third level institutes in preparing for swine flu. These recommendations are designed to accompany the National Pandemic Influenza Plan, 2007 and university /college emergency plans already in place. They are subject to change based on ongoing surveillance and continuous risk assessment.

This guidance is a working document of the National Pandemic Influenza Plan; it incorporates sections that are applicable to educational institutions it was created in August 2009 when swine flu was emerging in Ireland.

The guidance is split up into four different sections which gives specific duties under each heading that the college should complete if applicable. The four headings are as follows:

- Planning and co-ordination.
- Continuity of student learning operations.
- Infection control policies and procedures.
- Communications planning.

(HSE third level institutes guidance 2009)

The following is the main elements under each section that a third level institute needs to consider so that they are able to prevent the spread of swine flu. These are recommendations from the HSE.

2.2.4.2 Planning and co-ordination:

The guidance states that the college should ensure they are familiar with the National Pandemic Influenza Plan (discussed earlier), the college's local emergency plan and the most up to date information from the Department of Health and children, and the Health Protection Surveillance Centre. The college should always keep in regular

contact with the departments of public health to determine the state of the pandemic in Ireland.

The guidance also states college should Identify a pandemic coordinator and response team (including campus health services and mental health staff, student housing personnel, security, communications staff, physical plant staff, food services director, academic staff and student representatives) with defined roles and responsibilities for preparedness, response, and recovery planning. The college should delineate accountability and responsibility as well as resources for key stakeholders engaged in planning and executing specific components of the operational plan.

There should be a college nominee to lead on emergency planning.

There should also be clarity of senior management roles and responsibilities. Ensure that pandemic influenza planning is consistent with any existing third level institution emergency operations plan, and is coordinated with the pandemic plan of the community and of the Department of Education and Science.

The plan should be incorporated into the overall college plan. A pandemic plan should be developed that includes timelines, deliverables, and performance measures.

The college should incorporate into the pandemic plan scenarios that address third level institution functioning based upon having various levels of illness in students and employees and different types of community containment interventions.

(HSE Guidance for third level institutions 2009)

2.2.4.3 Continuity of student learning operations

The college should give guidance to develop and disseminate alternative procedures to assure continuity of instruction (e.g., web-based distance instruction, mailed lessons and assignments, instruction via local radio or television stations) in the event of third level institution closures.

The college should review arrangements for covering teaching and non teaching duties. Consider if candidates have completed the minimum requirement for a diploma etc. as soon as practicable (if appropriate).

An Institiúid Teicneolaíochta, Sligeach

The college should develop a continuity of operations plan for maintaining the essential operations of the third level institution including payroll; ongoing communication with employees, students and families; security; maintenance; as well as housekeeping and food service for student housing.

The college should develop contingency plans in case of gas, oil, water and power shortages. Consult with HR regarding the recruitment of volunteers who could assist with duties e.g. answering phones, Review sick leave and holiday arrangements for staff for use in a pandemic event.

(HSE Guidance for third level institutions 2009)

2.2.4.4 Infection control policies and procedures

The college should implement infection control policies and procedures that help limit the spread of influenza on campus (e.g. promotion of hand hygiene, respiratory etiquette).

The college should make good hygiene a habit now in order to help protect employees and students from many infectious diseases such as influenza.

The college should procure, store and provide sufficient and accessible infection prevention /cleaning supplies (e.g., soap, alcohol-based hand hygiene products, tissues, paper towels and bins for their disposal).

Ensure that environmental cleaning procedures to prevent the spread of respiratory illness are in place including: procedures for regular cleaning of hard surfaces especially desks and work stations.

Ensure that hand hygiene facilities are adequate and working properly; if/when updating or repairing facilities, consider installing automatic or foot-operated taps, dryers and waste bins.

The college should check cleaning arrangements/contracts and whether special provision could be provided during a pandemic.

An Institiúid Teicneolaíochta, Sligeach

The college shall establish policies for employee and student sick leave absences unique to pandemic influenza (e.g., non-punitive, liberal leave).

The college should establish policies for employees and students suspected to be ill or who become ill on campus; Employees and students with known or suspected pandemic influenza should not remain on campus and should return only after their symptoms resolve and they are physically ready to return to campus, or after the isolation time recommended by the local Department of Public Health, whichever is longer.

The college should identify a setting on campus where an infection control point might be set up and where those who are ill and unable to return home can be isolated.

The college should establish a pandemic plan for campus-based healthcare facilities that addresses issues unique to healthcare settings. Student health services shall ensure health services and clinics have identified critical supplies needed to support a surge in demand and take steps to have those supplies on hand.

(HSE Guidance for third level institutions 2009)

2.2.4.5 Communications planning:

The college should assess readiness to meet communications needs in preparation for an influenza pandemic, including regular review, testing, and updating of communications plans that link with public health authorities and other key stakeholders.

The college should develop a dissemination plan for communication with employees, students, and families.

The college should also develop and test modes of communication (e.g., hotlines, dedicated websites, local radio or television).

The college should ensure that a system is in place that can provide all staff and students with timely and up-to- date information on the current situation in relation to pandemic flu and advise them on actions that they need to take now and in the future.

This information should be made available on the college website.

An Institiúid Teicneolaíochta, Sligeach

The college should develop a plan of communication with international students and students with a disability.

They should also check and update student and staff contact details.

The college should identify staff who will act as spokesperson for media relations including media interview.

The college should disseminate information about the third level institution's pandemic preparedness and response plan. This should include the potential impact of a pandemic on student housing closure, and the contingency plans for students who depend on student housing and campus food service, including how student safety will be maintained for those who remain in student housing.

The college should disseminate information from public health sources covering routine infection control (e.g., hand hygiene, coughing /sneezing etiquette), pandemic influenza fundamentals (e.g., signs and symptoms of influenza, modes of transmission), personal and family protection and response strategies and the at-home care of students or employees and their family members.

(HSE Guidance for third level institutions 2009)

ITSligo
An Institiúid Teicneolaíochta, Sligeach

2.2.5 Public Health Guidance for Planning for Human Infections with the Influenza A (H1N1) in Residential Educational Institutions.

2.2.5.1 Introduction

This is public health guidance given by the HSE and the DOHC to ensure that educational institutions are prepared for pandemic H1N1 and that the risk of influenza pandemic is reduced to a minimum.

The document is broken into seven different sections these are:

- **Guidance for infection control: Preventing the spread of respiratory illness through knowledge of Influenza A (H1N1) and practice of good respiratory and hand hygiene.**

- Guidance for communications and guardianship arrangements for students

- Guidance for preparing for actions required if the educational institution suspects a student to have Influenza A (H1N1) or if there is a cluster of students/staff with influenza like illness in the school.

- Guidance for preparing for actions required in the case of a probable/ confirmed case of Influenza A (H1N1) in a residential educational institution

- Guidance for preparing for educational institution closures

- Guidance for caring for a student with Influenza A (H1N1) in the residential educational institution

- Guidance on caring for students who are identified as contacts of a case of Influenza A (H1N1).

(HSE and HPSC Guidance for Residential Educational institutions 2009)

An Institiúid Teicneolaíochta, Sligeach

2.2.6 Discussion of Irish polices for pandemic H1N1.

The review of Irish policies and plans are split up into four different areas. Two of the plans are related to pandemic planning these being 'National Pandemic Influenza Plan 2007' and 'Pandemic Preparedness for Ireland, advice of the PIEG'. These were both developed and published in 2007. As a country we need to be prepared for a potential pandemic as we see that they are unpredictable and could occur at any time like with the swine flu pandemic this was a major concern to countries when first detected in April of 2009. Planning is critical in order to limit the effects of a potential pandemic. If Ireland had not been prepared for a pandemic the outcome of the swine flu could have been a lot more serious. There could have been a higher illness rate, hospitalisation rate and even a very high death rate. The Irish health service and department of health have to be commended for these pandemic plans they are comprehensive and detailed.

When the plans were introduced we were in WHO phase 3 this was two years before the first strain of Pandemic H1N1 was discovered. This literature search focuses on the important aspects of these plans when a pandemic occurs. The major question is are these plans effective and were they carried out when swine flu was at its peak in Ireland.

It is very easy to make plans and policies however it is more important to test their effectiveness during a pandemic. The following chapter will investigate whether or not the national plans were actually put into operation by comparing the international guidance with our national guidance. In the overall discussion the implementation of the National Pandemic Influenza Plan will be assessed to ensure that the plan was put in place when Pandemic H1N1 reached Ireland.

The other two pieces of literature that was reviewed was the 'guidance for third level institutions' and guidance for 'residential educational institutions'. These were reviewed to examine the advice the health service disseminates to the educational institutions.

Colleges such as the Institute in Sligo are a communal area where a lot of persons meet on a regular basis, therefore infection can spread rapidly. The health service need to ensure that they provide authoritative and timely information on a pandemic in relation to actions they need to take to ensure that sickness is reduced to a minimum and that student learning can operate as normal. The overall effectiveness of the Guidance for Third Level Institutions will be evaluated in chapter three 'Comparisons' where this guidance is compared with I.T. Sligo's plan.

An Institiúid Teicneolaíochta, Sligeach

The following section (2.3) will demonstrate the entire Sligo Pandemic Plan

2.3 Institute of Technology Plan for Pandemic H1N1:

2.3.1 Introduction:

The Student Support Services Officer has the overall plan for containment of pandemic H1N1 in the student centre. The information was obtained on the 4th of December after an investigation of the plan with the student support services officer.

This plan has various different elements which include:

- Actions before students arrived back to college in September
- Actions to be taken when students arrived back to college in September
- Recommendations from student doctor on health care for pandemic H1N1
- Actions carried out to date by the college
- Communication plan for managing pandemic H1N1
- Contingency plan for appropriate patient care
- Management of communicable diseases
- Guidance for third level institutions checklist completed

2.3.2 Actual Plan

2.3.2.1 Plan before students arrives back to college:

Students were instructed not to return to college if they had symptoms of Pandemic H1N1. However, if symptoms were not present among students, they were still advised to make the following preparations –

- Make sure the student has contact details of their local General Practitioner.
- Have a thermometer to monitor rising temperatures if Pandemic H1N1 is suspected.
- Reserve finances to purchase "over the counter" medications if the need arises.
- Become informed about Pandemic H1N1.

An Institiúid Teicneolaíochta, Sligeach

(I.T. Sligo Pandemic Plan 2009)

2.3.2.2 Plan for when students are back at college

Due to the virus transmitting from person to person it is vital that students and staff take responsibility to keep the college infection free. Everyone can assist in the prevention of Pandemic H1N1 by undertaking the following simple protocols –

- Use a tissue when coughing and sneezing.
- Dispose of the used tissue in a waste disposal bin.
- Wash hands afterwards.
- Avoid close contact with people who are ill or have flu like symptoms.

Anyone who has symptoms of Pandemic H1N1 while attending or working at the college should contact their local G.P. After examination, if the doctor believes a student has contracted the virus they will be required to return home, via a private transport source (parent or family member), for at least seven days.

I.T .Sligo's Pandemic H1N1 plan encourages all students to assist each other at this time. By identifying a friend or house mate to look after a student who is ill, no-one will be left sick at home.

(I.T. Sligo Pandemic Plan 2009)

2.3.2.3 Actions by the Institute to reduce spread of Pandemic H1N1.

This was a list of actions that the institute had undertaken and actions that they still had to complete for control of infection of the pandemic H1N1

These are as follows:

2.3.2.3.1 Actions to Date:

- A group has been set up to put in place a plan to contain Pandemic H1N1.
- Held a meeting with the Health Service Executive regarding Pandemic H1N1. 29/07/09

IT Sligo An Institiúid Teicneolaíochta, Sligeach

- Meeting with Executive Committee to update them following the meeting with the H.S.E. 29/07/09
- Met with relevant functions to assess status of tasks/duties outlined in the Planning and Co-ordination Plan 13/08/09.

(I.T. Sligo Pandemic Plan 2009)

2.3.2.3.2 Tasks Completed

- Gels/dispensers placed in appropriate areas 12/08/09.
- Posters placed on entrance doors to college, library, canteen etc. 11/08/09.
- Hand washing information displayed at sinks 11/08/09.
- Student Health Services contingency plan for management of Pandemic H1N1 virus completed. 13/08/09.
- Website (I.T. Sligo) updated with virus information 14/08/09.
- Information regarding virus to be included in student registration pack 14/08/09. All other students (including foreign students) will be notified regarding Pandemic H1N1 by email.
- Fliers prepared and to be circulated to all the students on returning to college. – Student Union.

(I.T. Sligo Pandemic Plan 2009)

2.3.2.3.2 Tasks to be completed

- Essential services identified – Executive Committee.
- Cleaning – additional cleaning – Head of Learning Environment.
- Catering – Head of Learning Environment.

- Exams – HOS/Registrar's Department.
- Vulnerable/high risk staff – Human Resources.
- Establish polices regarding staff absences – Human Resources.
- Additional Nurse – Human Resources.
- Additional staff identified to be trained on Health 1 system – Human Resources.

(I.T. Sligo Pandemic Plan 2009)

2.3.2.4 I.T. Sligo Communication Plan for Managing Pandemic H1N1

The Institute has developed a communication plan to limit the spread of swine flu between staff and students in the college. The student union play a major role in communicating the facts about the swine flu to the student body. The student union plan for managing the swine flu is to make all current students and any new students coming into the institute aware of the flu and the steps and precautions involved to limit the spread of swine flu.

The SU will work alongside the institute to manage the swine flu and they will also work with staff and students. The student union was used as a conduit for this information because they communicate with staff and students daily through e-mails, they also have a student centre where members of the student union can be found they are very approachable and a good medium between staff and students.

The SU have developed information in the forms of leaflets on:

What the Pandemic (H1N1) is.

- Does the flu spread easily
- Symptoms of swine flu
- What to do if you have symptoms of swine flu (how to stop spread of infection)

An Institiúid Teicneolaíochta, Sligeach

- Personal actions (what to do if a person gets sick)
- How to care for themselves or someone else at home
- And where to get more advice.
- The student union has a plan for staff and students separately:

(I.T. Sligo Communication Plan for Managing Pandemic H1N1 2009)

2.3.2.4.1 Student Union Plan for Staff:

- Student union keeps staff updated with latest news (emails and leaflets)
- SU works closely with the committee based on latest advice from HSE actions that have been put in place.
- SU will work with t he student health nurse (SHN) putting together a flier with information on one side about the 'Flu buddy' and on the other side it will display information that will help staff and students understand symptoms and what to do in regards to swine flu.

2.3.2.4.2 Student union plan for students:

The student union keeps on-going information on communication updates with students throughout the following:

- Email the students with regular information and updates on swine flu
- Posters are put up around the student centre and throughout the I.T.
- Fliers given to all students when student union introduces themselves to students at beginning of academic year.
- Information leaflets left in the canteen
- Class representatives to advise their class groups and friends about 'buddy system'
- All new students are informed during registration.

An Institiúid Teicneolaíochta, Sligeach

All this information provided to the students should contain the information that helps limit the spread of swine flu around the college and informs the students of all the elements mentioned in the plan

(I.T. Sligo Communication Plan for Managing Pandemic H1N1 2009)

2.3.2.5 Management of Influenza A H1N1 Virus 'Contingency Plan for Appropriate patient care' (Health care plan)

2.3.2.5.1 Introduction to the Plan

This is a plan for the Health care system within the college so that the health service can operate as normal during a pandemic and to ensure that students with swine flu are treated appropriately at the same time reducing the spread of swine flu within the health centre. The plan is when students enter the health centre to visit the nurse that there is a plan to deal with those students as to ensure that the spread of swine flu is limited to a minimum.

This plan was completed in preparation for the student's arrival in September. The plan documents how the Student Health Service (SHS) can assist the college with management of the swine flu, it limits the spread ensures student welfare and helps the college to operate effectively with as little disruption as possible.

The plan provides detailed record of the SHS requirements that were outlined to the executive committee

This plan could not be enforced until the student medical centre was moved to the new building (this occurred in October)

An appointment only service was in operation before movement to the new building the appointments were made through the medical centre secretary and would filter into two different areas.

ITSligo An Institiúid Teicneolaíochta, Sligeach

2.3.2.5.2 Advice from Student Doctor regarding plan

A letter from Doctor Damien Tiernan in August stated to the Student support services that it was not possible to run the usual student health services in conjunction with a swine flu containment plan.

The doctor also states that the student health service will not deal with any cases of pandemic (H1N1) in students who have G.P. in the Republic of Ireland.

They are recommended to contact the student health service by telephone.

He also recommended the bare minimum of requirement to assess patients with possible swine flu to have two rooms adjacent to each other with running water in both.

This will minimise interaction between the potential swine flu cases and other students who do not have suspected swine flu. This will also control the spread of virus out of control within the Institute.

The doctor in the college is clearly following advice from the Document 'Guidance for Departments of Public Health on the management of Pandemic (H1N1) in an educational setting 2009) where one of the proposed recommendations for all educational institutions is that sick students should stay at home for seven days from the onset of symptoms of pandemic (H1N1).

(I.T. Sligo Pandemic Plan 2009)

An Institiúid Teicneolaíochta, Sligeach

2.3.2.5.3 Actual Plan.

Created by the student nurse Eilish Curley and Dr. Damien Tiernan

Written by: Eilish Corley

Approved by: Dr. Damien Tiernan.

Purpose

This procedure relate to management of the swine flu virus within the Student Health Service (SHS) of the Institute of Technology Sligo.

The aim(s) are to:

Provide appropriate medical care for the students who attend the SHS

Prevent the spread of Pandemic (H1N1) to other staff and students of the institute

Scope

This procedure relates only to the care of students attending the SHS.

The college's emergency response plan in relation to communicable disease relates to both staff and students.

Staff members who request assistance of the SHS will be given advice as per HSE guidelines and then will be referred to their own G.P.

The staff of the college is not required to use the student health centre as it is specifically set up for students of the institute.

Department set-up

These are the facilities that should be set up during a pandemic situation

Reception room (>1 meter away person symptoms)

- Nurses room
- Doctors room
- Waiting room

Containment room: People who self report symptoms of swine flu or that have been requested to see the nurse after the telephone triage.

Should wear face-masks and follow the strict HPSC etiquette

They should have clinical waste disposal for infected tissue.

PPE

Should wear PPE when dealing with suspected patients as outlined in the HSE recommendations (appendix 3).the SHS staff should wear:

- Surgical mask
- Plastic apron
- Gloves
- Goggles

Aerosol generating procedures

Nebuliser therapy:

This type of treatment should not be given as there is an increased risk of pathogen transmission. If this has to be done then it should be carried out in a single room

Others shouldn't enter the room if they do enter they should:

- Wear appropriate PPE

An Institiúid Teicneolaíochta, Sligeach

Infection Control

SHS Advisory role:

Advise college of current infection control HSE and HPSC guidelines

(The student health service should give information contained in the National Pandemic Influenza Plan on infection control techniques such as the respiratory and hand hygiene discussed in the plan in the previous chapter.)

Containment room:

This is essential for students that enter with suspected case of swine flu there should be information on hygiene and availability of tissues and sanitizer. (A separate room is made available to limit the spread as much as possible if a suspected case were to arrive in the college.)

Cleaning and Disinfection

This will be increased based on patients level of hygiene and the level of environmental contamination. (This is another essential element to limit the spread of swine flu)

Cleaning procedures after swine flu cases

The area should be thoroughly cleaned using hypochlorite solution (1000 ppm)

Attention should be paid especially to frequently touched sites.

Equipment

Single items of equipment should be used with suspected cases

Laundry

Pillows blankets etc. should not be used plastic coverings to limit the spread is essential

Transportation from the SHS

Persons with the pandemic (H1N1) that have came to the college should be transported by ambulance. Ambulance personnel should wear mask.

An Institiúid Teicneolaíochta, Sligeach

No public transport to be used.

Communication:

Preventing the spread of swine flu through education:

SSA advice patients entering and departing on preventing the spread of Pandemic H1N1 there will also be posters educating people.

The student health nurse (SHN) will work closely with the registrars department and the student union.

It is the main responsibility of the student union to provide guidelines to the student body on how to prevent the spread of pandemic H1N1.

(This was explained in the communications policy devised by the student union in an earlier section and this is written in the policy)

Communication of clinically diagnosed cases

Under the infectious diseases Regulations 2003 laboratory and clinical notification to the medical officer of health of influenza is mandatory.

The student health doctor has the responsibility to notify the public health doctor.

In accordance with the ITS management of communicable diseases the SHN has to contact the relevant college personnel. (Marion) for clinically diagnosed cases

Patient Assessment

Patients should ring in advance for an appointment

SSA- Organise patients to call SHN if they have the flu symptoms on a dedicated mobile number.

Students that appear with symptoms will be asked to return to their car and ring from there.

A telephone 'triage' is set up when a person with symptoms rings the dedicated number the SHN will then assesses the severity of symptoms and the recommended treatment.

ITSligo An Institiúid Teicneolaíochta, Sligeach

If when person rings and they are triaged and this shows that the patient's symptoms are mild they are informed how to manage symptoms themselves.

If when triaged the patients are categorised as 'at risk' groups or if their temperature is above 38 degrees Celsius then they are asked to attend the SHN and are seen by the student health doctor

Only on site clinics will review patients who are suspected cases.

The SHN or SHD will medically assess suspected cases using the interim algorithmic for primary care management of persons who may have influenza (appendix 6)

Clinically diagnosed cases are well enough to be cared for at home and shouldn't come back to the institute for seven days. (Following the educational institutes guidance for swine flu)

A member of family should collect them they shouldn't use public transport.

Staff of the SHS

It is the responsibility of Dr. Damien Tiernan to supply medical doctor to assess patients of swine flu.

It is the responsibility of the colleges Human Resource department to hire and orientate an additional nurse.

Additional nurses who can operate the college medical database of patients if the SHN falls ill.

Contingency plans need to be put in place if this happens.

Triages assessment forms are kept in the SHN offices

Continual medical records

Audit system

N/A

Revision History.

An Institiúid Teicneolaíochta, Sligeach

Appendix 1: Guidance for third level institutes in preparing for swine flu

Appendix 2: guidance for GP's key measures

Appendix 3: Infection control all health care facilities

Appendix 4: ITS document procedure 31 Communicable diseases

Appendix 5: 707 of 2003 Infectious Disease no.3 Regulations 2003

Appendix 6: Interim logarithm for primary care management of persons who may have swine flu

Appendix 7: Guidance for caring for people at home with swine flu

Appendix 8: College triage form (what nurse fills in)

(Curley.E & Tiernan.D 2009)

ITSligo An Institiúid Teicneolaíochta, Sligeach

2.3.2.6 ITS Emergency response plan 'Management of communicable diseases'

2.3.2.6.1 Introduction to the plan:

The college has an emergency response plan; there is a section in this emergency response plan that deals with the communicable diseases and how they are to be managed within the institute. The following will demonstrate the plan

2.3.2.6.2 Actual Plan:

Purpose

This procedure relates to the management of communicable diseases within the Institute of technology in Sligo as part of the (emergency response plan)

With an aim to:

1. Provide appropriate medical care for students who attend the SHS

2. Prevent spread of communicable diseases to other staff and students within the I.T.

Scope

This relates to only students attending the student attending SHS. This is the college emergency response plan in relation to communicable diseases for both staff and students.

However the SHS only has the responsibility for students

Procedure description:

Management of communicable diseases is available in the college emergency response plan.

This section is taken from that college plan:

Purpose: Provide Procedures to follow in the event of communicable disease among the student and staff population.

ITSligo An Institiúid Teicneolaíochta, Sligeach

In the outbreak of Communicable disease:

The role of nurse is to:

- Assess and ensure appropriate treatment and follow up for all suspected cases.
- Classify case and their system. If there is a possible, probable or confirmed communicable disease, the nurse should contact relevant college personnel. The nurse should inform them about case after consultation with medical personnel and with the control of spread.

The role of the doctor is to:

- Diagnose the communicable disease
- Advise student health department on control measures
- Inform the HSE.

(ITS Emergency response Plan 2009)

2.3.2.7 Discussion of the IT Plan for Pandemic H1N1:

The plan was investigated by searching through policy documents that were presented by the student support services officer in the student support services office in the student centre on the 4/December/2009.

There was no real sequence to the plan. The documents were shown and the elements of the plans and policies were written and summarised down.

There was a copy of the guidance document for third level institutions and this was completely filled in and checked by the pandemic response team (this can be seen under section 3.3.3) and contained sections relating to planning and response, infection control, continuity of student learning operations and communications planning.

Other sections obtained were the communication plans for Pandemic H1N1 the plan for the health care within the college and a section dealing with management of communicable diseases in the college. The plan also shows their actions to date and what they still have to do in relation to management of pandemic H1N1.

An Institiúid Teicneolaíochta, Sligeach

Overall the plan is good and covers the elements that are compliant with national guidance and there is evidence to show this. The I.T. could have made it into one an official report that has similar structure to a national guidance document. The plan is in place and compliant but it could be more structured.

The Institute has to be commended for being proactive in their response to swine flu within the college. Their main aim is to protect staff, students during a pandemic and that during a pandemic learning and normal operations can continue.

In chapter five the actual implementation of the I.T. Sligo plan will be tested and in chapter three comparisons will be drawn between the college plan and the national guidance to ensure I.T. Sligo is following advice.

ITSligo An Institiúid Teicneolaíochta, Sligeach

Chapter 3.0
Comparisons

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Chapter 3.0 Comparisons

3.1 Introduction

This section will involve a comparison of International Pandemic Plans with National Pandemic Plans then a comparison of national plans with the I.T. Sligo plan for Pandemic H1N1.

There is a need to compare the plans and search for differences and comparisons between the plans to ensure that as a nation we are following the expert advice from the leading agency from health (the WHO) and to also ensure that the institute of technology in Sligo is following the advice from the leading agency for health in Ireland (the HSE, DOHC and HPSC).

The chapter will be split into two areas:

- Similarities between the WHO Preparedness and response plan(s) and Irelands National Pandemic Influenza Plan 2007.
- Similarities and differences between the I.T Sligo plan and national guidance *'guidance for third level institutions'*

3.2 Comparison between the 'WHO guidance 2005 and the National Pandemic Influenza Plan 2007:

3.2.1. Introduction

The Health Service Executive (HSE) and the Department of Health and Children (DOHC) developed the national pandemic influenza plan from recommendations by the World Health Organization for national pandemic plans.

This section will review both plans and the aim(s) of both plans and discuss the structure of the plans and the information in both plans and will investigate as to whether they are similar in the structure and the information they present.

It would be expected that the two plans would be similar as the national pandemic influenza plan 2007 was created using recommendations from the WHO.

It has to be noted that the WHO Global Influenza Preparedness Plan in 2005 showed what they were doing globally to prepare for a pandemic and gave recommendations on what individual countries should do in preparing for a pandemic.

3.2.2 Comparison of WHO actions and Irelands Actions at different phases:

The core element of the WHO Influenza Preparedness Plan is to show the actions that WHO would take at each WHO pandemic phase at the same time showing actions that nations should take to ensure that countries are prepared for a pandemic, so that countries can run effectively throughout different stages of pandemic and that deaths are reduced to a minimum and sickness reduced.

Main similarity between the plans is that in the 2005 guidance is that it demonstrates what the World Health Organisation intend to do at each phase, the National Influenza Plan also shows Irelands intentions at phases 4,5 and 6.

The following table will show an example of what Ireland will do at phase 4-5 (Interpandemic phase) followed by what the WHO intend to do at phase 4.

Ireland plan when the WHO increases the pandemic alert level (Phase 4-5)	**WHO objectives at pandemic level 4**
Communication: • All health care staff will be familiarised with the national plan and their role • Information leaflet distributed to all households • Information campaign will commence • Newspaper, television and radio will also be used to keep you regularly updated on developments	*Planning and Co-ordination* • To coordinate global and national efforts to delay or contain the spread of human infection within limited foci. • To coordinate assessment of national needs and resource mobilization among affected and unaffected countries. *(WHO 2005)*

• Influenza pandemic website will give up to date advice at each phase. *(National Pandemic Influenza Plan 2007)*	
Telephone hotline: • The telephone hotline will be launched when WHO raises the alert level to Phase 5. *(National Pandemic Influenza Plan 2007)*	*Situation monitoring and assessment:* • To coordinate assessment of the extent of human to human transmission. • To describe the epidemiological, virological and clinical features of infection and possible source, and disseminate this information as needed for surveillance and control measures. • To enhance development or adjustment of diagnostic reagents and vaccines *(WHO 2005).*
Information given to public on how they can prepare (your duties) • Develop your household/family plan with the other members of your household/family to ensure that everyone is familiar with it. *(National Pandemic Influenza Plan 2007)*	Prevention and containment • To support and evaluate global and national efforts to delay or contain the spread of human infection within limited foci. • To assess susceptibility of new strain and availability of antivirals, and deploy from global stockpile when appropriate. • To promote development and prepare for production of pandemic vaccine. • To deploy pandemic vaccine to foci of disease, if appropriate and

IT Sligo An Institiúid Teicneolaíochta, Sligeach

	available. *(WHO 2005)*
Surveillance • Surveillance will be enhanced once the alert level increases. *(National Pandemic Influenza Plan 2007)*	Health system response: • To promote efforts by national authorities to use health-care capacity optimally if additional cases occur. • To provide guidance on clinical triage and treatment. • To enhance appropriate infection control and biosafety procedures in community primary and secondary care. *(WHO 2005)*
Antiviral medicines: • The antiviral stockpile will be reviewed. *(National Pandemic Influenza Plan 2007)*	Communications: • To ensure rapid sharing of appropriate information among health authorities, other international agencies and other partners, including what is known and what is unknown. • To prepare the public and partners for a possible rapid progression of events and possible contingency measures. *(WHO 2005)*
Pandemic Vaccine • WHO will try to isolate the virus that may cause a pandemic to speed development of a vaccine? *(National Pandemic Influenza Plan*	

ITSligo An Institiúid Teicneolaíochta, Sligeach

2007)	
Reorganisation of health services and redeployment of health service staff • Some non-essential services will be cancelled or postponed • Rosters will be drawn up to reallocate staff. *(National Pandemic Influenza Plan 2007)*	

(Table 3.1 Comparison between WHO's actions and Ireland's actions at phase 4/5)

Similarities:

From the above table the following similarities between plans can be seen:

Communication:

It can be seen that the WHO will provide all countries health department (HSE) with vital information about the seriousness of the pandemic and everything that the HSE would need to know to ensure that the pandemic is controlled. This knowledge will then be passed by Irelands HSE to the public and health care workers through the communication strategy mentioned above.

Surveillance:

The WHO will continually be carrying out monitoring of the pandemic situation as it progresses and will disseminate the ongoing information to the HSE in Ireland for either control measures or their own surveillance. Ireland will then increase their surveillance when the pandemic level increases

Containment and prevention of a pandemic influenza:

It can be observed that the WHO is continually researching ways to contain the pandemic and prevent the spread by preparing the pandemic vaccine and providing Ireland with this information as it becomes available. The WHO is also responsible for testing the strain of flu and the availability of antiviral and they will deploy from

An Institiúid Teicneolaíochta, Sligeach

the global stockpile if necessary and Ireland will also review their stockpile of antiviral medicines getting advice continuously from the WHO.

Health system response:

In Ireland at phase four some non essential services will be cancelled or postponed and the WHO will promote these practices.

It can be seen that there are similarities between the plans in the way the advice is distributed. It shows that the WHO carry out a lot of testing and provide information to the Irish government and this information is filtered, re-organised and disseminate to the Irish public and health care staff.

3.2.3 Comparison of WHO Pandemic Planning objectives and Irelands Planning Objectives:

The objective of pandemic preparedness planning and response in Ireland is to reduce mortality (deaths) and morbidity (sickness) and to minimise the resulting disruption to society. These are seen as high priority by the Irish government and the HSE.

In the introduction to the National Pandemic Influenza Plan it states why Ireland needs to invest in pandemic preparedness and these are adopted from the WHO. Two essential reasons are as follows:

- Preparation will lessen the direct medical and economic effects of a pandemic by making sure that adequate measures are put in place before the pandemic occurs.
- Improvements in infrastructure to prepare for the next influenza pandemic which will provide benefits now and will also mitigate the effect of other epidemics or infectious disease threats.

Because of the above advice given by the WHO it is of high priority for the government and the HSE to invest in pandemic preparedness and response they then state the two reasons why they are putting in place the pandemic preparedness plans and these are to are to reduce mortality (deaths) and morbidity (sickness) and to minimise the resulting disruption to society.

(National Pandemic Influenza Plan 2007)

It can be seen that the aims of the WHO and Ireland are very similar when it comes to being prepared for a pandemic. This would be an aim for every country.

Both agencies want to ensure the health of all persons when a pandemic occurs this is the main priority of all levels to ensure deaths are kept to a minimum and to reduce sickness.

The WHO objective is similar as they want countries to be prepared because it will mitigate the effect that an epidemic or other infectious disease can cause i.e. death and sickness. *(National Pandemic Influenza Plan 2007)*

The second priority of the Irish government in pandemic preparedness is to ensure that Ireland can continue normally during a pandemic, this is similar to the WHO aims stating that if you are prepared then it will lessen the direct medical and economical effects on a country. *(National Pandemic Influenza Plan 2007)*

It can be seen that the aim is clear on both to ensure that people are healthy as much as possible and that the country can continue as normal as possible both healthcare and economically.

ITSligo An Institiúid Teicneolaíochta, Sligeach

3.3 Comparison of the National plans and I.T. Sligo plan for pandemic H1N1.

3.3.1 Introduction

The document entitled 'Guidance for Third Level Institutions in preparing for Pandemic (H1N1) 2009 (Swine Flu)'. *(see section 2.2.4)* is a working document of the National Pandemic Influenza Plan 2007 because the guidance reflects recommendations of the national plan.

It is in a checklist format it can be used by educational institutions to ensure that they are doing all that is possible to ensure that the college is prepared for the swine flu. It falls under the four headings being:

- Planning and co-ordination
- Continuity of student learning and operations
- Infection control polices and procedures
- Communications planning

(HSE Guidance for third level institutions 2009)

3.3.2 Similarities and Differences between IT and Guidance.

The Institute of technology used this checklist to ensure that they were ready and prepared for swine flu.

This section is going to look at similarities between the I.T. Sligo plan and the Guidance for third level institutions in preparing for pandemic H1N1 2009.

The college had evidence to show that they had complied with this guidance and can be seen in section 3.3.3.

They used the guidance as part of their plan to curtail the effects of the pandemic H1N1 in the college.

The I.T. Sligo plan for pandemic H1N1 and the guidance are similar in the following ways:

Planning and co-ordination	*Continuity of student learning and operations*	*Infection control polices and procedures*	*Communications planning*
I.T. Sligo has carried out all functions in this area of the guidance. This shows that I.T. Sligo has arrangements for planning and co-ordination of pandemic H1N1.	I.T. Sligo has carried out all functions listed in the guidance under this section. This shows that I.T. Sligo has made arrangements for the continuation of learning and the normal day to day operations	The guidance gives a list of measures to show different measures to control the spread of infection the I.T plan put in place all these measures stated in the guidance.	The national guidance again shows what institutes should do to communicate about the pandemic H1N1 to students. The I.T. Sligo carried out most functions however they did not carry out a very important function to *'Disseminate information about the third level institution's pandemic preparedness and response plan'* this states that the I.T. should make available their plan on how they are dealing with the pandemic and measures the have

An Institiúid Teicneolaíochta, Sligeach

			put in to date in relation to preparedness and response.

(Table 3.2 Similarities between I.T. Sligo plan and National Guidance)

To conclude the only section that I.T. Sligo did not fully comply with the guidance was under communication planning section when they did not disseminate the actual plan to students.

ITSligo An Institiúid Teicneolaíochta, Sligeach

3.3.3 Evidence of Compliance with the National Guidance

The following is the information obtained from the Institute of Technology pandemic plan checklist for 'Guidance for Third Level Institutes'

1. Planning and Coordination	
National guidance	I.T. Sligo
Ensure you are familiar with the National Pandemic Influenza Plan, your local emergency plan and the most up to date information from the Department of Health (at http://www.dohc.ie/) and the Health Protection Surveillance Centre (at http://www.hpsc.ie)	The college is up to date with all the HSE and DOHC Information and are familiar with the National Pandemic Influenza Plan and the local emergency plan.
Identify a pandemic coordinator and response team (including campus health services and mental health staff, student housing personnel, security, communications staff, physical plant staff, food services director, academic staff and student representatives) with defined roles and responsibilities for preparedness, response, and recovery planning	The Co-ordinator is Padraig Ryan the team is Noel Moran, Marion Hardigon, Eilish Curley (SHN), Student Union President, Student Union Welfare Officer,
Delineate accountability and responsibility as well as resources for key stakeholders engaged in planning and executing specific components of the operational plan. Who is the college nominee to lead	Padraig Ryan: Head of Learning Environment.

ITSligo An Institiúid Teicneolaíochta, Sligeach

on emergency planning? Is there clarity of senior management roles and responsibilities	
Ensure that pandemic influenza planning is consistent with any existing third level institution emergency operations plan, and is coordinated with the pandemic plan of the community and of the Department of Education and Science.	Yes
Develop a pandemic plan that includes timelines, deliverables, and performance measures	Done
Incorporate into the pandemic plan scenarios that address third level institution functioning based upon having various levels of illness in students and employees and different types of community containment interventions. The Pandemic plan should include, but is not limited to, the following: 1. A plan for cancellation of classes, sporting events and/or other public events	

An Institiúid Teicneolaíochta, Sligeach

	No plan for cancellation of classes
2. A plan if there is the need to close off campus, student housing, and/or public transportation	Closing campus will be on instruction of the HSE.
3.Assessment of the suitability of student housing for isolation of ill students	Student Housing is privately owned.
4. Contingency plans for students who depend on student housing and food services (e.g., international students or students who live too far away to travel home)	International students: student union
5. Contingency plans for essential campus activities	Contingency plans (HOS/HR/ITS BIC manager)
6. Contingency plans for maintaining research laboratories, particularly those using animals; and stockpiling non-perishable food and equipment that may be needed in the case of an influenza pandemic.	John Bartlett (contingency plans labs using animals)

An Institiúid Teicneolaíochta, Sligeach

7. If the third level institution operates from multiple sites, ensure that each site has a nominated contact and that up to date contact details and arrangements are in place.	N/A
8. A plan to deliver teaching by remote access (see section 2)	N/A
9. A plan to manage exams	BMcC if necessary
10. An operational plan for surge capacity for healthcare and other mental health and social services to meet the needs of the third level institution during and after a pandemic. Plan for the need for expanding clinical facilities, resources and isolation facilities Identify rooms that could be used for isolation and residences for students that cannot go home. Consider how special groups may need to be managed i.e. people with disability – physical/learning etc	The current facilities are not suitable students are advised to stay at home and attend their own G.P.
11. A plan for monitoring the situation both on and off the	This is delegated to Human Resources and Student union.

ITSligo An Institiúid Teicneolaíochta, Sligeach

campus – including monitoring staff absences, the number of cases presenting and/or residing on the campus	
12. A protocol for transportation of sick individuals to hospitals if the ambulance service is not available	Ambulance will be needed to bring students to hospital
13.An emergency communication plan, including internal and external communications. This plan should identify key contacts including the local Department of Public Health as well as the higher education officials (including back-ups). It should clarify the chain of communications, including alternate mechanisms. Plan for alternative modes of communication in the event of a power failure of mobile phone outage	Executive Committee will identify essential services.
Implement an exercise/drill to test your plan, and revise it regularly.	N/A
Participate in exercises of the community's pandemic plan	N/A
Develop a plan to develop the sequence and timelines for restoration of operations and	N/A

ITSligo An Institiúid Teicneolaíochta, Sligeach

essential services/ activities	
Develop a recovery plan to deal with consequences of the pandemic (e.g., loss of students, loss of staff, financial and operational disruption).	N/A
Share what you have learned from developing your preparedness and response plan with other colleges/universities to improve community response efforts	N/A

(Table 3.3 Evidence of I.T. Sligo compliance with Planning and Coordination Guidance)

ITSligo An Institiúid Teicneolaíochta, Sligeach

2.Continuity of Student Learning and Operations	
Guidance	I.T. Sligo
Develop and disseminate alternative procedures to assure continuity of instruction (e.g., web-based distance instruction, mailed lessons and assignments, instruction via local radio or television stations) in the event of third level institution closures.	HOS
Review arrangements for covering teaching and non teaching duties.	HOS/HR
Consider if candidates have completed the minimum requirement for a diploma etc. as soon as practicable (if appropriate)	HOS/Registrar
Develop a continuity of operations plan for maintaining the essential operations of the third level institution including payroll; ongoing communication with employees, students and families; security; maintenance; as well as housekeeping and food service for student housing. Include the need to provide food for healthcare staff, maintenance staff or other key staff who continue to work on campus.	Catering budget
Develop contingency plans in case of gas, oil, water and power shortages	N/A
Consult with HR regarding the recruitment of volunteers who could	N/A

ITSligo An Institiúid Teicneolaíochta, Sligeach

assist with duties e.g. answering phones, Review sick leave and holiday arrangements for staff for use in a pandemic event	

(Table 3.4 Evidence of I.T. Sligo compliance with Continuity o f Student Learning Operations Guidance)

ITSligo An Institiúid Teicneolaíochta, Sligeach

3.Infection Control Policies and Procedures	
Guidance	I.T. Sligo
Implement infection control policies and procedures that help limit the spread of influenza on campus (e.g. promotion of hand hygiene, respiratory etiquette). Make good hygiene a habit now in order to help protect employees and students from many infectious diseases such as influenza.	Done
Procure, store and provide sufficient and accessible infection prevention /cleaning supplies (e.g., soap, alcohol-based hand hygiene products, tissues, paper towels and bins for their disposal). Ensure that environmental cleaning procedures to prevent the spread of respiratory illness are in place including: procedures for regular cleaning of hard surfaces especially desks and work stations. Ensure that hand hygiene facilities are adequate and working properly; if/when updating or repairing facilities, consider installing automatic or foot-operated taps, dryers and waste bins.	Done
Check cleaning arrangements/contracts	Done

An Institiúid Teicneolaíochta, Sligeach

and whether special provision could be provided during a pandemic	
Establish policies for employee and student sick leave absences unique to pandemic influenza (e.g., non-punitive, liberal leave)	HR
Establish policies for employees and students suspected to be ill or who become ill on campus; Employees and students with known or suspected pandemic influenza should not remain on campus and should return only after their symptoms resolve and they are physically ready to return to campus, or after the isolation time recommended by the local Department of Public Health, whichever is longer	Done
Identify a setting on campus where an infection control point might be set up and where those who are ill and unable to return home can be isolated.	Done
Establish a pandemic plan for campus-based healthcare facilities that addresses issues unique to healthcare settings. Student health services should ensure that	Done
Ensure health services and clinics have	Done

An Institiúid Teicneolaíochta, Sligeach

identified critical supplies needed to support a surge in demand and take steps to have those supplies on hand	
Adopt Department or Foreign Affairs travel recommendations, if any, (www.dfa.ie) during an influenza pandemic and are able to support voluntary and mandatory movement restrictions.	N/A

(Table 3.5 Evidence of I.T. Sligo compliance with Infection Control Policies and Procedures Guidance)

An Institiúid Teicneolaíochta, Sligeach

4. Communications Planning	
Guidance	I.T. Sligo
Assess readiness to meet communications needs in preparation for an influenza pandemic, including regular review, testing, and updating of communications plans that link with public health authorities and other key stakeholders	Done
Develop a dissemination plan for communication with employees, students, and families.	Done
Develop and test modes of communication (e.g., hotlines, dedicated websites, local radio or television).	Done
Ensure that a system is in place that can provide all staff and students with timely and up-to- date information on the current situation in relation to pandemic flu and advise them on actions that they need to take now and in the future. This information should be made available on your own website.	Done
Develop a plan of communication with international students and students with a disability.	Done
Check and update student and staff contact details.	Done
Identify staff who will act as spokesperson for media relations	Done

ITSligo An Institiúid Teicneolaíochta, Sligeach

including media interviews	
Disseminate information about the third level institution's pandemic preparedness and response plan. This should include the potential impact of a pandemic on student housing closure, and the contingency plans for students who depend on student housing and campus food service, including how student safety will be maintained for those who remain in student housing.	Not done
Disseminate information from public health sources covering routine infection control (e.g., hand hygiene, coughing /sneezing etiquette), pandemic influenza fundamentals (e.g., signs and symptoms of influenza, modes of transmission), personal and family protection and response strategies and the at-home care of ill students or employees and their family members. Provide links to reliable sources of information Health Protection Surveillance Centre at www.hpsc.ie Health Service Executive at www.hse.ie Department of Health and Children at www.dohc.ie Department of Foreign Affairs at www.dfa.ie	Done

An Institiúid Teicneolaíochta, Sligeach

Anticipate and plan communications to address the potential fear and anxiety of employees, students and families	N/A

(Table 3.6 Evidence of I.T. Sligo compliance with Communications Planning Guidance)

Tables 3.2 to table 3.4 demonstrate the evidence of the level of compliance of I.T. Sligo with the national guidance.

The next two chapters 4&5 will have an in-depth analysis of the actual implementation of I.T. Sligo Plan to assess the level of Implementation within the college.

Chapter four will examine the methodology for the implementation of I.T. Sligo Plan and chapter five will demonstrate and evaluate the actual implementation of the plan.

An Institiúid Teicneolaíochta, Sligeach

4.0

Methodology

ITSligo
An Institiúid Teicneolaíochta, Sligeach

4.0

Methodology

4.0 Introduction

To examine the implementation of the I.T. Sligo Pandemic H1N1 plan a methodology for assessing the implementation of the plan is extremely important.

The best way to assess the implementation of the pandemic plan is to examine other projects where a health care intervention was evaluated and to assess the methodology used in these projects, and to try and mirror the methodology used.

From examining methodologies of studies that were carried out that evaluated compliance with standard precautions (SP) the following and most common design techniques were the following

- Cross sectional surveys
- Qualitative surveys
- Questionnaires
- Surveys
- Observations
- Interviews
- Video Observations

The Implementation and Effectiveness of the I.T. Sligo plan is split up into the following areas:

- An evaluation into the implementation of the I.T. Sligo communication plan for Pandemic H1N1
- An evaluation into how effectively the communication plan for Pandemic H1N1 is implemented.
- An evaluation into the implementation of the health care plan and also how effectively the Health care plan is implemented.
- A physical examination of the college building, toilets, student health centre to ensure that all infection control techniques are in place.

ITSligo An Institiúid Teicneolaíochta, Sligeach

Although a lot of useful information was obtained and ideas were gathered from evaluating other methodologies in relation to health care interventions no one set methodology could be found. So the methodology for the implementation of the I.T. Sligo Pandemic Policy was devised by looking at a collection of different methodologies and the following was decided upon to collect the information:

- To assess the implementation of the I.T. Sligo communication plan a comparative analysis was decided upon consisting of comparing between the information that was supposed to be disseminated to students about swine flu and the information that actually was disseminated to students.
- To test the actual effectiveness of the information disseminated to students a questionnaire was decided upon.
- To assess both the implementation and effectiveness of the I.T. Sligo Health care plan an interview with the Student Health Nurse (SHN) in the college was decided upon.
- To carry out a physical examination of the college building to ensure that the infection control techniques were put in place different checklists for each area was decided upon.

4.2 Methodology for the Comparative analysis:

To fully examine the extent to which the information that is placed in the communication plan was actually disseminated to students the comparative study was decided upon. The student swine flu leaflet that was given to students in October of 2009 is compared against the information placed in the actual communication plan. This is effective method of investigation as it can demonstrate the extent of information that was actually given to students relating to Pandemic H1N1 in I.T. Sligo. This will be explained and demonstrated chapter 4 *'Implementation of the I.T. Sligo Plan.'*

An Institiúid Teicneolaíochta, Sligeach

4.3 Methodology for the Student Swine Flu Questionnaire:

The student swine flu questionnaire was decided upon to test the effectiveness of the information that was given to students.

It was decided to use the questionnaire as a method of finding out the information as it was widely used to gain information in other research projects that were reviewed.

The questionnaire is the most cost effective way of gathering information but it is time consuming as every question has to be taught out in great detail and it is very important that the right questions are asked so that the essential information is collected.

A questionnaire is said to be a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. *(Wikipedia 2009)*

It was considered the best way to ensure that students were being communicated effectively and was actually aware of the relevant information in relation to swine flu was to send out a questionnaire.

4.3.1 Distribution of the Swine Flu Questionnaire

The questionnaire was particularly aimed at students in the Institute of Technology in Sligo.

After a lot of taught and deliberation on how to actually distribute the questionnaire to the students the method of delivery was broken down into two different options.

- The first option was to develop the questionnaire and print off 100 copies and to spend one entire day in the college central area i.e. the canteen and ask different students to fill out the questionnaires.
- The other option was to develop an online questionnaire and develop a link to this questionnaire and send out the questionnaire (link created online) to all students in the institute via student email in the Institute of Technology. The website where the questionnaire is created is on the online site called 'Survey Monkey'.

The decided method for collecting the information with much deliberation and discussion, the conclusion is to use the online survey (survey monkey) sending the link to students via student email. The other method where the students were asked face to face to fill out the questionnaire was decided against for a number of reasons being:

An opportunistic questionnaire using a grab sample of students will not give any accurate information of the number of students who have had swine flu. It would not be known what proportion of the students has seen the questionnaire, what proportion of these would have answered it and how representative of the student body it would be. There is another problem that those people who have had swine flu may not wish to admit it in a student questionnaire face to face.

That is the reasoning for sending the questionnaire via survey monkey in a link format that is attached to an email. An email would be created explaining the survey and a brief description as to what the students would need to do to fill out the questionnaire. The actual email that was created and sent to students can be seen in appendix I.

4.3.1.1 Survey monkey:

This is a website called 'www.surveymonkey.com' this is where any person can create a questionnaire with various different options.

When creating the questionnaire it was decided to keep the questionnaire as simple as possible so that when persons opened the link in their email that they could see that it would not take long to answer the questions, and would be more inclined to fill out the questionnaire.

The students after reading the email would click on the link attaching to the email this will direct them to a website where the survey is placed. The students answer the questions, when completed the students finish the survey and the survey is sent back to survey monkey website and the survey monkey website actually analyse the results for the respondent.

It is an extremely effective tool for assessing questionnaires. The website analyses the results qualitatively by providing the answers in a specified pie-chart. The website

IT Sligo An Institiúid Teicneolaíochta, Sligeach

also analyses the questions quantitatively by showing the level of answers that were completed.

4.3.2 Design of the questionnaire:

4.3.2.1 Design of Questions:

When designing a questionnaire the types of questions that are asked have to be taken into consideration. There are three types of questions and these are called:

1. Open ended questions.
2. Closed ended questions.
3. partially closed ended questions

4.3.2.1.1 Open ended questions

An open-ended question is a form of question which cannot be answered with a simple "yes" or "no", or with a specific piece of information.

Examples:

- What do you think about your weight?
- What is the purpose of government?
- What is the most important purpose of government?
- Why did you choose that answer? (*Wikipedia 2009 (closed ended questions)*

4.3.2.1.1.1 Advantages of open ended questions:

- Open-ended questions allow respondents to include more information, including feelings, attitudes and understanding of the subject. This allows researchers to better access the respondents' true feelings on an issue.
- Open-ended questions cut down on two types of response error; respondents are not likely to forget the answers they have to choose from if they are given the chance to respond freely, and open-ended questions simply do not allow respondents to disregard reading the questions and just "fill in" the survey with

all the same answers (such as filling in the "no" box on every question). (*Colorado State University 2009 open ended)*

4.3.2.1.2 Closed ended questions:

A closed-ended question is a form of question which can normally be answered using a simple "yes" or "no", a specific simple piece of information, or a selection from multiple choices.

Examples:

- Question: Do you know your weight?
- Answer: Yes
- Question: What is your weight?
- Answer: 167 lbs

(*Wikipedia 2009 (closed ended questions)*

4.3.2.1.2.1 Advantages of closed ended questions:

- Closed-ended questions are more easily analyzed. Every answer can be given a number or value so that a statistical interpretation can be assessed.
- Closed-ended questions can be more specific, thus more likely to communicate similar meanings. Because open-ended questions allow respondents to use their own words, it is difficult to compare the meanings of the responses.
- In large-scale surveys, closed-ended questions take less time from the interviewer, the participant and the researcher, and so is a less expensive survey method. The response rate is higher with surveys that use closed-ended question than with those that use open-ended questions.

(*Colorado State University 2009 closed ended)*

An Institiúid Teicneolaíochta, Sligeach

4.3.2.1.3 Partially Closed Ended Questions.

Partially closed ended questions this type of question provides a set of responses where the last alternative is "other Please specify".

4.3.3 Aims of questionnaire:

As discussed previously the questions that are asked are testing whether the students were well informed on swine flu by the student union, i.e. the effectiveness of the implementation of the communication plan. The questions were based on the Institute of Technology Communication Plan. The following will go through the questions that were asked in the questionnaire and give a brief justification for each question:

4.3.4 Justification of Questions

Question One:

Are you male or Female?

Male:

Female

Justification:

This is a closed ended question that asks the respondent to determine their sex. This question was asked to look at the differences between men and women in the college in relation to swine flu.

An Institiúid Teicneolaíochta, Sligeach

Question Two:

Are you aware of the term 'Swine Flu' (Pandemic H1N1)?

Yes

No

Justification:

This is a very simplistic closed ended question. The swine flu has been very well documented on the television in the form of advertisements, during the peak there was a vast amount of information available on the news. The radio also had advertisements about swine flu and the effect and also at the peak there was a lot of coverage in the national and regional newspapers. However it can still not be assumed that every single student will have heard about the swine flu as this may not have been the case.

Question Three:

Have you ever had the swine flu?

Yes

No

Justification:

This question is a closed ended question and is important as it will give a rough estimate to the amount of cases of swine flu that were in the college during the college year.

An Institiúid Teicneolaíochta, Sligeach

Question Four

Are you aware of the symptoms of swine flu?

Yes

No

Justification:

This question is a close ended question. It asks the question because the Institute of Technology communication plan indicated that they informed all students of the symptoms of swine flu and this question will investigate are students aware of the symptoms of swine flu.

Question Five

Would you know the procedure to take if you experienced the symptoms of swine flu (to stop the spread of infection)?

Yes

No

Justification:

This question is close ended. The question is asked because the Institute of Technology communication plan stated that they informed students the procedure to follow if they did have symptoms of swine flu and this question will investigate the effectiveness of the information provided.

Question Six

Do you feel you were you adequately updated and informed about swine flu through e-mails, fliers, posters, etc?

Yes

No

Justification:

This question was asked because the students union stated in the communication plan that they informed students on the actions to take if a friend or someone they know, experience the symptoms of the swine flu. This question will determine the effectiveness of this information that was disseminated to students

Question Seven:

If you feel adequately informed about the swine flu where did you feel you gained this information about the pandemic?

Nowhere
Student Union
Television
Radio

Other: _____

An Institiúid Teicneolaíochta, Sligeach

Justification:

This question is a partially close ended question. That was asked to discover where the students felt they obtained the most information about Pandemic H1N1.

The following chapter *'Implementation of the I.T. Sligo Plan'* will demonstrate the results of the questionnaire and will evaluate the results to demonstrate implementation of the plan.

4.4 Methodology for Interview with SHN

An interview with the Student Health Nurse (SHN) within I.T. Sligo was decided upon to test both the implementation and the effectiveness of the implementation of the Health care plan within the college.

An interview with the student health nurse was decided upon to investigate whether or not this plan was put in place and test the effectiveness of the implementation of the plan. The interview was also decided upon to obtain the nurse's opinion on the Pandemic H1N1 and the effectiveness of the plan.

The actual health care plan for pandemic H1N1 contained the following elements:

- purpose
- scope
- department set up
- PPE
- Aerosol generating procedures
- Infection control
- Communication
- Patient assessment
- Staff of the SHS
- Audit system
- Revision history.

An Institiúid Teicneolaíochta, Sligeach

The questions for the nurse are based on the elements of this plan. The answers will be evaluated qualitatively

4.4.1 Type of Interview:

A face to face evaluation interview was decided upon for the interview with the nurse.

Evaluation research is defined as a '*systematic determination of merit, worth, and significance of something using criteria against a set of standards.*'(*Google define 2010)*

The face to face interview was decided upon instead of sending the questions to the nurse by email after looking at the following advantages of face to face interviews.

Advantages of a face to face interview are as follows:

- Enables the interviewer to establish rapport with the respondent
- Allows the interviewer to observe as well as listen
- Permits more complex questions to be asked than in other types of data collection
- Some uses: to get before-and-after data about a lesson module or a change in administrative procedure; to gather opinions on a specific learning or teaching technique

(Practical Assessment Research & Evaluation 1997)

4.4.2 Design of the interview

It was decided that the nurse for the college would be an ideal person to interview as she was heavily involved in the administration of policies and procedures and with the actual implementation of the policies.

The questions for the nurse were developed two weeks prior to the interview and were created after examination of the health care system plan for pandemic H1N1: '*Management of Influenza A(H1N1) Virus 'Contingency Plan for Appropriate patient care'*.

Her view on the current situation in regard to Pandemic in the college and the effectiveness of the plans and policies are evaluated.

An Institiúid Teicneolaíochta, Sligeach

The plans and procedures in the Institute of Technology were evaluated in order to come up with the questions for the interview with the nurse. The questions were designed after to determine the worth of the plan against the set of criteria laid out in the plan

The remainder of the chapter will look at all the question that is asked of the respondent in the interview and there is a justification for each question. The list of questions in its entirety can be seen in appendix III.

Question One

'Was the telephone triage system for students put into operation when the new health centre opened?'

Justification:

This question is asked because in the plan called *'Management of Influenza A(H1N1) virus 'contingency plan for appropriate patient care'* under the section 4.5 *'Patient Assessment'* it stated that when a student with symptoms rings the dedicated telephone number the SHN will assess severity of their symptoms and recommend their treatment. To ensure that the telephone triage number was actually set up and in operation when they moved to the new student centre this question is asked.

Question two:

Is the telephone triage system still in place? If not could you please state the time when the triage ceased being used?

Justification:

This question is asked because when the plan for the college was investigated in December the swine flu was still predominant throughout the college. When the SHN was interviewed in April the swine flu was not at the same stage and this question is asked to determine was there still a need for the telephone triage system and if there was not a need for the telephone triage system then when did the system cease.

IT Sligo An Institiúid Teicneolaíochta, Sligeach

Question Three:

In your opinion was the telephone triage system effective at reducing the spread of Pandemic H1N1?

Justification:

This question was created to determine the SHN opinion to whether she considered the telephone triage to be of any use. The telephone triage is used nationally also and the question was asked to see if the telephone triage is actually effective in reducing swine flu.

Question Four:

Was there many students using this triage system? (Exact numbers if at all possible)

Justification:

This question was created to enquire about the amount of persons who actually used this system.

Question Five:

Was there a system set up upon entry to the student health centre to ensure the students visiting the centre did not have swine flu?

Justification:

This question was created to find out what was the actual plan in place for when students entered the health centre with symptoms of Swine Flu

IT Sligo An Institiúid Teicneolaíochta, Sligeach

Question Six:

Were there many students that entered the student health centre with the symptoms of the swine flu?

Justification:

This question was created to gather information from the nurse on the amount of persons that had entered the student health centre with swine flu symptoms i.e. cold or flu symptoms.

Question Seven:

Of these students that entered the student health centre was there many students that were confirmed with the pandemic H1N1?

Justification:

This question was created to obtain a rough estimate to the amount of students that actually had a confirmed case of pandemic H1N1.

Question Eight:

Was the containment room set up for students who did not use the triage telephone system and presented themselves to the student health centre?

Justification:

This question was created because in the plan called *'Management of Influenza A(H1N1) Virus 'Contingency Plan for Appropriate patient care'* under the section *'department set up'* it states that if there are students who self report symptoms of swine flu or that have been requested to see the nurse after the telephone triage would

IT Sligo An Institiúid Teicneolaíochta, Sligeach

be placed in the containment room. The question was created to actually ensure that the containment room was indeed set up.

Question Nine

Was there any student(s) that were sent to hospital by ambulance from the student health centre with confirmed case of the swine flu?

Justification:

This question was created to investigate how many students (if any) were taken to hospital by ambulance with confirmed case of the pandemic H1N1. It was created because in the plan *'Management of Influenza A(H1N1) Virus 'Contingency Plan for Appropriate patient care'* under the section *'Infection Control'* it states that persons with the pandemic (H1N1) that have came to the college should be transported by ambulance.

Question Ten:

Was there ever an occasion where the PPE supplied for persons with confirmed Pandemic H1N1 was used by yourself or the doctor

Justification:

This question was created because in the plan called *'management of Influenza A(H1N1) Virus 'Contingency Plan for Appropriate patient care'* under the section 'PPE' for the student health care staff' it states that the SHS staff should wear:

Surgical mask, Plastic apron, Gloves, and Goggles. The question was created to ensure that they actually wore the PPE when dealing with suspected or confirmed cases.

Question Eleven:

Do you feel the procedure that was put in place was effective for reducing the spread of Pandemic H1N1 in the college?

Justification:

This is an informative question to determine her opinion as to whether the plans put in place by the student support services actually worked and was proven to be effective in reducing the numbers of any pandemic within the college

Question Twelve

Is there anything you would have done differently if there was to be another Pandemic outbreak in the college?

Justification:

This was another informative question to obtain the SHN's opinion on whether or not she would do anything different in the college if there were another Pandemic to arrive.

The following chapter *'Implementation of I.T. Sligo Plan'* will demonstrate and evaluate the results from the student nurse interview.

4.5 Methodology for Physical Implementation of I.T. Sligo:

Four individual checklists that reflect infection control guidance for third level institutions were decided upon.

The checklists are a tool to examine the extent of physical implementation of infection control techniques throughout the following four areas:

- Student Health Centre Checklist

- Female toilet checklist
- Male Toilet Checklist
- Checklist for main college building

(All of the checklists can be seen in appendix IV)

The results of the Physical examination of all these areas can be seen in the following Chapter: *'Implementation of I.T. Sligo Plan'*

ITSligo An Institiúid Teicneolaíochta, Sligeach

Chapter 5.0
Implementation of the I.T. Sligo Plan

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

5.0 Implementation of the I.T. Sligo plan:

5.1 Introduction:

This section will now examine the actual implementation of the I.T. Sligo plan and the overall effectiveness of the following elements:

- The I.T. Sligo Communication Plan for Pandemic H1N1, by comparing the leaflets given to students against the information based in the plan and by discussing and evaluating the Student Swine Flu Questionnaire.
- The I.T. Sligo Health care plan by assessing the results from the interview with the SHN.
- Investigating the results of the physical examination from the four different checklists.

This section will examine to ensure that the elements listed in the I.T. Sligo plan were actually carried out and were effectively implemented throughout the college.

5.2 Implementation of the I.T. Sligo Communication plan:

The Institute developed a communication plan to limit the spread of swine flu between staff and students in the college. The student union (SU) play a major role in communicating the facts about the swine flu to the student body. The student union has a plan in place the plan for managing the swine flu to make all current students and any new students coming into the institute aware of the flu and the steps and precautions involved to limit the spread of swine flu.

The SU will work alongside the institute to manage the swine flu and they will also work with staff and students. The student union was used as a conduit for this information because they communicate with staff and students daily through e-mails; they also have a student centre where members of the student union can be found they are very approachable and a good medium between staff and students.

An Institiúid Teicneolaíochta, Sligeach

The student union produced leaflets containing the following information:

- What the Pandemic (H1N1) is.
- Does the flu spread easily
- Symptoms of swine flu
- What to do if you have symptoms of swine flu (how to stop spread of infection)
- Personal actions (what to do if a person gets sick)
- How to care for themselves or someone else at home
- And where to get more advice

(I.T. Sligo Communication Plan for managing Pandemic H1N1)

The comparative study will determine whether or not the student union actually provided this information via leaflets:

In October an observational examination of the large canteen in the main college area was carried out.

A member of the student union left a leaflet regarding swine flu information on each table in this main canteen. One of these leaflets was collected on this day, (the leaflet can be seen in appendix IV).

The following table will compare the information they were supposed to provide to students against information that was provided to students:

I.T. Sligo Communication plan	*Leaflet to students*
What is Pandemic H1N1 is	✓
Spread of swine flu	X
Symptoms of swine flu	✓
What a person can do to prevent spread of swine flu	✓
Personal actions	✓
How to care for themselves or some one else at home	✓

Where to get more advice	✓

(Table 5.1 Comparison between information placed in the plan and information in the leaflet)

5.2.1 Additional Information:

It is clear to see that the student union did in fact provide the information to students that they said they were going to disseminate.

Information was not provided on how easily the pandemic can spread. However they do state that the common cold and pandemic H1N1 symptoms are at times difficult to distinguish against then goes on to give the differences between the common cold symptoms and pandemic flu symptoms.

This was additional information they had not been stated in the plan itself but was in fact stated in the leaflet. The plan stated that information would be provided on the symptoms of swine flu but the plan did not state that information would be provided on the differences between the common cold symptoms and Pandemic H1N1 symptoms. This information is very informative and the Institute should be commended for this.

It is not stated on the leaflet how students should care for themselves at home, however it does state what the student(s) should do if they have flu like illness.

A system was organised by the Institute called the 'Flu buddy system' this is where a person would choose a friend that they could trust who would keep in contact with them and help them out if they were to get sick with the swine flu.

This leaflet provides the 'flu buddy' with duties for students to help their friend(s) if swine flu were to be contracted. This could be seen as what 'how to care for someone else in their homes'. This is a good system if students were to actually use it.

An Institiúid Teicneolaíochta, Sligeach

Other duties of the student union were to inform all new students to the institute about the swine flu and the 'flu buddy system' at initial registration.

The leaflet was given out to all students when registering.

The student union also had to keep the students regularly updated concerning swine flu information and updates of the virus by email. These were sent to all students at start of the year.

Posters were placed in the student union and notice boards throughout the college. These were posters concerning the exact same information as the leaflet.

It is clear to see that the relevant information was provided to students; however it begs the question as to whether the students actually read the leaflets that were placed in communal areas around the college and on notice boards were these leaflets actually of any significance if not actually communicated to students face to face.

The student swine flu questionnaire investigates were students actually aware of the swine flu and the procedure in place in the institute also to ensure that the information given to students by the student union was actually taken on board.

An Institiúid Teicneolaíochta, Sligeach

5.2.2 Student swine flu questionnaire:

5.2.2.1 Results from student swine flu questionnaire:

There were 100 respondents to the questionnaire. The following will demonstrate the results qualitatively using excel graphs.

Question One:

The First question was asked to determine how many of the 100 respondents that replied to the questionnaire were male and how many were female. These chart shows that 64 of the respondents to the questionnaire were women and that 36 of the respondents were male.

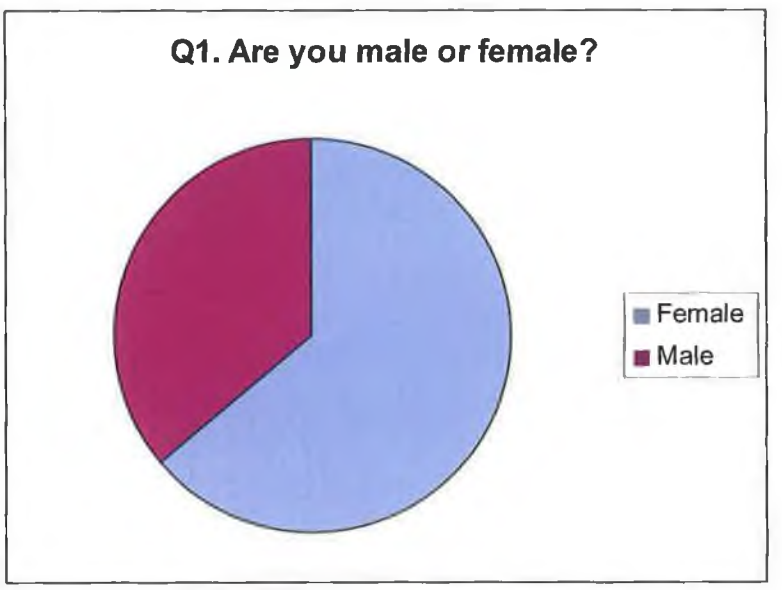


Figure 5.1 'Graph demonstrating the ratio between men and women that responded to the questionnaire'

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Question Two:

The second questions asked the respondents whether they were aware of the term 'Swine flu'. It can be seen from the graph all respondents were aware of the swine flu.

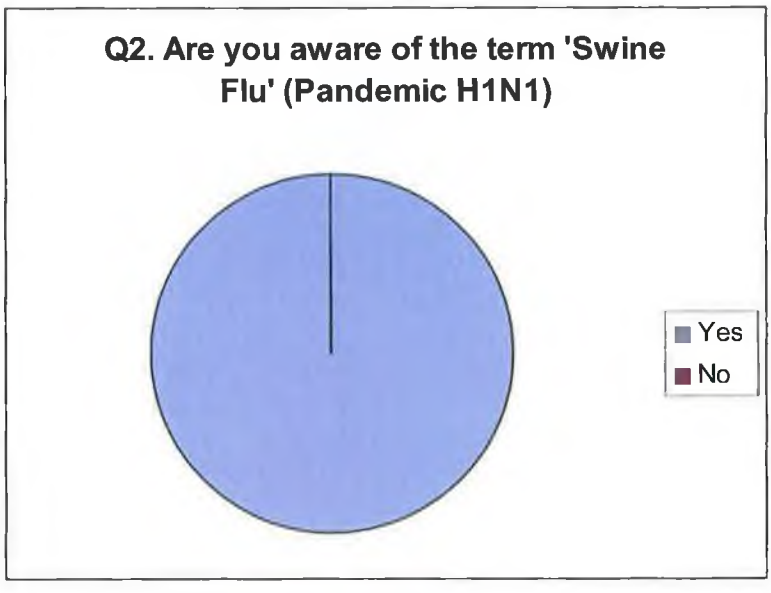


Figure 5.2 a graph to demonstrate the level of respondents that were aware of Pandemic H1N1

An Institiúid Teicneolaíochta, Sligeach

Question Three:

The third question asks the respondents whether or not they have had the swine flu. It can be seen from the graph that 91% of the 100 respondents had not experienced the swine flu and that 9% of the respondents actually experienced the pandemic H1N1.

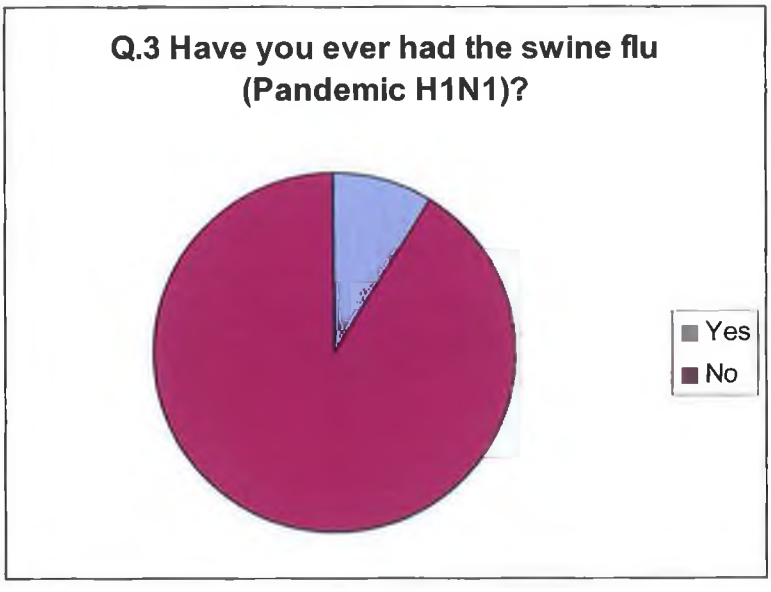


Figure 5.3 a graph to demonstrate the level of respondents that contracted Pandemic H1N1.

An Institiúid Teicneolaíochta, Sligeach

Question Four:

The fourth question asks the respondents are they aware of the symptoms of the swine flu (Pandemic H1N1). It can be seen from the graph that 93% of the respondents are aware of the symptoms of swine flu however 7% of respondents are not aware of the symptoms of swine flu.

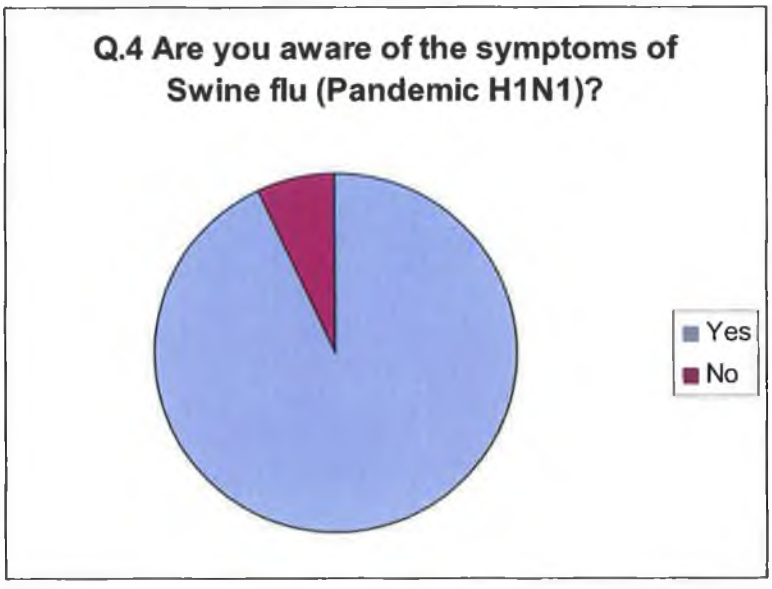


Figure 5.4 a graph to demonstrate the level of respondents that were aware of symptoms of Pandemic H1N1.

Question Five:

The fifth question asks the respondents would they know what procedure to take if they experienced the symptoms of swine flu to stop the spread of infection. From the graph it can be seen that 80% would know the procedure to take to if they experienced the symptoms of swine flu to stop the spread of infection; however 20% of respondents are not aware.

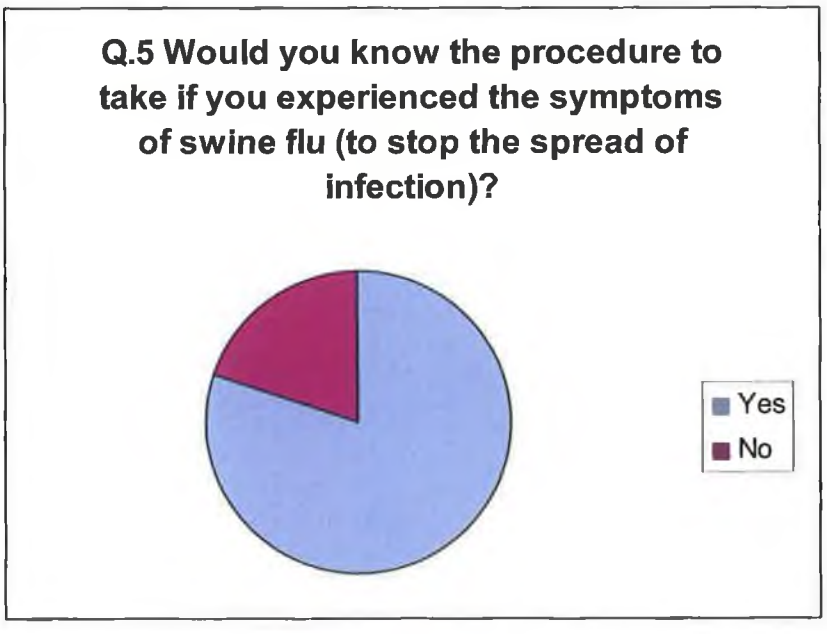


Figure 5.5 a graph to demonstrate the level of respondents that know the procedure to take if they experienced the symptoms of swine flu.

An Institiúid Teicneolaíochta, Sligeach

Question Six:

The sixth question asks the respondents do they feel they were adequately updated and informed about swine flu through emails, fliers, posters etc. From the graph it can observed that 81% of respondents feel they were adequately updated where as 19% of the respondents feel they were not adequately updated.

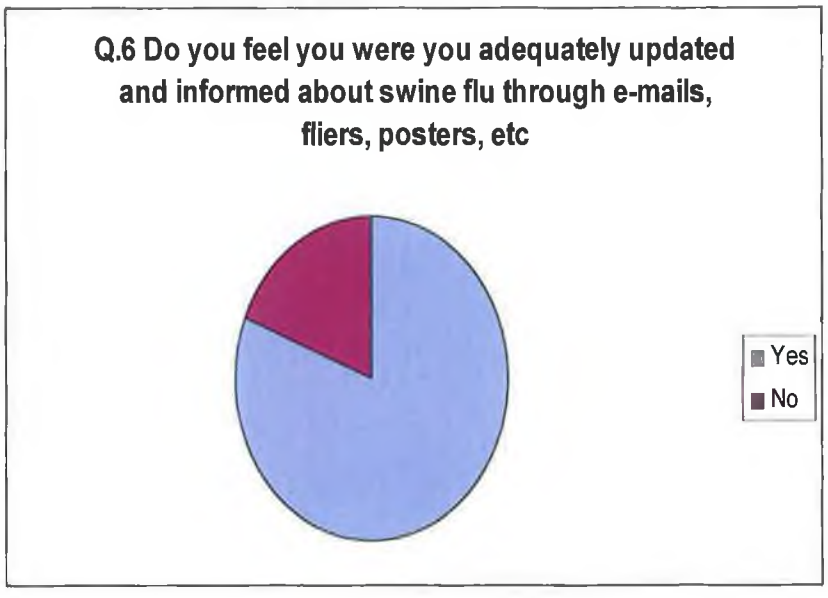


Figure 5.6 a graph to demonstrate the level of respondents that felt they were adequately updated and informed about swine flu.

An Institiúid Teicneolaíochta, Sligeach

Question Seven:

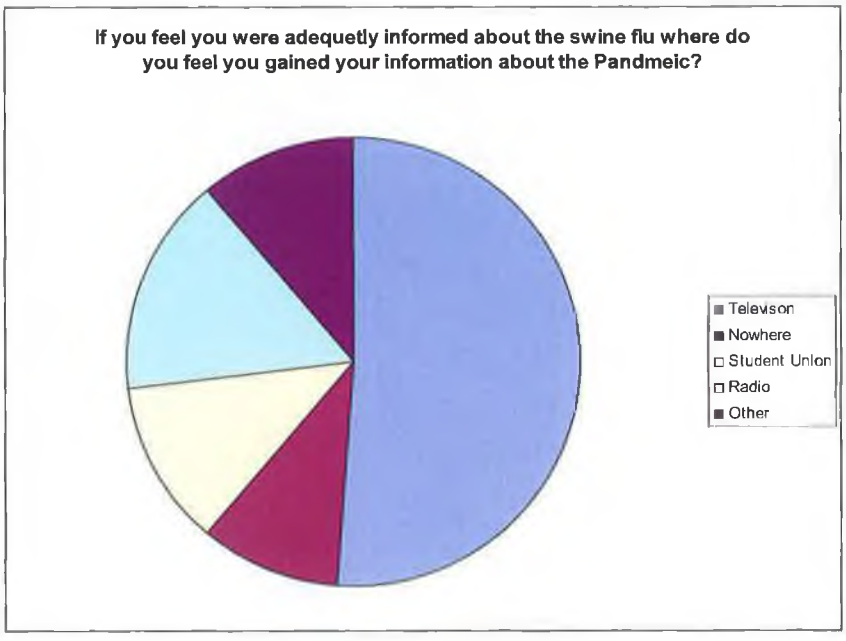


Figure 5.7 a graph to demonstrate the level of respondents that gathered the information from different sources.

The seventh and final question demonstrates that 51 persons obtained the information about the pandemic from television, 10 were informed from nowhere, 12 persons feel they were informed from the student union 16 were informed from radio and 11 persons gave *'other'* responses these were as follows:

- Post
- internet, posters
- Online research I did when I was told I tested positive for influenza A/H1N1!
- medical personnel
- On work placement and a conference I attended for it.
- posters in all public places
- Newspapers, National news, posters
- Emails. Although I received emails I didn't pay much attention to them.

An Institiúid Teicneolaíochta, Sligeach

- The IT nurses' office had informative posters, and emails were sent, but no one addressed the rumours that swine flu wasn't as bad as the news first stated and the rumours that some of the medical companies were behind the whole scare to make profits... I'm still unsure what to believe!
- Media and friends who are pharmacists and doctors
- print media, online news sources

ITSligo
An Institiúid Teicneolaíochta, Sligeach

5.2.2.2 Effectiveness of Communication Plan

The results from this questionnaire were mainly positive and were answered as expected. It can be seen that students in the college were well informed and aware of the swine flu with all 64 females and 36 male respondents they were all aware of the swine flu. This was to be expected as the swine flu at its peak was predominant on the news, radio, through advertising campaigns, in health care units and also in places of work such as the institute.

Nine persons out of the one hundred persons that responded to the questionnaire have contracted the swine flu. This was a relatively low figure however it is clear to see that nearly 10% of the 100 respondents actually contracted the swine flu.

There are over 4,000 persons in the Institute of Technology if we were to take these answers as representative of the entire college then it would be an estimate that there could have been fewer than 400 persons with swine flu in the entire college.

93 of all persons asked were aware of the symptoms of swine flu. Seven persons were not aware of the symptoms. This is good as the student union informed the students of the symptoms.

80 people would know what procedure to take if they experienced symptoms of the swine flu however 20 persons would not know what procedure to take.

81 persons feel they were in fact adequately updated by the college through emails, fliers posters etc.

It would appear that most students were happy with the performance of the college on informing them of swine flu. This is a satisfactory result.

However the results from the final question are quite the opposite. When asked if where the students felt they gained the most information about pandemic H1N1 only 12 persons gained their information from the student union. This doesn't mean that the information was not given to students there is evidence to show that the information was in fact provided to students. However it would be apparent that students really did not take much notice of the information this can also be seen from one of the other responses from one student saying they acquired their information from *'Emails. Although I received emails I didn't pay much attention to them'*.

ITSligo An Institiúid Teicneolaíochta, Sligeach

It is apparent that the media (television, radio, internet, newspapers) are extremely important in informing persons about the current situation of a pandemic, how to reduce the amount of persons contracting pandemic, and informing persons the techniques that should be used to control the spread of infection.

ITSligo
An Institiúid Teicneolaíochta, Sligeach

5.3 Health care plan:

5.3.1 Introduction

The following will take an in-depth look at the results from the interview with the SHN to ensure the Health Care Plan was put into operation and will evaluate the overall effectiveness of the Health Care Plan.

An interview was set up with the student health care nurse on the 21st of April 2010 at half three in the afternoon. (Actual results can be seen in appendix V)

The student health nurse was very informative and helpful throughout the interview providing a wide range of additional information.

5.3.2 Results from the Interview with the nurse:

The following is going to demonstrate the answers that were given by the student health nurse to the answers that were given.

The questions are going to be assessed qualitatively and both the questions and the answers can be seen below:

Question One:

Was the telephone triage system for students put into operation when the new health centre opened?

Answer:

Yes there was a number set up for students to ring if they experienced the symptoms of Pandemic H1N1. It was placed on the bottom of the college swine flu leaflet given to students at the start of the year.

IT Sligo An Institiúid Teicneolaíochta, Sligeach

Question Two:

Is the telephone triage system still in place? If not could you please state the time when the triage ceased being used?

Answer:

The number was never rung by students. It is still technically in use and is placed in the drawer in my office.

Question Three:

In your opinion was the telephone triage system effective at reducing the spread of Pandemic H1N1?

Answer

Not in any way,

Question Four:

Was there many students using this triage system? (Exact numbers if at all possible)

Answer:

No student used this system; students just came into the student health care centre if they possessed the symptoms of swine flu and were assessed upon entry to the student health centre and treated from there.

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Question Five:

Was there a system set up upon entry to the student health centre to ensure the students visiting the centre did not have swine flu?

Answer:

Yes, the procedure was that if students entered the student health centre they were asked if they had any flu like symptoms by the secretary of the student health centre. If the student had flu like symptoms regardless they were isolated from other students and given a face mask. There temperature would be taken if it was above 38 degrees Celsius it would be classified as swine flu.

Question Six:

Were there many students that entered the student health centre with the symptoms of the swine flu?

Answer:

No numbers were taken in peak times a rough estimate would be about 50 persons a day entered into the student health centre that had symptoms of swine flu, if they were very suspicious that the students had swine flu the G.P. would take the case from there. If students were extremely sick or had a chronic illness their parents or guardians would be rang.

Question Seven:

Of these students that entered the student health centre was there many students that were confirmed with the pandemic H1N1?

IT Sligo An Institiúid Teicneolaíochta, Sligeach

Answer:

None.

Question Eight:

Was the containment room set up for students who did not use the triage telephone system and presented themselves to the student health centre?

Answer

There was a treatment room where suspected students were placed and were given facemasks to limit infection.

Question Nine

Was there any student(s) that were sent to hospital by ambulance from the student health centre with confirmed case of the swine flu?

Answer

No

Question Ten:

Was there ever an occasion where the PPE supplied for persons with confirmed Pandemic H1N1 was used by yourself or the doctor

Answer:

The PPE was used at all times during peak season; this included the full face mask which was changed at all times.

An Institiúid Teicneolaíochta, Sligeach

Question Eleven:

Do you feel the procedure that was put in place was effective for reducing the spread of Pandemic H1N1 in the college?

Answer:

No, there were not that many cases in the institute there was not as many cases as there was in other colleges.

Question 12:

Is there anything you would have done differently if there was to be another Pandemic outbreak in the college?

Answer:

Yes, we followed all advice and procedures

5.3.3 Effectiveness of Implementation of Health Care Plan:

This was an interesting interview. The interviewee SHN was very informative in her answers and provided a lot of information.

The SHN seemed to carry out all recommendations given to her by the executive committee through additional information she disclosed that she and the SHD were both extremely busy in august getting the health service prepared for the student's arrival in September in relation to pandemic preparedness.

Because the swine flu was not as serious as anticipated in it can be seen observed from the results of this interview that some of the procedures in the plan were not followed through.

IT Sligo An Institiúid Teicneolaíochta, Sligeach

Under the plan under the section '*Patient Assessment'* is a section on showing how the patients are to be assessed they introduce a telephone triage system where individuals can telephone if they feel they have swine flu symptoms and they will be assessed and will be recommended treatment. This is a very good system for reducing the numbers entering the student health care centre which in turn would reduce the spread of infection.

However it is apparent from the interview from the nurse that this system was not put into place. She showed the telephone it was still in her bottom drawer located in her office.

The reason why this number was not used is because on the leaflet (shown in appendix IV) it states that this mobile number is a number where you can get more information about the swine flu it was named the 'student health swine flu advice number', it was not shown as a 'telephone triage' number where a patient would be medically assessed.

The plan shows there should be a telephone triage system in place but there is only an advice number which cannot be seen to be the same system.

From interviewing the nurse we can actually see that the patient assessment is as follows:

Students were assessed upon entry to the student health centre and the student health care secretary medically assessed the students asking them if they had symptoms of swine flu if they did they were put into a separate room and given a face mask to control spread of infection. The person's temperature was then taken and if it was above 38 degrees Celsius they were confirmed with pandemic H1N1.

Fortunately from around the 50 persons who were entering the student health centre a day with pandemic H1N1 with flu symptoms none were actually diagnosed with pandemic H1N1.

An Institiúid Teicneolaíochta, Sligeach

Institute of technology in Sligo were lucky that the swine flu was not predominant throughout the college, however it begs the question that if the pandemic influenza were to be of greater strength would the student health centre have been able to cope with this form of patient assessment and should they have promoted the telephone triage system as a means of patient assessment instead?

This should be reviewed if another wave of pandemic H1N1 were to appear or possibly a new strain of influenza were to come about that may be a lot more contagious and severe.

Overall the student health care system put a lot of effort into controlling pandemic H1N1 and put most elements of their health care plan into place. It is evident that they followed instructions from the HSE, DOHC and HSPC.

An Institiúid Teicneolaíochta, Sligeach

5.4 Infection control policies and procedures:

5.4.1 Introduction

The following will demonstrate the results from the four physical examinations of the Student Health Centre, female toilets, male toilets and main college building.

In the information sheet for schools, colleges and centres of education on pandemic H1N1 (2009), states that the five most important things that schools/colleges can do to prevent the spread of

Raise awareness:

Schools/colleges can encourage good prevention awareness by putting up posters on respiratory etiquette and hand hygiene.

Respiratory etiquette

Promote students and staff to cover their mouth and nose with a paper tissue when coughing or sneezing. If no tissue is available they should cough or sneeze into the inside of their elbow. A tissue should be used only once and disposed of quickly and carefully (a dustbin is fine).

Hand Hygiene:

Students/staff should wash their hands with soap and water. Hand drying facilities must not be shared between people. Hence the types of hand drying facilities that can be used include paper towels (which are disposed of into waste bins), hot air hand dryers, and roller towels.

To ensure that the Institute were carrying out all these infection control techniques a physical examination was carried out to ensure that these measures were actually in place. These examinations took place on the 20th of April 2009.

An Institiúid Teicneolaíochta, Sligeach

5.4.2 Results from physical examination:

5.4.2.1 Results from Student Health Care Centre

Checklist	Yes	No	Comment
Is there a nurses room	✓		
Is there a doctors room		✓	
Is there a reception room	✓		
Is there a containment room	✓		There is an extra room that can be used for containment of cases.
Does each room have HSE hand wash etiquette posters?	✓		Yes there are posters placed in reception room and leaflets left on table in reception room.
Does each room have hand sanitizer placed for student/staff use?	✓		The reception area has alcohol gels placed on the table in the room.
Is the telephone triage system still in place in the student health centre?		✓	
Is there a notice board upon entry to the Student centre with swine flu information attached?	✓		
Is there HSE hand wash etiquette posters upon entry to the student centre	✓		Placed upon entry to the student centre just before entrance to the main building
Is there Hand sanitizer upon entry to the student centre?	✓		Also placed upon entry to the student centre just before

An Institiúid Teicneolaíochta, Sligeach

			entrance to the main building the poster is located beside the hand sanitizers. All hand sanitizers both in the reception room and upon entry are full.
Does the toilet placed in the SHS have hand wash etiquette posters placed inside?	✓		Yes, posters that show how to wash hands properly (HSE) see appendix 3
Is there adequate hand wash placed in the toilets?	✓		Yes all full.
Is there proper hand drying facilities (individual)	✓		Newly installed hand dryers.

(Table 5.2 'Checklist showing results for Student Health Care Centre')

An Institiúid Teicneolaíochta, Sligeach

5.4.2.2 Results from Main College Building Inspection

Area under Investigation:	Is there a hand sanitizer present?	Is there hand wash poster attached?	Is the sanitizer full?	Comment
Front door entrance to main canteen area	✓	✓	✓	
Side entrance to the canteen area of the college	✓	✓	✓	
Entrance to I.T. services	✓	✓	✓	
Entrance to the library	✓	✓	✓	
Entrance to the science block	✓	X	✓	There was just a hand gel dispenser placed upon entry to the newly renovated science block.
Main entrance to college (reception area)	✓	✓	✓	
Entrance to dopiest café	✓	✓	✓	

An Institiúid Teicneolaíochta, Sligeach

(Table 5.3 'Checklist showing results for Main college building)

5.4.2.3 Results from Female Toilet Inspections:

Toilet number:	Location:	Hand wash etiquette poster	Adequate soap/ hand wash	Comment:
1	Female toilet placed down below the main canteen	✓	✓	This toilet is placed in an older part of the building some of the taps are not working to the best of their abilities. The soap dispensers were in working order and there was a HSE poster showing persons how to wash hand properly to stop spread of infection.
2	Female toilets placed upstairs in engineering block	✓	✓	This public toilet is small with only 2 toilets in there. However the hand dryer is working and very powerful

An Institiúid Teicneolaíochta, Sligeach

				and the soap dispensers were also full. The HSE poster was placed beside the drier.
3	Female set of toilets placed in the science block opposite to room B2046	✓	✓	This is quite a large public toilet with six toilets inside. The HSE poster was placed in two areas in the toilets the soap dispensers were full and there was no shared hand drying facilities. The hand driers were very powerful. On outer entrance to the toilets there was HSE information on Pandemic H1N1.
4	Female set of toilets placed the opposite end of the science block.	✓	✓	Another large set of toilets also newly refurbished. There was plenty of hand wash and the HSE hand

An Institiúid Teicneolaíochta, Sligeach

				hygiene poster was placed on the wall.
5	Female set of toilets placed in the engineering block towards very end of main building.	✓	✓	Large set of toilets. There was no sharing of hand drying facilities, the soap dispensers were in working order and were also full. There was one HSE poster on hand washing techniques.
6	Female set of toilets in the business (D block)	✓	✓	Hand dryers were placed in this toilet not overly strong in power. HSE poster was placed in these toilets also.
7	Female set of toilets in the reception area of the college.	✓	✓	Posters, soap dispensers and 3 hand driers were placed in these toilets. The largest toilet examined

(Table 5.4 'Checklist showing results for Female toilets')

An Institiúid Teicneolaíochta, Sligeach

5.4.2.4 Results from Male Toilet Inspections:

Toilet number:	Location:	Hand wash etiquette poster	Adequate soap/ hand wash	Comment:
1	Male placed down below the main canteen (beside bank)	✓	✓	
2	Male toilets placed upstairs in engineering block (directly opposite from female toilets near presidents office)	✓	✓	
3	Male set of toilets placed in the science block opposite to staff office	✓	✓	
4	Male set of toilets placed the opposite end of the science block.	✓	✓	
5	Male set of toilets	✓	✓	

An Institiúid Teicneolaíochta, Sligeach

	placed in the engineering block towards very end of main building.			
6	Male set of toilets in the business (D block)	✓	✓	
7	Male set of toilets in the reception area of the college.	✓	✓	

(Table 5.5 'Checklist showing results for Male toilets')

5.5 Discussion on How Effectively Infection Control Techniques were implemented.

It can be seen from the physical examination results that I.T. Sligo was very good and efficient at Physical implementation of infection control techniques.

In every toilet examined there were posters informing persons on the proper way to wash their hands given by the HSE. This was if followed very well at reducing the spread of pandemic H1N1. The spread of germs and influenza virus would be greatly reduced if everyone were to wash their hands in this way. However this is not always going to happen. The select few will not take any notice of these posters.

That is why there needs to be a good communication plan in place to accompany the infection control techniques informing student of the importance of how washing hands properly after using the bathroom can really have an impact on reducing infections and influenzas.

A physical observation of all notice boards throughout college shows the HSE Pandemic Influenza advice and also the student unions posters are placed on notice boards throughout the college.

When soap and hot water are not available, i.e. in toilets it can be observed that all entrances to the college have alcohol based hand gels that persons can use without water to limit bacteria and infections passing. Beside most of these hand gels there were Pandemic H1N1 posters (provided by the HSE) informing readers on the importance of hand hygiene and respiratory etiquette.

Bins were placed throughout the college to dispose of their tissues.

Cleaning is another major element of infection control. Toilets were cleaned once a day. There is a rota system in each toilet. This is placed on the back of every door showing when the toilet was last cleaned. The cleaners washed down the hard surfaces in toilets with an ethanol based spray. It is not evident that they were informed to increase their methods of cleaning during the pandemic peak.

Overall the I.T did follow advice for infection control throughout the college.

It was well planned out and organised.

The student health care centre carried out all functions in relation to infection control. Placing information leaflets, alcohol hand gels, posters and tissues in the reception room. A room was put in place for isolation of students if needs be. The nurse would provide infection control techniques to anyone who was to visit the SHN.

Posters were placed throughout the student centre (where the health centre is also located) and the alcohol hand gel was placed at several locations.

An Institiúid Teicneolaíochta, Sligeach

Chapter 6.0

Pandemic H1N1

Cases and Rates

ITSligo
An Institiúid Teicneolaíochta, Sligeach

6.0

Cases and Rates of Pandemic H1N1.

6.1Introduction:

The overall aim of this chapter is to compare, contrast and effectively analyse the numbers of confirmed laboratory cases in the North West of the country with the rest of the republic

The Health Protection Unit in the Department of Public Health Division, were very obliging and the rates of Pandemic H1N1 in the North West were supplied to assist research in this dissertation. The rates that can be seen in the table below, they are split up into different groups. The first being the amount of persons aged from 17 to 23 years of age in the North West amounts to 22,821 persons of all these persons of this age group there were 47 persons that actually obtained the pandemic H1N1.

The rate of confirmed H1N1 population of the age bracket 17-23 is at a rate of 206 per 100,000 people.

The next group is the entire population in the (all age groups) in the North West. There are 238,317 persons of all age groups in the North West. Of all these persons in the North West 223 of these 238,317 persons had confirmed Pandemic H1N1.

The rate of confirmed H1N1 population of all age brackets is at a rate of 94 per 100,000 people.

(Health protection unit cases and rates for Pandemic H1N1 2010)

Then the next set of populations and rates come from the entire republic of Ireland, the entire 26 counties.

It can be seen that in the entire republic there are 444,146 persons aged 17-23 years of age. Of all these persons there have been 757 confirmed cases of pandemic H1N1 within this age bracket in the republic. The rate of confirmed H1N1 in the age bracket 17-23 years is 170 per 100,000.

The next section looks at the entire population (all age brackets) in the republic of Ireland the number of persons in the republic is 4,239,848, of this entire population

An Institiúid Teicneolaíochta, Sligeach

the number of persons that had confirmed case of Pandemic H1N1 is 4,585. The rate of confirmed H1N1 in the entire republic was 108 per 100,000 persons.

The HPSC were also informed of two suspected cases of H1H1 in students who attended Sligo IT. These students were in 17 to 23 yr old age group.

(Health protection unit cases and rates for Pandemic H1N1 2010)

Sligo
An Institiúid Teicneolaíochta, Sligeach

6.2 Results

6.2.1 Quantitative Results

H1N1 North West

NW Population of 17 to 23 yr olds = 22821

No. of Confirmed H1N1 cases in NW aged 17 to 23 yrs olds = 47

Rate of Confirmed H1N1 in NW population of 17 to 23 yr olds = 206 per 100,000.

NW Population all age groups = 238,317

No. of Confirmed H1N1 cases in NW all age groups = 223

Rate of Confirmed H1N1 in NW population all age groups = 94 per 100,000.

H1N1 ROI

ROI Population of 17 to 23 yr olds = 444146

No. of Confirmed H1N1 cases in ROI aged 17 to 23 yrs old = 757

Rate of Confirmed H1N1 in ROI population of 17 to 23 yr olds = 170 per 100,000.

ROI Population all age groups = 4239848

No. of Confirmed H1N1 cases in ROI all age groups = 4585

Rate of Confirmed H1N1 in ROI population all age groups = 108 per 100,000

Note we were notified of two suspected cases of H1H1 in students who attended Sligo IT.

These students were in 17 to 23 yr old age group

Sligo An Institiúid Teicneolaíochta, Sligeach

(Health protection unit cases and rates for Pandemic H1N1 2010)

6.2.2 Qualitative Results:

These results were analysed qualitatively using excel graphs.

Figure 6.1

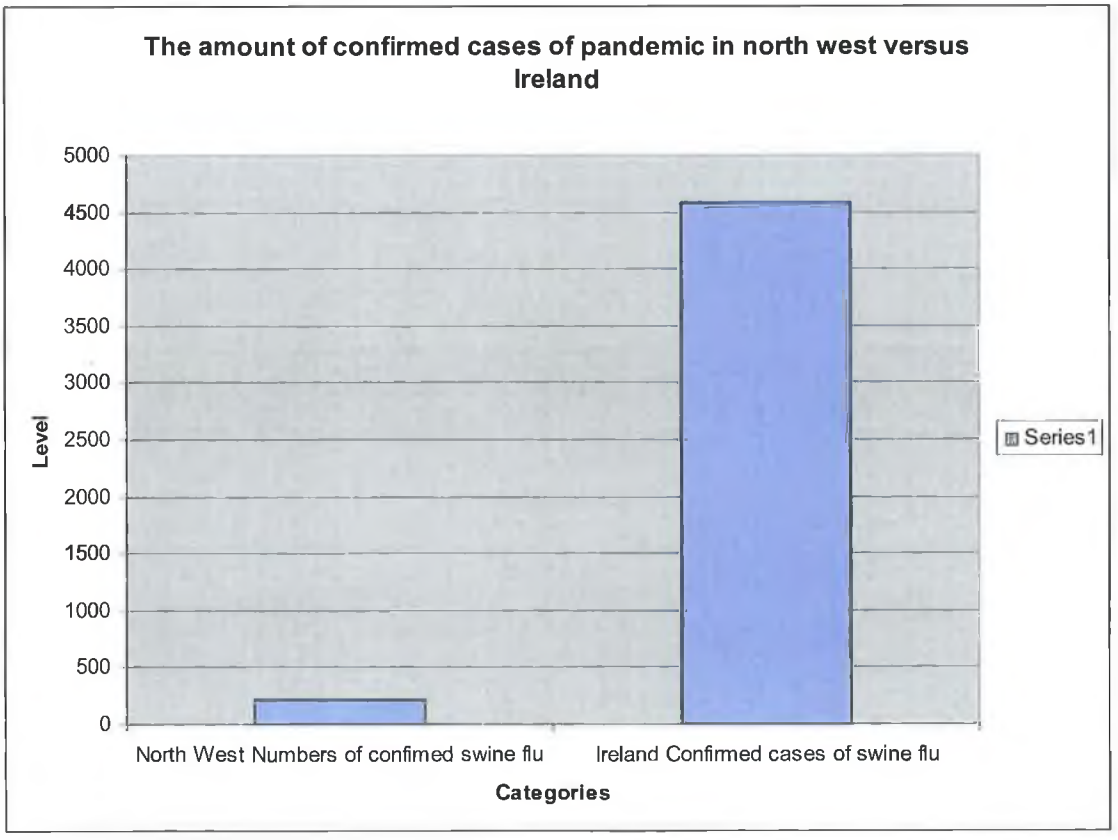


Figure 6.1 a graph that compares the level of confirmed cases of Pandemic H1N1 in the North West versus Ireland.

An Institiúid Teicneolaíochta, Sligeach

Figure 6.2

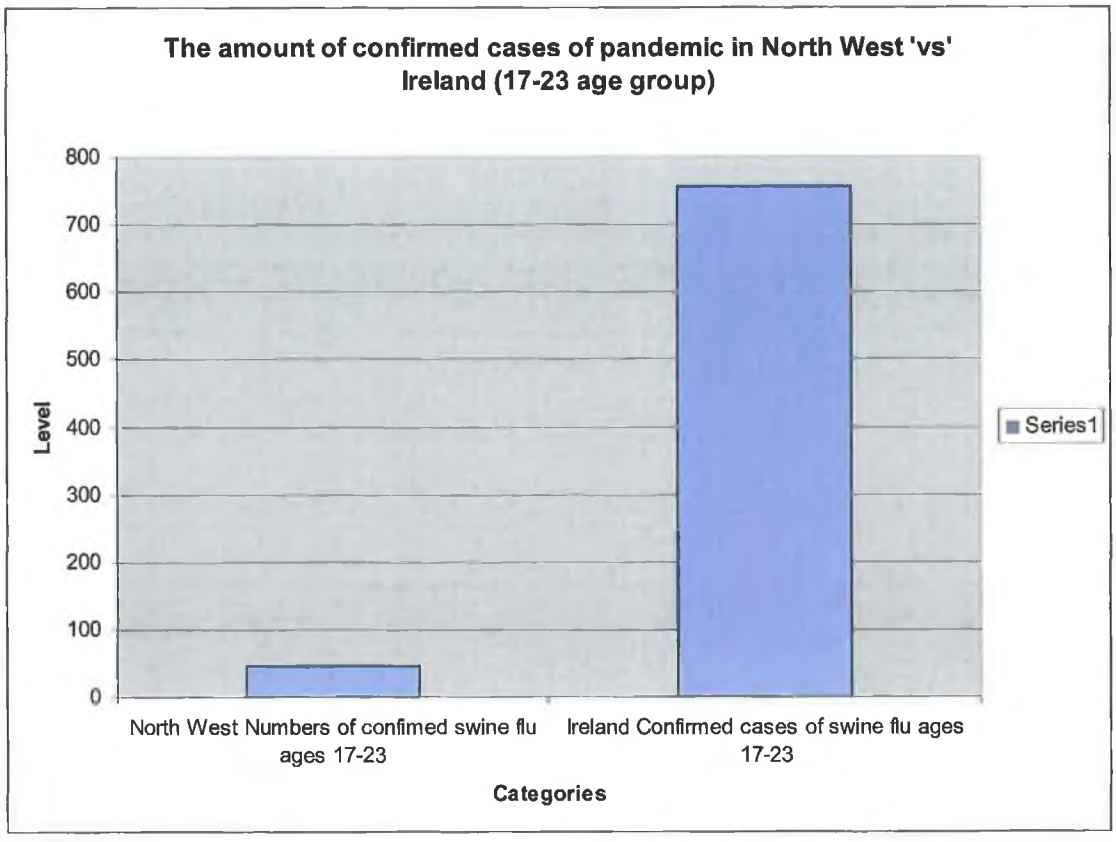


Figure 6.2 a graph that compares the level of confirmed cases of Pandemic H1N1 in the North West versus Ireland between the ages of 17-23 years.

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Figure 6.3

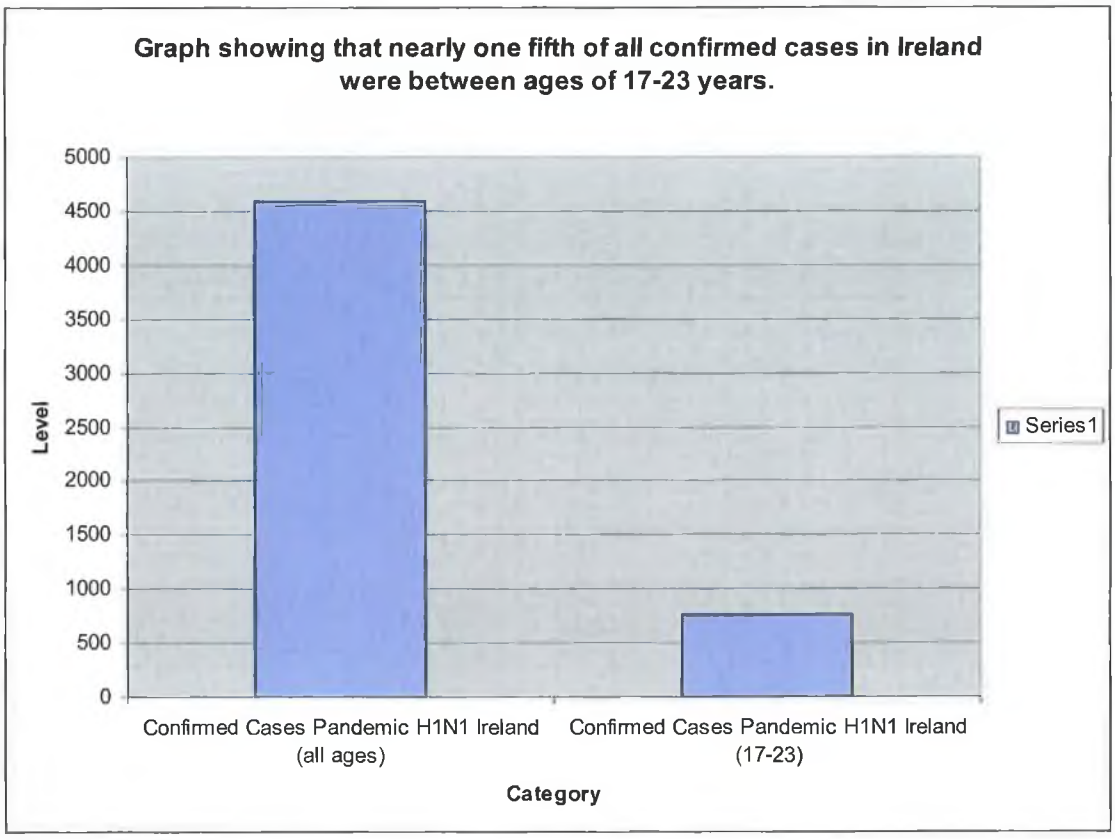


Figure 6.3 a graph that confirms that nearly 1/5 of all confirmed cases of Pandemic H1N1 in Ireland were between the ages of 17-23 years

An Institiúid Teicneolaíochta, Sligeach

Figure 6.4

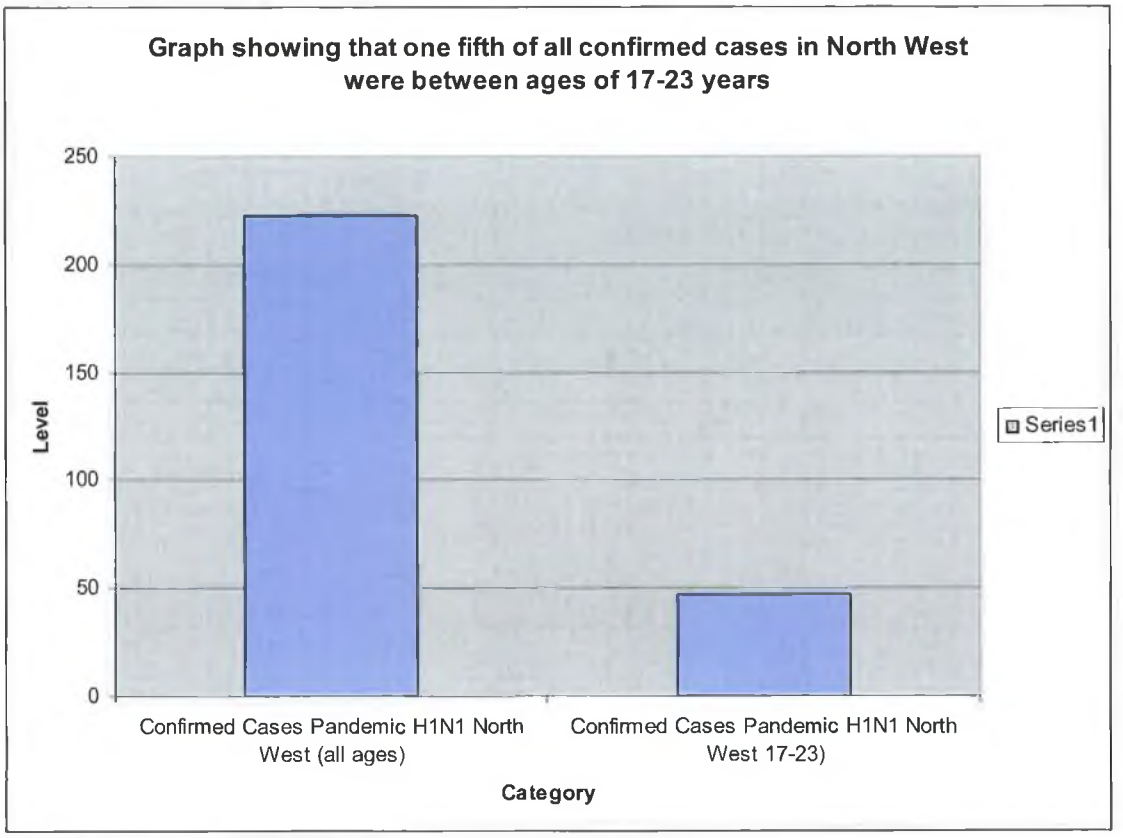


Figure 6.4 a graph that confirms that 1/5 of all confirmed cases of Pandemic H1N1 in the North West were between the ages of 17-23 years.

(Health protection unit cases and rates for Pandemic H1N1 2010)

6.2.3 Discussion

The amount of confirmed cases of Pandemic H1N1 in the North West accounted for 4.8% of entire amount of cases in the republic of Ireland this accounted for all age brackets.

It can also be seen that the amount of persons aged 17-23 years in the North West with a confirmed case of pandemic H1N1 accounted for 6.8% of all cases in Ireland of the same age bracket.

The results indicate that nearly one fifth of all confirmed cases of Pandemic H1N1 in Ireland were between the ages of 17-23 years.

The results also demonstrate that over one fifth of all confirmed cases of Pandemic H1N1 in the North West were between the ages of 17-23 years.

The Health Protection Unit was notified of two suspected cases of H1H1 in students who attended Sligo IT. These students were in noted to be in the 17 to 23 yr old age group. When compared with the results from the student swine flu questionnaire it can be observed that nine students had contracted swine flu.

ITSligo An Institiúid Teicneolaíochta, Sligeach

7.0

Discussion

ITSligo
An Institiúid Teicneolaíochta, Sligeach

7.0 Discussion

7.1 Introduction:

The overall aim of this dissertation is to investigate, and contrast, the international, the national and the local policies on pandemic H1N1 during the recent (2009) emergency. It also seeks to investigate the implementation of local policy, looking specifically at It Sligo, a third-level educational institution.

The specific aim is to assess Pandemic preparedness and response prepared by the World Health Organisation (WHO), plans created by the Government and Health Service in Ireland (HSE, DOHC and HPSC) and to assess whether these preparedness plans were actually effective for reducing pandemic H1N1.

The actual implementation of the I.T. Sligo Pandemic Plan is tested using different methodologies and the effectiveness of the implementation of the I.T. Sligo Pandemic Plan is evaluated.

This section discusses and critically analyses the following points with back up from the research:

- A discussion of Pandemic H1N1 and the situation regarding the Pandemic both globally and in Ireland.
- Globally was the WHO prepared and able to respond to the swine flu? Did they put all measures in place when the World was in WHO phase 6 of Pandemic?
- Nationally did Ireland put their National Pandemic Influenza Plan into action when swine flu reached the country?
- An analysis of the comparison between WHO 2005 plan and the National Pandemic Influenza Plan 2007, to evaluate whether or not Ireland followed international advice when creating their Influenza Pandemic preparedness plans.
- To discuss the guidance Ireland put in place for educational institutions specifically aimed at Pandemic H1N1 and to discuss whether or not the guidance was effectively used by I.T. Sligo to prepare their plan.

ITSligo An Institiúid Teicneolaíochta, Sligeach

- An assessment of the implementation of the I.T. Sligo health care plan.
- An assessment of the implementation of the I.T. Sligo communication plan for Pandemic H1N1.
- To compare, contrast and effectively analyse the numbers of confirmed laboratory cases in the North West of the country with the rest of the republic.
- To compare and contrast the spread of infection versus the severity of Pandemic H1N1 on the country.

7.2 Pandemic H1N1 where are we now?

This section will discuss what stage Pandemic H1N1 is at currently and also the consequences relating to Pandemic H1N1 both internationally and nationally.

Internationally (as of 6th August 2010) the number of deaths due to the pandemic is 18,449. *(WHO pandemic H1N1 update 112)*

This might be compared with the pandemic of 1918, where it was estimated there was estimated to be over 50 million deaths and this figure could arguably be as high as 100 million. *(Taubenberger, JK, and Morens, DM,.2006)*

On the 6th of August 2010 the Director General of WHO released a statement at a press conference stating that the World is moving into the post pandemic period she stated '*The world is no longer in phase 6 of influenza pandemic alert. 'We are now moving into the post-pandemic period. The new H1N1 virus has largely run its course'*

(WHO Director General press conference August 2010)

If we focus on Ireland then nationally, to date there have been 26 confirmed deaths due to Pandemic H1N1 and over 4,586 laboratory confirmed cases of pandemic H1N1. *(Influenza surveillance weekly report week 20 2010)*

The Health Protection Surveillance Centre in Ireland provides a weekly update for influenza and in week 20 of 2010 (17th-23rd May 2010) the report stated that the G.P. Influenza like illnesses (ILI) consultation rate was 4.0 per 100,000. This weekly report

also stated that 4,586 confirmed cases of Pandemic H1N1 were notified in Ireland as of the 22nd of May 2010. Children and young adults being the most affected group stating that 80% of confirmed pandemic cases were of persons aged 35 years or below. There have been 26 deaths in Ireland to this date from pandemic H1N1. *(Influenza surveillance weekly report week 20)*

When the GP ILI of week 20 in 2010 (*4.0 per 100,000*) is compared with the reported Influenza Like Illness (ILI) rate for week 43 of 2009) (peak in Ireland) *210.9 per 100,000* population. It can be noted that rate of flu in Ireland is at very low levels indeed.

As the current rate is below the influenza threshold level, this indicates that influenza is no longer circulating widely in the community and in effect the first wave of this pandemic is over.

The vaccination programme finished at the end of March 2010 but vaccine is still available for pregnant women through their GPs or maternity hospitals. Pregnant women from 14 weeks to 6 weeks after birth are still advised to be vaccinated. This is important, as in previous pandemics there have been second waves of the flu, and also it is very likely that pandemic (H1N1) will circulate again in the coming autumn/winter.

(DOHC Pandemic H1N1 update April 2010)

An Institiúid Teicneolaíochta, Sligeach

7.3 Was the WHO prepared and able to respond to Pandemic H1N1?

To answer this question *'was the WHO prepared and able to respond to Pandemic H1N1'* this section will assess the effectiveness of International guidance in Preparedness and Response. This section will also examine the measures the WHO put in place for a phase six of a pandemic and assess whether or not these measures were actually put in place.

The World Health Organisation (WHO) is the lead authority for health among 196 countries across the world and will undoubtedly have a large amount of responsibility when it comes to preparing for pandemics, responding to pandemics and providing information to countries in relation to pandemics.

The WHO has to be commended for their continuous work with pandemic H1N1 since it's the first case was confirmed in April of 2009.

In regards to pandemic H1N1 the main role of the WHO is to provide information to countries on planning and co-ordination, situation monitoring and assessment, reducing spread of disease, continuity of health care provision and communications.

The 2005 and 2009 WHO pandemic plans were both very informative and showed what the leaders of the World Health initiative intend to do when Pandemic H1N1 or that matter any other pandemic were to occur.

WHO carried out all their responsibilities that were stated in the 2009 guidance under which were to work along with Ireland and other nations in the following areas

- Coordination of the international public health response under IHR 2005.
- Designation of the current global pandemic phase.
- Selection of the pandemic vaccine strain and recommendation of timing to start pandemic vaccine production.
- Assistance to national pandemic rapid containment efforts.
- Assessment of pandemic severity

An Institiúid Teicneolaíochta, Sligeach

- Global aggregation of key epidemiologic, virologic, and clinical information about the pandemic virus to help national authorities in deciding the optimal response.

- Provision of guidance and technical assistance.

From the comparison of International and national plans (section 3.2) it demonstrates that the WHO carry out a lot of testing and provide information to the Irish government and this information is filtered, re-organised and disseminate to the Irish public and health care staff

Overall the Global Pandemic Preparedness and Response plans were effective. The aim of the 2009 document was to inform and harmonise international and national pandemic preparedness and response before, after and during an influenza pandemic.

The WHO actively did this by providing their actions before pandemic, phases 1-3 i.e. what the WHO need to do themselves to be prepared for a pandemic under planning and co-ordination, communications, reducing the spread of disease, situation monitoring and assessment and continuity of health care provision and also provide information to nations on what they should do to strengthen their pandemic preparedness and response under the same headings.

The WHO showed their duties during a pandemic at phases 4 to 'contain new viruses within a limited area or delay of its spread' the document also gave guidance to nations on how to they can do this also.

The WHO also displayed their actions at phases 5-6 where action shifted from preparedness to response at a global level to reduce impact of a pandemic. They gave specific actions to nations at these phases also.

When pandemic was at its peak globally, i.e. phase 6 our actions as a country and the World Health Organisation's actions is to respond to the pandemic to overall reduce the impact the pandemic would have on the entire world.

By examining the Actions of the WHO and recommended actions for countries at phases 5-6, it can be seen that Ireland carried out all functions under planning and coordination for example we provided leadership to multi-sectoral resources to

An Institiúid Teicneolaíochta, Sligeach

mitigate the effects of a pandemic by the HSE providing guidance to all different types of sectors. The WHO had a more advisory role to assist countries.

At phase 5-6 under situation monitoring and assessment the WHO had to carry out monitoring and assessment so that they could inform member states about the pandemic situation, this was carried out and information was regularly provided to Ireland. Nations were given actions under situation monitoring and assessment all of which Ireland carried out in their weekly influenza surveillance report conducted by the HSE, HSPC and DOHC.

When Pandemic H1N1 was at phase 6, the WHO had to reduce the spread of disease, they carried out their actions under the document again, it mainly consisted of assessment of antiviral medicines and the adoption of a pandemic vaccine. The WHO still has an advisory role to member states to provide information on reducing the spread of disease. They also had to update guidance as necessary all of which was carried out. Ireland had to reduce the spread of disease such as individual/household measures, societal measures, and pharmaceutical measures all of which were put into place in Ireland.

Under continuity of health care provision both the WHO once again had an advisory role to countries and Ireland had to put in measures to ensure that the health care in Ireland could continue in Ireland throughout the pandemic which they carried out.

Under communications the WHO had to provide information regularly to member states and Ireland had numerous duties under communications all of which were carried out.

In conclusion the WHO guidance was very informative and gave information to countries and provided a plan of how the WHO was going to deal during a pandemic. When the world was in a phase 6 global pandemic, the WHO ensured that they were prepared and ready to respond to a pandemic to reduce the effects of a pandemic on the world. The WHO was prepared for swine flu and put their actions into place in order to respond to the swine flu.

It can be observed from this section that internationally (the WHO) was prepared and able to respond to the swine flu. They put all their measures in place when the World

IT Sligo An Institiúid Teicneolaíochta, Sligeach

was in WHO phase 6 of pandemic so that they could meet their overarching goal of globally reducing the impact of a pandemic.

7.4 Was the National Pandemic Influenza Plan put into place during Pandemic H1N1?

The National Pandemic Influenza Plan was introduced in 2007, when Ireland was at WHO phase 3. This is Ireland's overall plan if a pandemic influenza were to be introduced into the country. The main aim of this section is to demonstrate whether the specific elements of the plan were put into place when Pandemic H1N1 reached Ireland.

The main aim(s) of this national plan was to limit the effects of a potential pandemic and to provide the following:

- Information about pandemic influenza
- Information on what persons need to do if the country enters a pandemic stage.
- And to show the government and health service plans for a potential pandemic.

There is information provided to the public also on what 'their responsibility' is during a pandemic giving their responsibilities at phases 4, 5 and 6. This is information on what the public should do at each stage to reduce the effect of pandemic on themselves and their families.

The main area of investigation is to ensure that the health services plan for a potential pandemic was put into operation when Pandemic H1N1 was confirmed in April 2009.

The Health service plan for a future pandemic is one of the most important sections in the national plan and consists of the eight core elements the following will determine as to whether the plan was put into operation when pandemic H1N1 reached Ireland:

An Institiúid Teicneolaíochta, Sligeach

Was the communication strategy put into place?

Yes, information was provided to homes in the form of leaflet drop to every household, regular press briefings were organised by the HSE and the DOHC on seriousness, vaccines, control techniques etc. A dedicated section was specifically set up on the HSE website with a wide variety of information for different audiences i.e. the public, health care workers, educational institutions etc. From October to December 2009 there was any amount of information on the news, radio, health care websites, and the internet providing information on pandemic h1N1.

Was the dedicated telephone hotline number put into place?

Yes this was put in place on the HSE website that was a 24 hour hotline that could be accessed 24 hours a day.

Was information given to the public?

Yes, given in the plan at each stage and demonstrated separately when swine flu reached phase 6.

Was the stockpile of anti-viral drugs distributed?

Yes.

Was the pandemic Vaccine administered in Ireland?

Yes, the vaccine did not arrive in Ireland until 2nd November, the 'at risk' groups (underlying medical conditions) were dealt with firstly and then everybody else. The Vaccine completed being administered in March 2010.

It is evident the health service in Ireland put their plan into action and proved to be effective. Without pandemic planning the rate of deaths, hospitalisations and confirmed cases of pandemic H1N1 would have been detrimental.

The main aim of the overall plan is met, to reduce the effects of a pandemic on the country. If this plan had not been put in place there is no telling what may have happened in Ireland, health services would not have been able to cope, our economy

would suffer as essential services, and normal business operations would not have been able to go ahead.

Irelands planning documents both National Pandemic Influenza Plan and the Pandemic Preparedness for Ireland advice of the PIEG are essential to curtailing the effects that pandemic H1N1 had on our society.

It is clear to see that Ireland follow advice from the WHO in regards to Planning. In the chapter 3 *'comparisons'* section it shows that the similarities between the plans proving that Ireland did in fact follow guidance from the WHO when preparing and responding to pandemic.

It can now therefore be verified that Nationally Ireland did in fact put their national pandemic plan into action when swine flu reached Ireland.

7.5 Did Ireland follow International Advice when creating their Influenza Pandemic Preparedness Plan?

Chapter 3 compares the National Pandemic Influenza Plan (Irelands plan) for a pandemic and the WHO Global Influenza Preparedness Plan 2005. The plans were similar in structure as they both showed their actions at different stages. From the comparison it can be seen that both the WHO plan and Irish plan have specific and similar duties under communication, surveillance, containment and prevention of a pandemic influenza and the health system's response.

It can be seen that there are similarities between the plans in the way the advice is distributed. The plans are similar as they both demonstrate their actions under communications, surveillance, health system response and containment and prevention of Pandemic Influenza.

It shows that the WHO main responsibility is carry out a lot of testing and provide information to the Irish government and this information are filtered, re-organised and disseminated to Irish government department and Health care agencies. This shows that Ireland rely on guidance and testing from the World Health Organisation.

From this examination the conclusion has been made that Ireland did in fact follow international advice when creating their Influenza Pandemic preparedness plans.

An Institiúid Teicneolaíochta, Sligeach

7.6 An evaluation of guidance for Educational Institutions

This section will discuss national guidance specifically aimed at educational institutions for Pandemic H1N1.

In the weekly influenza surveillance report of week 42 (Pandemic H1N1 peak in Ireland) it stated the highest amount of laboratory confirmed cases were seen from educational institutions. This shows that spread is higher at educational institutions, younger persons were more susceptible to contracting swine flu this has been proven one fifth of all persons contracting swine flu in Ireland were aged between 17-23 *(HSE cases and rates)* years and 80% of all cases were under the age of 35 *(weekly influenza report)*. The guidance provided to Educational institutions by the HSE had to be very informative and really help to reduce the spread of pandemic H1N1.

The HSE, DOHC provided a wide range of information to third level institutions in the form of short guidance on actions that should be taken when students develop flu like symptoms at university or college. They also provided an information sheet for schools colleges and centres of education on pandemic H1N1.

The Guidance specifically designed for third level institutions that is reviewed in the literature review (section 2.2.4) is a checklist for educational institutes to follow to ensure that third level colleges are prepared for Pandemic H1N1. This guidance is a working document of the National Pandemic Influenza Plan

The guidance gives advice on what educational institutions should do in relation to planning and co-ordination, infection control policies and procedures, continuity of student learning operations and communications planning.

It appears that the guidance covers all elements and reflects national guidance. It allows third level Institutions to cover all areas and allows them to be pro-active at managing swine flu within the college to reduce spread of infection and to ensure there is as little disruption as possible to student learning and operations.

The guidance is effective and has been used by the Institute of Technology in Sligo. The subsequent section will assess in further detail the extent of the college's compliance to the national guidance.

An Institiúid Teicneolaíochta, Sligeach

7.7 Did I.T. Sligo follow national guidance for Pandemic H1N1?

It is apparent that the Institute of Technology in Sligo followed national guidance in relation to Educational Institutions. From the physical inspection of the main college building it is apparent that I.T. Sligo followed guidance for infection control for educational institutions from public health guidance (discussed in section 2.2.5)

The hand gel dispensers were allocated at all entrances to the college and at communal areas and also before entrances to different sections of the building i.e. the science block or engineering area. Posters providing information on respiratory etiquette and hand hygiene were placed beside these hand gel dispensers.

The college used posters that were downloaded from the HSE website on respiratory etiquette and hand hygiene.

When carrying out the health care plan the institute took health care advice from the HSE. In their plan they provide an appendix which links to several HSE plans they used when putting together their health care plan. (Can be seen in the health care plan section 2.3.2.5.3 *revision history*)

In regards to actual college plan it is clear that I.T. Sligo used the information provided as part of the National Pandemic Influenza Plan i.e. the guidance for third level institutes for pandemic H1N1. (See section 3.3.3 for evidence of compliance to the plan)

The only element of that guidance that was not complied with is under '*communication planning'* the actual plan that has been discussed was not disseminated to students (which can be seen in table 3.2)

Students were not made aware of what the actual college was doing in regards to pandemic H1N1 in terms of health care, communications planning, continuity of student operations, infection control and planning and response. The college should have made available the entire plan they had in place and had a policy letter providing their intention to limit swine flu and protect student health during a pandemic.

Although the students and staff were not aware of the actual layout and information laid out in the plan, it is obvious to see that the students knew the college were actively trying to reduce pandemic H1N1 in the college, the students were updated by emails, provided information by leaflets, posters, hand washing facilities, hand gel dispensers were all put in place to reduce spread. When students entered the student health centre there was an abundance of information about swine flu and infection control techniques and the secretary assessed students when they went to see the nurse. Although the official document was not published to the students it was in fact clear that information was passed to students

From the above analysis of the compliance of I.T. Sligo with national guidance, the conclusion can be made that I.T. Sligo followed national advice for educational institutions apart from one section they did not communicate the actual plan for Pandemic H1N1 to the entire college.

7.8 Overall Implementation of I.T. Sligo Pandemic H1N1 Policy:

The aim of this section is to evaluate the implementation of the I.T. Sligo Pandemic H1N1 plan. This will be broken down into two parts firstly there is an assessment of the implementation of the health care plan and secondly there is an assessment of the implementation of the I.T. Sligo communication plan. The effectiveness of both is also discussed.

7.8.1 Implementation Health care plan

The Health care plan *'Management of Influenza A(H1N1) Contingency plan for appropriate student care'* was successfully administered in the student health care centre. Some elements of the plan were not put into place this was because the swine flu was not as big an issue in the Institute as first imagined. For example transportation of ill (pandemic cases) students from the student health care centre to the hospital by ambulance never occurred because thankfully the situation never became that serious in the college.

From the interview with the student health nurse and the comparisons between the health care plans in place in the college it can be observed that there was one element

ITSligo An Institiúid Teicneolaíochta, Sligeach

of the health care plan that was not properly put into operation. This was the telephone triage system as a means of patient assessment where a student could ring and the SHN would assess their symptoms and recommend their care. From the interview with the nurse and the examination of the leaflet that was given to all students by the student union it is apparent that there was a telephone number set up in the student health care centre. However this number was cited on the leaflet as where you could get more information about the swine flu not as a means of patient assessment.

The nurse said that 'the telephone was never used by students' maybe if a second wave of pandemic H1N1 were to come about or if a different worldwide pandemic were to arrive the student health care system within the college should use and promote the telephone number as a means of patient assessment and this could in turn reduce spread around the college.

This was the only element of the health care plan that was not effectively operated, by interviewing the nurse and physically examining the student health centre it is apparent that the remainder of the health care plan was followed. The health care system in the college has to be commended. It is evident that the SHN is very dedicated to reducing the numbers of persons obtaining the virus throughout the college. Even though the phone number was not used as it was intended in the plan there was a system in place to ensure that any students with flu like symptoms that came into the college were divided at the reception area by the receptionist and placed in the containment room with a mask. The students were given an information leaflet with a disposable thermometer and if there temperature was over 38 degrees Celsius then they were more likely to have swine flu and should contact their own G.P. This is a pro-active step taken by the institute and can be seen as a very effective control technique.

From this section it can be seen that I.T. Sligo implemented their health care plan successfully apart from one element they did not use the telephone triage system as a means of patient assessment but as a means of providing more information to students.

An Institiúid Teicneolaíochta, Sligeach

7.8.2 Implementation of the Communication Plan:

The communication plan within the I.T. had to be created to inform students of a variety of issues regarding Pandemic H1N1. The communication plan was created before students came back to college this was an effective form of planning. Communication is essential in reducing the effects and spread of a pandemic through information

The plan had essential information that reflected national guidance; it provided information and from the section 4.2 showing *implementation of the communication plan* proves that this information was given to students through the use of fliers, emails, dedicated swine flu information on I.T. Sligo website at start of year. The swine flu questionnaire administered to student's tests the effectiveness of the communication plan throughout the college.

The main areas of interest from this questionnaire is that majority of students did feel they were adequately updated and informed about swine flu from the student union through emails, fliers internet etc. however when asked where students obtained the information about pandemic H1N1 the most frequent answer was the television followed by radio, then the student union and ten felt they weren't adequately addressed about swine flu. Eleven persons gave their own responses some were very interesting, one respondent stated they obtained their information from the student union but didn't take much notice, the main answers were internet, media etc.

The overall conclusion to the implementation of the communication plan is that the college did in fact put their communication plan into operation when the students came back to college. The information they said that they would disseminate to the students was in fact given to the students via the fliers and posters comprising of the same information was placed throughout the student centre and the main college building. However the way in which the information was communicated to the students appears not to be effective. Only 12 persons feel they gathered their information from the student union. The recommendation is that the student union should ensure that they communicate the information more effectively throughout the college. The main area is how to represent and explain the importance of the measures

An Institiúid Teicneolaíochta, Sligeach

that are in place to control infection and explain to students their role and the effects that a pandemic can have on students showing examples. If a new wave of pandemic were to enter Ireland I.T. Sligo should enhance the way they communicate their plan. However the student union and the nurse did provide the information and must be commended for this.

From the evaluation of the information a conclusion can be drawn that I.T. Sligo fully implemented their communication plan however it is evident that the information was not communicated efficiently as it should have been because the results of the questionnaire show that students received their information about swine flu from the media.

7.9 Evaluation and analyses of cases and rates of Pandemic H1N1 comparisons between Ireland and North West.

This section will compare, contrast and effectively analyse the numbers of confirmed laboratory cases in the North West of the country with the rest of the republic and come to a conclusion as to the level of Pandemic H1N1 in the North West within the all age groups and then more specifically the level of pandemic H1N1 within the age bracket 17-23 years.

The North West in Ireland comprises of Donegal, Sligo Leitrim Monaghan and Cavan.

It can be seen from Chapter 6 *'Pandemic H1N1 Cases and Rates'* that the rate of pandemic H1N1 in the North West is a relatively high number of confirmed cases. The North West contributed significantly to the amount of cases in the entire republic with 4.8% of all confirmed cases of pandemic H1N1 coming from the North West.

In the entire republic of Ireland there are 444,146 persons aged between 17-23 years out of all these persons there were 757 confirmed cases of pandemic H1N1 in the age bracket.

In Ireland there were 4,586 confirmed cases of pandemic H1N1 out of a population of over 4 million (4,239,848) a rate of 108 per 100,000.

(Health protection unit cases and rates for Pandemic H1N1 2010)

One fifth (21%) of all the persons in the North West that had a confirmed case of Pandemic H1N1 were between the ages of 17-23 years.

It can be seen that nearly one fifth (16.5%) of the country that contracted pandemic H1N1 were between the ages of 17-23 years.

It is therefore well established that the Pandemic H1N1 affected the younger population more significantly than persons aged over 35. In week 20 of the Influenza surveillance report it stated that children and young adults were most affected group with 80% of all confirmed cases being aged less than 35 years *(HSPC weekly influenza surveillance week 20)* It can also be seen that from the actual cases and rates in the north west and Ireland that nearly one fifth of the populations were aged between 17-23.

It is also well established that persons with underlying medical conditions (at risk groups) were also affected heavily. Twenty six people died in the republic of Ireland due to Pandemic H1N1 all of these persons apart from one had underlying medical conditions.

(DOHC Pandemic H1N1 update April 2010)

From the section 6.5.2.1, it can be seen that the health protection unit in the department of public health were notified of two suspected cases of H1H1 in students who attended Sligo IT. However it can be noted that from the results of the student swine flu questionnaire that nine people said that they had contracted swine flu. It is apparent that more students contracted swine flu than mentioned in the results. The reason for this could be that the other cases were not reported. Another reason is that students may have self diagnosed and stayed at home and their case was not reported.

Overall the question has to be asked did Ireland have a high level of Pandemic H1N1. When comparing the overall population in Ireland against the amount of confirmed cases it can be seen that 0.1% of the entire population had a confirmed case of pandemic H1N1. In the North West only 0.09% of the population had a confirmed case of pandemic H1N1.

An Institiúid Teicneolaíochta, Sligeach

This would indicate that Ireland had relatively low laboratory confirmed cases of pandemic H1N1.

Two conclusions can be made from this discussion, the first being that the numbers of confirmed laboratory cases in the North West of the country contributed significantly to the overall numbers of confirmed cases in the country.

The second conclusion is that nearly one fifth of all persons who contracted swine flu in the country and in the North West were of the ages 17-23 years.

7.10 Investigation into the spread of Pandemic H1N1 in Ireland.

The number of confirmed cases of Pandemic H1N1 that emerged is relatively low within the entire country; however Ireland during its peak had one of the highest rates of Pandemic Influenza intensity in Europe. This would indicate that during this time Pandemic H1N1 was spreading rapidly throughout the country.

According to the article that was produced by Irishhealth.com in October of 2009 it stated that 'we have the highest level of European level of swine flu' the article also said that 'Ireland, along with Iceland, has the highest intensity of swine flu infection in Europe, according to statistics from a major European disease monitoring body.

The article also stated that *'The European figures have been produced as it was revealed yesterday that there were 30,000 new H1N1 cases in Ireland last week'.*

Ireland was one of only two countries that were identified by the ECDC as 'very high' and given a red colour due to the intensity of swine flu incidence'.

Another European survey published by the ECDC shows that Ireland also has one of the highest geographic spreads of swine flu in Europe.

Ireland, along with countries such as the Netherlands, the UK and Spain, has influenza activity above baseline levels in one or more regions in terms of laboratory-confirmed cases.

(Hunter 2009)

It is clear to see that during the peak in the months from September through to December the spread of pandemic was extremely high the highest level in Europe along with Iceland. The following table will demonstrate the GP Influenza Like Illness (ILI) for each week from September through to January to demonstrate the level of Pandemic H1N1 throughout the country during peak times:

Week Number	GP ILI rates	H1N1 Information
40	88.4 per 100,000	➢ H1N1 continued to increase ➢ Four people had died to this date from Pandemic H1N1 *(HSPC weekly influenza surveillance week 40)*
41	97.1 per 100,000	➢ H1N1 continued to increase both hospitalised cases and confirmed cases. ➢ No deaths *(HSPC weekly influenza surveillance week 41)*
42	158.8 per 100,000 (sharpest increase since 2000)	➢ H1N1 continued to rise (hospitalised cases and confirmed cases) the highest being seen in educational

		settings ➢ Death levels rose to eight this week *(HSPC weekly influenza surveillance week 42).*
43	210.9 per 100,000	➢ Hospitalised cases H1N1 doubled in this week ➢ The number of hospitalised cases being sent to ICU rose from 2 to 12 in this week ➢ Death levels rose to 10 in this week. (2 died this week) *(HSPC weekly influenza surveillance week 43)*
44	178.5 per 100,000	➢ Laboratory cases of pandemic decreased in this week ➢ Hospitalised cases increased by 6% ➢ ICU admissions stayed the same ➢ Death levels rose to 14 in this week. (4 died this week)

An Institiúid Teicneolaíochta, Sligeach

		(HSPC weekly influenza surveillance week 44)
45	174.8 per 100,000	➢ Laboratory cases of pandemic remained stable ➢ Hospitalised cases decreased ➢ ICU admissions decreased also ➢ Death levels rose to 15 in this week. (1 died this week) *(HSPC weekly influenza surveillance week 45)*
46	134.4 per 100,000	➢ Laboratory cases of pandemic decreased sharply ➢ Hospitalised cases decreased by 50% ➢ ICU admissions increased slightly ➢ Death levels rose to 16 in this week. (1 died this week) *(HSPC weekly influenza surveillance week 46)*
47	126.9	➢ Laboratory cases of pandemic decreased slightly

Sligo An Institiúid Teicneolaíochta, Sligeach

		➢ Hospitalised cases were stable ➢ ICU admissions decreased ➢ Death levels rose to 17 in this week. (1 died this week) *(HSPC weekly influenza surveillance week 47)*
48	93.6 per 100,000	➢ Laboratory cases of pandemic decreased. ➢ Hospitalised cases decreased ➢ ICU admissions decreased ➢ Death levels rose to 18 in this week. (1 died this week) *(HSPC weekly influenza surveillance week 48)*
49	60.4 per 100,000	➢ Laboratory cases of pandemic decreased further ➢ Hospitalised cases decreased further ➢ ICU admissions decreased to 1 person ➢ Death levels rose to

An Institiúid Teicneolaíochta, Sligeach

		20 in this week. (2 died this week) *(HSPC weekly influenza surveillance week 49)*
50	51.4 per 100,000	➢ Laboratory cases of pandemic decreased further ➢ Hospitalised cases decreased further ➢ ICU admissions increased ➢ Death levels rose to 21 in this week. (1 died this week) *(HSPC weekly influenza surveillance week 50)*
51	42.4 per 100,000	➢ Laboratory cases of pandemic continued to decrease ➢ Hospitalised cases decreased further from 50 to 12 cases. ➢ Death levels rose to 21 in this week. (1 died this week) *(HSPC weekly influenza surveillance*

An Institiúid Teicneolaíochta, Sligeach

		week 51)
52 & 53	16.6 and 16.5 per 100,000	➢ Laboratory cases of pandemic decreased. ➢ Hospitalised remained stable ➢ Death levels rose to 22 in this week. (1 died this week) *(HSPC weekly influenza surveillance weeks 52&53)*

(Table 6.1 Comparison of Weekly Influenza Reports weeks 40-52&53.)

It is plain to see that swine flu In Ireland reached its peak at week 42 and after this week the swine flu situation in Ireland started to improve. If the swine flu had not decreased in this week and continued to spread the effects of the pandemic could have been more serious than they turned out to be.

Overall apart from the few weeks where swine flu was at its worst i.e. spread the most the actual effects were not as bad as feared. However Ireland still had the highest rate of spread of pandemic at week 42 within Europe. The overall conclusion that can be made from this section is that spread of pandemic was a serious problem during the peak.

To conclude, the Pandemic H1N1 emergency was not as severe as originally taught. The very commendable act that can be observed from the 'Swine Flu' Pandemic is that Internationally, Nationally and locally we are prepared for a pandemic. Communication internationally through to nationally and right through to locally is seen to be one of the most important elements in Pandemic Preparedness and Response. From this research it can be seen that communication is vital and that communication globally, nationally and locally can always be improved. Now that the world is in Post Pandemic phase it is recommended that the WHO revise their

An Institiúid Teicneolaíochta, Sligeach

guidance accordingly so that they learn from the Pandemic H1N1. The government and health service need to review and their pandemic plans also to ensure that Ireland learn from the recent pandemic emergency. All educational institutes in particular I.T. Sligo need to review their actions and plans for Pandemics and the I.T. should particularly take the advice recommended in the final section.

I.T. Sligo was very pro-active and all plans were put in place and they followed national guidance in the form of 'Guidance for Educational Institutions'. I.T. Sligo however was very lucky as the level confirmed cases in the Institute were very low (only 2 students from the I.T. Sligo were confirmed with Pandemic H1N1). Student learning operations were not affected at any stage during the pandemic, all in all from being a student in the college at the time of the Pandemic swine flu was a worry for students at the start of the year when there were deaths, when the vaccine became available and when the information was being communicated about the seriousness of the Pandemic. However when the pandemic severity reduced and the media attention ceased, the worry among students eased and overall the college was not affected very much by the swine flu.

The reality although could have been very different if plans were not put in place locally by the student support services and the student union. Their pro-active work to reduce swine flu within the college needs to be commended.

If another pandemic were to occur where the strain of influenza was more serious the Institute should revise their plans with the recommendations in Chapter seven.

An Institiúid Teicneolaíochta, Sligeach

8.0

Conclusions & Reccomendations.

ITSligo
An Institiúid Teicneolaíochta, Sligeach

8.0

Conclusions and Recommendations:

8.1 Conclusions:

From carrying out this re-search the overall conclusion is that the Plans in place internationally, nationally and locally were implemented. The effectiveness can only be related to laboratory confirmed cases, hospitalisations and deaths during a pandemic. Overall the number of deaths was relatively low compared to past pandemics. The overall rate of deaths in Ireland was also low compared to the entire population; however spread of Influenza in Ireland was of the highest in Europe in October when swine flu was at its peak. The conclusion can be made that the spread of the swine flu was a larger problem than the actual severity of the infection itself. Infection control and reducing the spread of disease was the most important feature of Pandemic H1N1.

From carrying out this report the following conclusions can be made:

- Globally (the WHO) was prepared and able to respond to the swine flu. They put all their measures in place when the World was in WHO phase 6 of pandemic so that they could meet their overarching goal of globally reducing the impact of a pandemic.
- Nationally Ireland put their National Pandemic Influenza Plan into action when swine flu reached Ireland.
- From the comparison of the WHO 2005 plan and the 2007 national pandemic Influenza plan Ireland did in fact follow international advice when creating their Influenza Pandemic preparedness plans.
- Ireland put in place advice for educational institutions specifically aimed at pandemic H1N1 and this guidance was effective as it was used by Sligo I.T. to prepare their plan.
- I.T. Sligo followed national advice for educational institutions apart from one section they did not communicate the actual plan for Pandemic H1N1 to the entire college.
- I.T. Sligo implemented their health care plan successfully apart from one element they did not use the telephone triage system as a means of patient assessment but as a means of providing more information to students.
- I.T. Sligo fully implemented their communication plan however the conclusion was drawn that the information was not communicated efficiently

An Institiúid Teicneolaíochta, Sligeach

as it should have been because the results of the questionnaire show that students received their information about swine flu from the media.

- Numbers of confirmed laboratory cases in the North West of the country contributed significantly to the overall numbers of confirmed cases in the country.
- The evidence shows that nearly one fifth of all persons who contracted swine flu in the country and in the North West were of the ages 17-23 years.
- Evidence during the peak time of the pandemic September through to December 2009 spread of the infection was a bigger problem than the severity of the infection itself.

8.2 Recommendations:

The following are recommendations for the Institute of Technology to improve their pandemic plan:

- Ensure that respiratory etiquette and hand washing techniques and their importance are continually promoted throughout the college. Respiratory etiquette and hand washing techniques are part of everybody's responsibilities throughout the entire year not just when there is a serious risk imminent. That way the college will be prepared for a possible new pandemic or a re-occurrence of the swine flu.
- Improve communication techniques and way information is communicated throughout the college to show importance of infection information.
- If there is a second wave of pandemic H1N1 the health care system should actually use and effectively communicate the telephone triage system as a means of patient assessment.
- The I.T. in future should make available their plan for a pandemic i.e. what they are doing and their commitment to managing pandemic available to all students and staff alike and provide a more structured plan.

The following are recommendations for the National guidance:

- The 2007 plan should be updated to incorporate the new re-grouped WHO that were placed in the 2009 guidance
- The health care system in Ireland needs to carry out a full analysis of their pandemic plans and the way they responded to Pandemic H1N1. Look at

ITSligo An Institiúid Teicneolaíochta, Sligeach

mistakes and update plans to ensure that as a nation we learn from our mistakes and therefore will be ready for a future pandemic.

The following are recommendations for the International guidance:

- The WHO will need to assess their role and the actions that were carried out when pandemic H1N1 was at its peak evaluate their mistakes, update guidance and roles to ensure that if another pandemic comes along that the organisation learns from their mistakes.

ITSligo
An Institiúid Teicneolaíochta, Sligeach

9.0

References

ITSligo
An Institiúid Teicneolaíochta, Sligeach

9.0

References:

Curley.E and Tiernan.D, 2009. I.T. Sligo Health Care Plan 2009. *'Management of Influenza A H1N1 Virus 'Contingency Plan for Appropriate patient.*

Colorado State University 2009: Writing Guides Survey Research *Advantages Of Open Ended Questions* [Online] Available from:

http://writing.colostate.edu/guides/research/survey/com4a2a2.cfm

Accessed on the 14/04/2010

Colorado State University 2009: Writing Guides Survey Research *Advantages Of closed Ended Questions* [Online] Available from:

http://writing.colostate.edu/guides/research/survey/com4a2a1.cfm

Accessed on the 14/04/2010

Department of Health and Children (DOHC) press release on 'National Pandemic Influenza Plan and Advice for Pandemic Influenza being published 15th January 2007. Information concerning the Pandemic Influenza Expert Group (PIEG)
[Online] accessed from the following link:

http://www.dohc.ie/press/releases/2007/20070115.html

Accessed 21/12/2009

Department of Health of Children (DOHC) April 2010. Update on (Pandemic H1N1) 2009 (Swine Flu).

[Online] accessed from the following link:

An Institiúid Teicneolaíochta, Sligeach

http://www.dohc.ie/issues/swine_influenza/

Accessed 21/06/2010.

Health Service Executive, 2009. *National Pandemic Influenza Plan 2007.* [Online] accessed from following link:

http://www.hse.ie/eng/services/Publications/Corporate/Emergency_Management_National_Plan_for_Pandemic_Influenza_January_2007.pdf.

Accessed 18/11/2009

Health Protection Surveillance centre (HPSC) 2008. 'Pandemic Influenza Preparedness for Ireland: Advice of the Pandemic Influenza Expert Group' Chapter 1 Introduction.
[Online] accessed from the following link
http://www.ndsc.ie/hpsc/A-Z/EmergencyPlanning/AvianPandemicInfluenza/Guidance/PandemicInfluenzaPreparednessforIreland/File.3253.en.pdf

Accessed 21/12/2009

Health Protection Surveillance Centre (HPSC) website relating to information regarding 'functions of HPSC'
[Online] accessed from the following link:

http://www.ndsc.ie/hpsc/AboutHPSC/FunctionsofHPSC/

Accessed 21/11/2009

Health Protection Unit, Department of Public Health Unit (North West Region) April 2010. HIN1 Cases & Rates for Ireland and North West Region Week 17 2009 (wk ending 01/05/2009) to Week 15 2010 (wk ending 17/04/2010)

Health Promotion Surveillance Centre, 2010. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 20.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4348,en.pdf

Accessed on: 06/08/2010

Health Promotion Surveillance Centre, 2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 40.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,3998,en.pdf

Accessed on: 04/08/2010

Health Promotion Surveillance Centre, 2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 41.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4005,en.pdf

Accessed on: 01/08/2010

Health Promotion Surveillance Centre, 2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 42.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4016,en.pdf

Accessed on: 04/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 43.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4026,en.pdf

Accessed on: 01/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 44.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4033,en.pdf

Accessed on: 03/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 45.

[Online] accessed from the following link:

IT Sligo An Institiúid Teicneolaíochta, Sligeach

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4040,en.pdf
Accessed on: 03/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 46.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4058,en.pdf
Accessed on: 03/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 47.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4066,en.pdf
Accessed on: 01/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 48.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4079,en.pdf
Accessed on: 01/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 49.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4083,en.pdf

Accessed on: 02/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 50.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4088,en.pdf

Accessed on: 06/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Week 51.

[Online] accessed from the following link:

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4090,en.pdf

Accessed on: 04/08/2010

Health Promotion Surveillance Centre,2009. Influenza Surveillance in Ireland Weekly Update, Influenza season 2009/10. Weeks 52 & 53.

[Online] accessed from the following link:

Accessed on: 02/08/2010

http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/20092010Season/File,4101,en.pdf

Hunter, N, 2009. *'We have highest European level of swine flu'* Article published by Irish Health Website. (November 2009)

[Online] accessed from the following link:

http://www.irishhealth.com/article.html?id=16403

Accessed on: 09/07/2010.

Health Service Executive 2009. 'Guidance for Third Level Institutions in preparing for Pandemic (H1N1) 2009 (Swine Flu)' August 2009

[Online] accessed from the following link:

http://www.education.ie/servlet/blobservlet/interim_public_health_guidance_third_level.pdf

Accessed on: 01/11/2009.

Health Service Executive (HSE) and Health Protection Surveillance centre (HPSC) 2009. 'Guidance for residential educational institutions in preparing for and managing Pandemic (H1N1) 2009 (Swine Flu)'.

[Online] accessed from the following link:

http://www.education.ie/servlet/blobservlet/public_health_guidance_for_planning_for_residential.pdf

Accessed on: 11/12/2009.

Institute of Technology Sligo 2009. *'I.T. Sligo Pandemic H1N1 Plan'*.

Institute of Technology Sligo 2009. *I.T. 'Communication plan for managing Pandemic H1N1'*,

Institute of Technology Sligo 2009. *'ITS Emergency response plan 'Management of communicable diseases'*

Practical Assessment Research & Evaluation 1997. *'Designing Structured Interviews for Educational Research' a* peer-reviewed electronic journal. ISSN 1531-7714

[Online] Accessed from the following link:

http://pareonline.net/getvn.asp?v=5&n=12

Accessed on 13/07/2010.

Taubenberger, JK, and Morens, DM,.2006. '1918 influenza: the mother of all pandemics'.

[Online] accessed from the following link:

http://www.cdc.gov/ncidod/eid/vol12no01/05-0979.htm

Accessed 10/08/2010.

World Health Organisation 2010. Pandemic H1N1 2009: frequently asked questions (FAQ's) *'What is the pandemic (H1N1) 2009 virus?*

[Online] accessed from the following link:

http://www.who.int/csr/disease/swineflu/frequently_asked_questions/about_disease/en/index.html

accessed 01/08/2010.

World Health Organisation, 2005. 'W.H.O. global influenza preparedness plan' [online] accessed from the following link

http://www.who.int/csr/disease/influenza/PIPGuidance09.pdf

Accessed 21/11/2009

World Health Organisation 2009. Global Alert and Response (GAR) section of website information taken from website concerning the 2009 WHO guidance document

[Online] accessed from following link:

http://www.who.int/csr/disease/influenza/pipguidance2009/en/index.html

Accessed 21/12/2009

World Health Organisation 2010. *'H1N1 in post pandemic period'* Press release from virtual press conference on the 6th August 2010.

[Online] accessed from the following link:

http://www.who.int/mediacentre/news/statements/2010/h1n1_vpc_20100810/en/index.html

Accessed 10/08/2010.

World Health Organisation 2010. '*What is the pandemic (H1N1) 2009 virus?* 'Pandemic H1N1 2009: Frequently asked questions (FAQ'S) 24/02/2010

[Online] accessed from the following link:

http://www.who.int/csr/disease/swineflu/frequently_asked_questions/about_disease/en/index.html

Accessed on 01/08/2010

Wikipedia 2010. The free encyclopaedia 2009 *Questionnaire*

[Online] accessed from the following link

http://en.wikipedia.org/wiki/Questionaire

Accessed on the 13/04/ 2010

Wikipedia 2010. The free encyclopaedia 2009 *Close-ended question*

[Online] accessed from the following link:

http://en.wikipedia.org/wiki/Closed-ended_question

Accessed on 13/04/ 2010

Bibliography

Heulwen.M,S, Gould.D, Gammon.J, 2006. 'A review of the evidence for suboptimal compliance of healthcare practitioners to standard/universal infection control precautions' From the Journal of Clinical Nursing 2006.

McKenna, M. 2010. '"The Compliance of I.T. Sligo with National and International Pandemic H1N1 Policies".

An Institiúid Teicneolaíochta, Sligeach

ITSligo
An Institiúid Teicneolaíochta, Sligeach

APPENDIX I

Appendix I
Cover Letter Attached to Student E-mail.

Email sent to students by Tony Partridge on the Fri 16/04/2010 08:51

This email was sent to all students on my behalf.

Hi all,

I would be very grateful for your help.

My name is Noelle Sheridan, I am an MSc student in the Institute currently studying Environmental Health and Safety Management. As part of the course I am writing a dissertation about the swine flu policies and procedures internationally, nationally and in IT Sligo.
I am sending this email to you using the email box of my supervisor, Tony Partridge, School of Science.
For my dissertation I have put together a questionnaire for students in relation to swine flu and I would be very grateful if you would fill this questionnaire in for me. This is quite a short questionnaire which should take no longer than a few minutes to complete.

The information gathered from this questionnaire will anonymous and be used only for statistical purposes. All replies will be treated as private and confidential and no personal details that can identify you will be asked for, recorded or kept.

Thanks very much for your time and assistance.

Please follow the link to enter the questionnaire.

http://www.surveymonkey.com/s/KMD6RJY

Kind Regards

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

APPENDIX II

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Appendix II
Questionnaire Sent to Students via E-mail.

Student Swine Flu Questionnaire.

Question One

Are you male or female?

Yes

No

Question Two

Are you aware of the term 'Swine Flu' (Pandemic H1N1)

Yes

No

Question Three

Have you ever had the swine flu (Pandemic H1N1)?

Yes

No

Question Four

Are you aware of the symptoms of Swine flu (Pandemic H1N1)

Yes

No

Question Five

Would you know the procedure to take if you experienced the symptoms of swine flu (to stop the spread of infection)?

Yes

No

Question Six

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Do you feel you were you adequately updated and informed about swine flu through e-mails, fliers, posters, etc?

Yes

No

Question Seven

If you feel adequately informed about the swine flu where did you feel you gained this information about the pandemic?

Nowhere

Student Union

Television

Other (please specify)

ITSligo
An Institiúid Teicneolaíochta, Sligeach

APPENDIX III

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Appendix III
Questions for the Student Health Nurse Questionnaire.

Question One:
Was the telephone triage system for students put into operation when the new health centre opened?

Question Two:
Is the telephone triage system still in place? If not could you please state the time when the triage ceased being used?

Question Three:
In your opinion was the telephone triage system effective at reducing the spread of Pandemic H1N1?

Question Four:
Was there many students using this triage system? (Exact numbers if at all possible)

Question Five
Was there a system set up upon entry to the student health centre to ensure the students visiting the centre did not have swine flu?

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Question Six:
Were there many students that entered the student health centre with the symptoms of the swine flu?

Question Seven:
Of these students that entered the student health centre was there many students that were confirmed with the pandemic H1N1?

Question Eight:
Was the containment room set up for students who did not use the triage telephone system and presented themselves to the student health centre?

Question Nine:
Was there any student(s) that were sent to hospital by ambulance from the student health centre hwith confirmed case of the swine flu?

Question Ten:
Was there ever an occasion where the PPE supplied for persons with confirmed Pandemic H1N1 was used by yourself or the doctor

An Institiúid Teicneolaíochta, Sligeach

Question Eleven:
Do you feel the procedure that was put in place was effective for reducing the spread of Pandemic H1N1 in the college?

Question Twelve:
Is there anything you would have done differently if there was to be another Pandemic outbreak in the college?

ITSligo
An Institiúid Teicneolaíochta, Sligeach

APPENDIX IV

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Appendix IV
Physical Inspection Checklists

Checklist for the Student Health Centre:

Checklist	Yes	No	Comment
Is there a nurses room			
Is there a doctors room			
Is there a reception room			
Is there a containment room			
Does each room have HSE hand wash etiquette posters?			
Does each room have hand sanitizer placed for student/staff use?			
Is the telephone triage system still in place in the student health centre?			
Is there a notice board upon entry to the Student centre with swine flu information attached?			
Is there HSE hand wash etiquette posters upon entry to the student centre			
Is there Hand sanitizer upon entry to the student centre?			
Does the toilet placed in the SHS have hand wash etiquette posters placed inside?			
Is there adequate hand wash placed in the toilets?			

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Appendix IV
Physical Inspection Checklists

Checklist for the main college building:

Area under Investigation:	Is there a hand sanitizer present?	Is there hand wash poster attached?	Is the sanitizer full?	comment

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Appendix IV
Physical Inspection Checklists

Male Toilet Checklist:

Toilet number:	Location:	Hand wash etiquette poster	Adequate soap/ hand wash	Comment:

Sligo
An Institiúid Teicneolaíochta, Sligeach

Appendix IV
Physical Inspection Checklists

Female Toilet Checklist:

Toilet number:	Location:	Hand wash etiquette poster	Adequate soap/ hand wash	Comment:

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

APPENDIX V

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Appendix V
Student Swine Flu Leaflet Distributed to Students.

ITSligo
An Institiúid Teicneolaíochta, Sligeach

SWINE FLU INFO

What is Swine flu (Influenza A(H1N1)virus)?

Influenza A(H1N1) commonly referred to as Swine flu, is an acute respiratory illness, which usually causes high fever, severe weakness and fatigue. It makes you feel very sick, more than a normal cold.

How do I know if I have swine flu?

It can be difficult at times to distinguish between the common cold and influenza. The main difference is that the symptoms of influenza come on rapidly and are typically accompanied by muscle aches and a fever. The common cold has a more gradual onset and is associated with a runny nose and sneezing. An important additional feature of influenza A (H1N1) 2009 is that diarrhoea and vomiting occur occasionally.

Know the difference between

Pandemic Flu Symptoms Include:

- Sudden Onset of Symptoms
- High Fever - Temperature over 38°C/100.4°F
- Prominent Headache
- Aches and pains - often severe
- Fatigue, weakness can be prolonged for a number of weeks
- Extreme exhaustion - early and prominent
- Runny nose, sneezing, sore throat - common
- cough - common, can be severe
- Vomiting / diarrhoea - sometimes

Common Cold Symptoms Include:

- Slow Onset of Syptoms
- Fever - rare
- Headache - rare
- General aches and pains - rare
- Fatigue, weakness - quite mild
- Extreme exhaustion- never
- Runny nose - common
- Sneezing - usual
- Sore throat - common
- Cough - mild to moderate hacking cough
- Vomiting/diarrhoea- not associated with the common cold in adults

How can I prevent the spread of Swine Flu?

- Use a tissue when coughing or sneezing
- Dispose of used tissues in a waste bin
- Wash your hands afterwards
- Avoid close contact with sick people
- Clean hard surfaces (e.g. door handles) regularly in your accommodation

What should I do if I have a flu-like illness?:

- Go home to your accommodation
- Take your temperature
- If your temperature is 38°C or higher do not return to college- call your home GP immediately for advice
- If your temperature is normal (<38°C) but you feel unwell, call to the Student Health Service for an appointment as normal.

Where can I get more information?

Student Health Swine flu advice number: 087 2055177

24 Hour HSE Flu Information Line Freephone 1800 94 11 00

Web sites: Sligo IT Website, the Department of Health and Children and the HSE (www.dohc.ie, http://www.hse.ie/eng/swineflu/, www.hpsc.ie).

ITSligo An Institiúid Teicneolaíochta, Sligeach

ITSligo
An Institiúid Teicneolaíochta, Sligeach

APPENDIX VI

Appendix VI
Results From the SHN Interview

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

…cuts = send home to G.P

213

3 Cases for months

…blic Health Ring

-1

35061

why slips?

21/April/2011

15.30

Questions for the nurse: E.1

Question One:
Was the telephone triage system for students put into operation when the new health centre opened?

yes, number on bottom of leaflet. Separate number to college.
Opened = 1st October (third week semester)

Question Two:
Is the telephone triage system still in place? If not could you please state the time when the triage ceased being used?

was never really rang it. (Still in operation officially)
But really healthcare
Isolated with mask.

Question Three:
In your opinion was the telephone triage system effective at reducing the spread of Pandemic H1N1?

Not in any way.
~~Contact~~

Question Four:
Was there many students using this triage system? (Exact numbers if at all possible)

None, uniform.
Students just came into Student health care centre if they were sick. (Given form by nurse)

Question Five
Was there a system set up upon entry to the student health centre to ensure the students visiting the centre did not have swine flu?

yes, asked if they was cold/flu systems regardless " secretary Isolated them
given a mask to into reception area.
taking temperatures less then 38 then it
Not 38°C.

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Question Six:
Were there many students that entered the student health centre with the symptoms of the swine flu?

No numbers

ILI of pop

50 patients a day had symptoms

supporting = ring own G.P. GP take it sometime

Very sick or chronic illness Ring parents;

How to care at home; carers; mask wearer

Question Seven:
Of these students that entered the student health centre was there many students that were confirmed with the pandemic H1N1?

—

Question Eight:
Was the containment room set up for students who did not use the triage telephone system and presented themselves to the student health centre?

— treatment room - temporary face mask

no exposure from other students.

Question Nine:
Was there any student(s) that were sent to hospital by ambulance from the student health centre hwith confirmed case of the swine flu?

No;

Question Ten:
Was there ever an occasion where the PPE supplied for persons with confirmed Pandemic H1N1 was used by yourself or the doctor

Full room – wear all time during peak

season; full face mask;

changed all time

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Question Eleven:

Do you feel the procedure that was put in place was effective for reducing the spread of Pandemic H1N1 in the college?

No Just not so much cases in Sligo
Not so much people had swine flu so compared to other college.

Question Twelve:

Is there anything you would have done differently if there was to be another Pandemic outbreak in the college?

Too much
Followed every guideline
Do the same again
Spent year at public Health + guidelines
UCG-
Nobody turned

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

APPENDIX VII

ITSligo
An Institiúid Teicneolaíochta, Sligeach

Appendix VII
Results from Physical Examinations
(Four areas)

ITSligo
An Institiúid Teicneolaíochta, Sligeach

20/April/2010

Checklist for the Student Health Centre:

Checklist	Yes	No	Comment
Is there a nurses room	✓		
Is there a doctors room		✓	
Is there a reception room	✓		
Is there a containment room	✓		Entire Room in Place
Does each room have HSE hand wash etiquette posters?	✓		Posters in Reception room leaflets on table
Does each room have hand sanitizer placed for student/staff use?			Reception sts on table
Is the telephone triage system still in place in the student health centre?		X	
Is there a notice board upon entry to the Student centre with swine flu information attached?	✓		
Is there HSE hand wash etiquette posters upon entry to the student centre	✓		Placed on Board outside entrance
Is there Hand sanitizer upon entry to the student centre?	✓		Same area - alcohol gel - attached Posters - all full
Does the toilet placed in the SHS have hand wash etiquette posters placed inside?	✓		
Is there adequate hand wash placed in the toilets?	✓		yes all full

Hand dryers - newly installed also in toilet, working properly.

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

20/ April/2010

Checklist for the main college building:

Area under Investigation:	Is there a hand sanitizer present?	Is there hand wash poster attached?	Is the sanitizer full?	comment
Front door entrance to canteen	✓	✓	✓	
Side entrance to canteen area	✓	✓	✓	
Entrance to I.T Services	✓	✓	✓	
Entrance to Library	✓	✓	✓	
Entrance to Science Block	✓	X	✓	Not Hand gel.
Main entrance to college (Reception area)	✓	✓	✓	
Entrance N Dopsi O's Cafe.	✓	✓	✓	

An Institiúid Teicneolaíochta, Sligeach

Female Toilet Checklist:

Toilet number:	Location:	Hand wash etiquette poster	Adequate soap/ hand wash	Comment:
1	Female toilet ground down below main canteen	✓	✓	-Older part of building -Some taps problem with flow HSE Posters in place
2	Female toilet up stairs engineering block (Beside Students Office)	✓	✓	Small toilet (2 units) Hand dryer, Soap- full HSE poster ✓
3	Toilet beside Block	✓	✓	Six toilets HSE poste Soap= full Hand dries= warming info on door
4	Toilets opposite end Science Block	✓	✓	6 toilets new, Hand wash,
5	Toilets engineering block Towards end of college	✓	✓	No Soap, dryers working, only 1 poster
6	Female toilets Block	✓	✓	Driers Not Strong
7	Reception Area toilets	✓	✓	Posters, Soap, large amt hand dryers

Sligo
An Institiúid Teicneolaíochta, Sligeach

IT Sligo
An Institiúid Teicneolaíochta, Sligeach

Male Toilet Checklist:

Toilet number:	Location:	Hand wash etiquette poster	Adequate soap/ hand wash	Comment:
1	Male toilet below canteen beside Bank	✓	✓	
2	Male toilet upstairs engineering block (beside) career [illegible]	✓	✓	
3	toilet placed opposite to staff office	✓	✓	
4	Male office at opposite entry Science Block	✓	✓	
5	Toilet in engineering Block	✓	✓	
6	male toilets Business Block	✓	✓	
7	male toilets Reception	✓	✓	