

Exposure management pandemic planning health essay

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Infection prevention and control belongs to health and safety issue, therefore, all those people who are health care workers have responsibility of offering healthy and safe environment to patients and the society. The support from these agencies or health care workers should be able to provide patient-centred care by clinical practices from a perspective that safety and quality are essential and also from the angle that a patient's preference is a big consideration. In each healthcare facility, it is necessary to put infection prevention and control into first place to ensure effectiveness. The managers need to know how their certain healthcare facility performs by controlling the systems in place to prevent infection transmission and decrease the risk. The person who is in charge of certain organizations, such as CEO of a hospital, should have overall responsibility and relatively deeper involvement into this national infection prevention and control program. Each agency should determine the methods to accurately monitor infection prevention and control policies. All staff should be able to understand their roles and responsibilities, having appropriate education and training to keep a healthy and safe environment. Infection prevention and control committee, whose members represent very important personnel, are able to make decisions. A variety of departments form this committee, such as Nursing, Public health including Public Health Nurses and Environmental Health Officer, Pharmacy, Clinical Laboratory, Medicine, Dental, Epidemiology, Dietary, Microbiology, Equipment Technicians, Administration, X-ray, Central Supply and Sterilization, Housekeeping, Laundry, Mortuary, Quality Improvement, Operating Theatre, Transport Services and some other departments. The National Infection Prevention and Control Committee

within the ambit of the Directorate of Health Services Management, has the authority to recommend and/or revise the Infection Prevention and Control Policies and Guidelines, which should be subjected to periodic reviews. The PICC should be responsible to the health care facility manager or Medical Superintendent or Clinical Director (2006, Reid).

Pandemic planning requirements

Prevention

During a pandemic, it will be extremely limited to get access to those antiviral drugs or vaccines, so the only way and also the best way to delay the outbreak or the transmission and spread of the certain infection disease should be non-medical interventions. General personal hygiene Enhance people's knowledge about individual respiratory hygiene in the community to reduce the risk of transmission. Community infection control measures Take advantage of corresponding vaccines and antiviral drugs in people who have contact with pathogens (defining risk groups). 3. Social distancing and quarantine Closures such as day-care facilities, educational institutions; ensure contact tracing, food supply, medical care, psychological assistance and social support for these people. 4. Travel and trade restrictions. Make sure international transport agencies have accurate instructions on how to deal with diverse epidemiological situations and possible emergency cases on board□

Preparedness

The purpose is to make countries recognize and manage certain infection disease to reduce transmission, morbidity and mortality and further more to

decrease social and economic loss. Moreover, the preparedness is not a quick process. It is recommended to use pandemic preparedness check list to evaluate the accomplishment of the current plan associated with a more comprehensive guideline drafted by WHO to help develop a national plan to deal with the outbreak of infection disease.

1. Preparing for an emergency:-
Getting started;-Command and control;-Risk assessment;-Communication: Public communication and communication among those involved in the response;-Legal and ethical issues;-Response plan by pandemic phase;
2. Surveillance:-Interpandemic surveillance;-Enhanced surveillance (phase 2 and beyond);-Pandemic surveillance;
3. Case investigation and treatment:-
Diagnostic capacity: local laboratory capacity; Reference laboratory availability;-Epidemiological investigation and contact management;-Clinical management: case management and treatment; infection control in health-care settings;
4. Preventing spread of the disease in the community:-Public health measures: General personal hygiene; Community infection control measures; Social distancing and quarantine; Travel and trade restrictions;-
Vaccine programmes: Routine vaccine programmes; Pandemic strain influenza vaccine programme;-Antiviral use as a prevention method;
5. Maintaining essential services:-Health services: Health service facilities; Health service personnel; Health service supplies; Excess mortality;-Other essential services;-Recovery;
6. Research and evaluation:-Research during phase 2 and beyond;-From research to action;
7. Implementation, testing and revision of the national plan□

Response and recovery

Many people will be affected in a wide range of different ways after a pandemic outbreak. They might suffer from health exacerbations, financial loss, losing friends or relatives. Government should make sure the rebuilding of the whole society materially and mentally.

Key phases

The WHO uses a series of pandemic phases to describe the world-wide situation from phase one to six. However, Australia has its own system to describe these phases, so may not be the same as that of WHO, which describes whether in countries overseas or just in Australia. A set of activities recommended by WHO, government, industry and agencies need to be undertaken when declaring the phases of a pandemic infection disease. A series of factors can trigger the change from one phase to another, such as pathogen's characteristics and the epidemiological behaviour of the certain infection disease. According to the Australian Health Management Plan for Pandemic influenza (2009), Pandemic virus emerges in Australia: AUS1-Animal infection in Australia: the risk of human infection or disease is considered low; AUS2-Animal infection in Australia: substantial risk of human disease; AUS3-A virus with pandemic potential infecting birds or other animals in Australia and causing a small number of human cases (no human-to-human spread or at most rare instances of spread to a close contact); AVERT (AUS4)-Small cluster of human cases occurring in Australia caused by a virus with pandemic potential (limited human to human transmission in Australia but spread is highly localized, suggesting the virus is not well adapted to humans.); AVERT(AUS5)-Larger cluster(s) of human cases caused

by a virus with pandemic potential with Australia only one of two countries to be affected globally. (Human to human spread still localised in Australia, (substantial pandemic risk). Phase 6 Responses Pandemic: CONTAIN (AUS6a)-Pandemic virus has arrived in Australia causing small number of cases and/or small number of clusters. SUSTAIN (AUS6b)-Pandemic virus is established in Australia and spreading in the community. CONTROL (AUS 6c)- Customised pandemic vaccine widely available and is beginning to bring the pandemic under control. RECOVER (AUS 6d)-Pandemic controlled in Australia but further waves may occur if the virus drifts and/or is re-imported into Australia.

The key phases that signal to change during a pandemic are:

1. Identification: a new pandemic microorganisms or virus has been identified to sustain human to human transmission in the community all around the world. 2. Microbes or virus (pathogens) enter into Australia. 3. Pathogen severity on both impact and spread through the whole Australian community. 4. Availability of certain customized pandemic vaccines. 5. The end of the pandemic, measured by disease activity returning to seasonal levels (National Action Plan for Human Influenza Pandemic, 2011).

Important lessons learned from past exposures

Flu pandemics can happen if a new strain of virus causes an epidemic which spreads over a wide range of geographic area and impacts an extremely high proportion of population. And the intervals between previous pandemics have varied from 11 to 42 years with no obvious recognizable pattern. The latest one was from 1968 to 1969. The effect of the following pandemic

could turn into a catastrophe to the public around the world and shortage of providing essential community services. From previous experiences of outbreaks of influenza, they were substantially different from each other, therefore there's huge uncertainty of future possible period and impact caused by a new strain of virus, that's why we need to have pandemic planning to reduce this uncertainty in order to reduce the big loss.

Future directions

1. Immunization It is the most effective and efficient way to prevent a wide range of infection diseases such as influenza, varicella (chickenpox), pertussis (whooping cough), tetanus, diphtheria, hepatitis B, meningococcal C disease, measles, mumps, rubella, rotavirus, polio and pneumococcal disease. 2. Disease control response and preparedness-Conduct continuous, evidence based, systematic reviews of communicable disease control policies, procedures, protocols and publications according to an agreed schedule;-Implement and evaluate a sustainable and effective management response to outbreaks in residential aged care facilities;-Develop a comprehensive, sustainable and effective response to prevent and manage outbreaks in child care facilities;-Investigate the impacts and issues related to the management of non-multiresistant Methicillin Resistant Staphylococcus aureus and develop an appropriate position for the Division, etc. 3. Pandemic preparedness and major incident response This means that it concludes responsibility for the leading public health efforts to include an influenza pandemic until it can be controlled via an efficient and effective vaccine, or controlling is no longer possible. 4. Aboriginal and Torres Strait

Islander communicable disease prevention and control; 5. Surveillance and research (Queensland Health, 2006)