

Influenza Pandemic: A Webliography

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Abstract:

Currently, the world is experiencing an influenza pandemic caused by the novel coronavirus (Covid-19) is believed to have originated in Wuhan province of China in the autumn of 2019. During this unique time of self-isolation to halt the community spread of this virus the following webliography aims to provide information regarding influenza pandemics. Influenza pandemic is a global outbreak of an influenza virus. This article outlines the World Health Organization six phase classification system for flu pandemics. It discusses the difference between pandemics and epidemics. The cause and effect of past influenza pandemics is also covered in this article. This webliography is a guide to online resources for instance consumer health websites such as Healthline and WebMD and government websites for example Center for Disease Control and Prevention (CDC), Health Canada and the World Health Organization (WHO) websites that provide information on influenza pandemics.

Keywords: Public Health; Epidemiology; Pandemics; Influenza, Human; Epidemics

Introduction:

Center for Disease Control and Prevention (CDC) in the United States defines influenza pandemic is a global outbreak of an influenza virus that affects a large

portion of the population worldwide. These types of pandemics occur when new influenza A viruses that may be transmitted from animals to humans are easily spread from human to human (Center for Disease Control and Prevention 2020).

The World Health Organization (WHO) has a six-phase classification system for influenza pandemics. Phase 1 of the World Health Organization classification is that no influenza virus among animals is known to cause infections in humans (World Health Organization 2009). Phase 2 is an influenza virus in domesticated or wild animals that is known to cause infections in humans and is therefore a pandemic threat (World Health Organization 2009). In phase 2 the virus has jumped from having animals as its host to having humans as the host. Phase 3 the influenza virus has caused sporadic cases or small numbers of infections in people but has not resulted in human to human transmission enough to cause community level outbreaks. In this phase there is limited human to human transmission of the influenza virus (World Health Organization 2009). Phase 4 is characterized by verified sustained human to human transmission of the influenza virus and community level outbreaks, sustain community level outbreaks is a significant risk factor for pandemic status (World Health Organization 2009). Some may categorize phase 4 as an influenza epidemic. Phase 5 and 6 are considered pandemic status by the World Health Organization (World Health Organization 2009). Phase 5 is when the influenza virus has community level outbreaks or human to human transmission in two different countries (World Health Organization 2009). Phase 6 is when a third country is experiencing community level outbreaks (World Health Organization 2009). After these six phases there is a post peak period in which the number of cases in most countries have dropped below peak, however during the post peak period there is a

chance of reoccurrence or second wave of the influenza outbreak (World Health Organization 2009). Following the post peak period there is a post pandemic period when the influenza outbreak drops to seasonal levels (World Health Organization 2009).

A common question is: what is the difference between an epidemic and a pandemic? An epidemic is when there is a sudden increase in the number of cases of a disease in a population in a geographic area (Center for Disease Control and Prevention 2006/2012). Pandemic is when an epidemic has spread over many countries and continents, affecting large numbers of people (Center for Disease Control and Prevention 2006/2012).

In the twentieth and twenty-first century there has been five influenza pandemics. Therefore, influenza pandemics are relatively infrequent since there has been five such pandemics in the last hundred years. Past influenza pandemics include the Spanish flu 1918, Asian flu 1957, Hong Kong flu 1968 and swine flu 2009 (Center for Disease Control and Prevention 2018). The Spanish flu which began in 1918 was caused by the N1H1 virus (Center for Disease Control and Prevention 2019). The Spanish flu was one of the most contagious and deadly influenza pandemics, approximately 500 million people or a third of the population of the world were infected with the N1H1 virus and approximately 50 million people died globally of the Spanish flu (Center for Disease Control and Prevention 2019). The Asian flu which started in 1957 was caused by the H2N2 virus it was responsible for approximately 1.1 million deaths worldwide (Center for Disease Control and Prevention 2019). The Hong Kong flu which began in 1968 was caused by the H3N2 virus it caused an estimated 1 million deaths worldwide (Center for Disease Control and Prevention 2019). The Swine flu pandemic started in 2009 and was caused

by a novel H1N1 virus. There are no exact numbers as to how many people were infected and how many died of the swine flu worldwide, but estimates suggest 1.6 million confirmed cases (World Health Organization 2010) and 151,700-575,400 people died of the swine flu globally (Center for Disease Control and Prevention 2019).

Currently, globally we are experiencing another influenza pandemic, Covid-19 which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) which was identified by the World Health Organization in December 2019 and originated in Wuhan, China (World Health Organization 2020). As of June, 26 2020 there has been over 9.4 million confirmed cases and 484 249 deaths of covid-19 in 216 countries (World Health Organization 2020).

The following is a webliography or guide to online resources such as consumer health and government websites that provide information on influenza pandemics.

Consumer Health Websites:

Healthline Pandemic Influenza

<https://www.healthline.com/search?q1=influenza+pandemics>

Healthline is an American provider of online health information for a general audience. Healthline has many articles about influenza pandemics such as articles about “Stopping the next influenza pandemic at the source”, “Flu pandemics are we ready?”, “Pandemic: What it is and what it means for you”, 10 Facts about the greatest pandemic in history people still get”, “Here's how COVID-19 compares to past outbreaks” and “Worst outbreaks in U.S. history”.

WebMD Pandemic Influenza

<https://www.webmd.com/search/search_results/default.aspx?query=influenza%20pandemics>

WebMD is an USA based company that produces health information online. WebMd has many articles about influenza pandemics such as “Have influenza pandemics occurred in the past?”, “What major flu pandemics have occurred in the past?”, “What are flu epidemics or pandemics?” and “Swine Flu: Learning from Past Pandemics”.

Government Websites (International):

Center for Disease Control and Prevention (CDC) Pandemic Influenza
<<https://www.cdc.gov/flu/pandemic-resources/index.htm>>

The Centers for Disease Control and Prevention is the national public health institute of the United States. The Center for Disease Control and Prevention (CDC) has a website on pandemic influenza (see figure 1). This webpage discusses pandemic basics and past outbreaks, national pandemic strategies and monitoring for influenza viruses. In the section on pandemic basics and past outbreaks discusses difference between seasonal flu versus pandemic flu; has questions and answers about pandemic influenza and chronicles past influenza pandemics. The website section on national pandemic strategies explains the pandemic intervals framework; influenza risk assessment tool and severity assessment framework. The section on monitoring for influenza viruses discusses the current situation; viruses of special concern and global monitoring. Many of the Center for Disease Control and Prevention websites including the one on influenza pandemics are available in English and Spanish.

Figure 1: Center for Disease Control and Prevention Pandemic Influenza Website

<https://www.canada.ca/en/public-health/services/diseases/flu-influenza/pandemic-flu.html>



Health Canada Pandemic Flu <<https://www.canada.ca/en/public-health/services/diseases/pandemic-flu.html>>

Health Canada is the governmental agency responsible for helping Canadians maintain and improve their health (Health Canada 2020). Health Canada webpage on pandemic flu includes the following topics: causes; what individuals and families need to know in the event of a flu pandemic; what health professionals need to know about pandemic influenza; how Canada prepares for pandemic flu. The webpage on causes explains the difference between pandemic versus seasonal flu; what causes pandemic flu and impacts of pandemic flu. “What individuals and families need to know in the event of a flu pandemic” webpage discusses how to be prepared; practical things to know in the event

of a flu pandemic and how to stay informed. The section on “what health professionals need to know about pandemic influenza” covers the following topics background; unpredictable nature of pandemics; pandemic impact; pandemic planning in Canada and key components of pandemic influenza preparedness and response. “How Canada prepares for pandemic flu” webpage allows Canadians to learn about Canada's planning for pandemic flu, including detecting and monitoring, vaccines, and antiviral drugs.

World Health Organization (WHO) Regional Office for Europe Pandemic Influenza
<<http://www.euro.who.int/en/health-topics/communicable-diseases/influenza/pandemic-influenza>>

The World Health Organization (WHO) is a specialized agency of the United Nations (UN) that is responsible for international public health. The World Health Organization webpage on pandemic influenza discusses preparedness and response and what World Health Organization, Regional Europe (WHO/Europe) is doing to help countries prepare for the next pandemic. There are other links on the webpage to other related webpages on topics such as: pandemic influenza preparedness framework; past pandemics; pandemic preparedness; how pandemic influenza emerges; pandemic vaccines and pandemic risk management guidance.

Conclusion:

Currently, all regions of the world are experiencing the global influenza pandemic caused by Covid 19. This webliography also provides information on how influenza pandemics are created and past pandemics. This guide to online information resources on pandemic

influenza aims to provide information regarding how to prepare and what to expect during an influenza pandemic.

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