

Legal and Policy Lessons Learned from Past Plagues

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Table of Contents

Introduction	3
<i>The Relationship Between Law and Literature</i>	4
Theme 1: Government and Public Health Officials' Communication	5
<i>Communication is Essential to Maintaining Public Trust</i>	5
<i>An Unwillingness to Change Course of Action</i>	7
<i>In the Absence of Good Communication, Rumours Prevail</i>	10
<i>Lessons Learned</i>	12
Theme 2: Cognitive Dissonance	13
<i>The Initial Belief that the Pandemic Will Not Affect Me</i>	13
Discriminatory Beliefs	15
An Inability to Comprehend	15
Competing Priorities	16
<i>Caution Decreases as Cases Decrease</i>	17
<i>Lessons Learned</i>	19
Theme 3: Stigmatization and Discrimination	20
<i>The Disproportionate Burden of Disease</i>	20
<i>The Belief that Disease is for the Poor and Racialized</i>	24
<i>Lessons Learned</i>	26
Theme 4: The Role of Religion	27
<i>Religion as a Basis for Disease and Survival</i>	27
<i>The Important Role of Religious Institutions</i>	28
Supporting Communities Through Disease	28
Religious Leaders and Messaging	30
<i>Lessons Learned</i>	31
Conclusion	32
Bibliography	35

Introduction

Epidemics and pandemics are often described as unprecedented times; however, history demonstrates that these events are not as unique or uncharted as society believes. Several novels recount the experiences and impacts of historical infectious disease epidemics and pandemics around the world. Three such novels have been selected for discussion in this paper and will be contrasted with the ongoing news stories and accounts of the COVID-19 pandemic. This discussion will then cover almost 350 years of humanities' relationship with infectious diseases, starting with the Plague epidemic in 1665 and extending to the continuing COVID-19 pandemic in December 2021.

The three novels selected each represent a turning point in the human-science relationship, and subsequently infectious disease. Daniel Defoe recounts the Plague epidemic in London in 1665 that killed a quarter of the city's population in *A Journal of the Plague Year*.¹ At this time, humanity possessed a scarce understanding of infectious disease and religion dominated discourse. *The Ghost Map* by Steven Johnson details the 10-day cholera epidemic in London in 1854 and the starting point for modern-day epidemiology and understanding infectious disease.² The influenza pandemic that spanned from 1918-1920 is the focus of John M. Barry's *The Great Influenza*.³ This pandemic is believed to have started in the army camps in the U.S. before spreading overseas and resulted in an estimated global death toll between 50 and 100 million people.⁴ The 1918 influenza pandemic represents the first intersection between infectious disease and modern-day science.

¹ Daniel Defoe, *A Journal of the Plague Year* (London: Arcturus Publishing Limited, 2020).

² Steven Johnson, *The Ghost Map* (New York: Riverhead Books, 2006) at 95.

³ John M Barry, *The Great Influenza* (New York: Penguin Books, 2018) at 4.

⁴ *Ibid* at 4, 92.

The novels demonstrate that commonalities exist across infectious epidemics and pandemics depicting what constitutes an effective, or poor, policy or legal response by government and public health officials. These commonalities exist despite the biological differences between infectious diseases and the evolving nature of modern science over time. Recognizing the patterns present in past epidemics and pandemics can help inform legal and policy decisions for effective official responses and preparations now and in the future.

An understanding of the themes described in this paper can provide a starting point or road map for governments' actions. This foundation is particularly important when a novel infectious disease first emerges, and little is known about its constitution. The themes explored in this paper include: (1) government and public health officials' communication; (2) cognitive dissonance; (3) stigmatization and discrimination; and (4) the role of religion. These themes are interrelated to one another, compounding or minimizing each other's effects.

The Relationship Between Law and Literature

Historical and fictional accounts provide one avenue for reflection upon the lessons for law and policy from past epidemics and pandemics. Law and literature possess a close bond and borrow aspects from the other field while remaining distinct domains.⁵ Both fields require the development of narrative and reasoning to be successful, and seek to explain social norms and

⁵ Justice AK Sikri "The Inexplicable Yet Unavoidable Relationship Between Law and Literature [Part II]", *Bar and Bench* (24 May 2020), online: <www.barandbench.com/columns/the-inexplicable-yet-unavoidable-relationship-between-law-and-literature-2> [perma.cc/H3X4-9JSD]; Arinze J Oduburu, "Law and Literature: The Interconnectedness and Distinction Between Them", *Legal Pages* (7 October 2020), online: <legalpages.com.ng/law-and-literature-the-interconnectedness-and-distinction-between-them/>.

issues, beliefs, and customs.⁶ Constitutions, legislation, and legal arguments all include the careful use of words and the production and accessibility of written law.⁷

The relationship between law and literature is not novel, but can be seen in the works of Homer, Sophocles, and Shakespeare.⁸ Literature can be used to explore the positive and negative aspects of the law, and narratives of justice and morality in the legal realm.⁹ Both law and literature predominantly focus on the same subject matter of humans and society.¹⁰ Despite differences in the two fields, the overall relationship between law and literature can be complementary and enrich one another.¹¹ Novels can be used to bolster our understanding of responses to disease outbreaks, the public's perceptions of certain policies, and the human condition.

Theme 1: Government and Public Health Officials' Communication

Communication is Essential to Maintaining Public Trust

Effective communication is a critical component of government and public health responses to an epidemic or pandemic. The theme of good communication strongly influences the other themes discussed in this paper. Communication possesses a direct relationship to public trust and the willingness to follow public health measures.

The 1918 influenza pandemic best exemplifies the link between communication and trust. Governments around the world censored public communications and the media because of

⁶ *Ibid*; Martin Skop, "Law and Literature – A Meaningful Connection" (2015)4:1 *Filozofia Publiczna i Edukacja Demokratyczna* 6 at 7.

⁷ *Ibid*; Sikri, *supra* note 5.

⁸ *Ibid*.

⁹ *Ibid*; Skop, *supra* note 6 at 7.

¹⁰ Oduburu, *supra* note 5.

¹¹ *Ibid*.

World War I (WWI).¹² This censorship led to the false belief that the influenza virus originated in Spain garnering the name of “Spanish Influenza” or “Spanish Flu,” as Spain, a neutral party in the war, did not censor their newspapers to prevent reports of the influenza virus.¹³ Spain became the starting point for the virus simply because they were the only government that did not lie.

In the U.S., then President Woodrow Wilson adopted the attitude that the nation must win the war at all costs and refused to give attention to anything outside of the war effort.¹⁴ Barry states that this focus “would ultimately, if indirectly, intensify the attack of influenza and undermine the social fabric.”¹⁵ The government chose to refrain from taking any steps to mitigate the influenza pandemic as they “feared that taking any such steps might cause panic and interfere with the war effort.”¹⁶ Government officials and newspapers alike minimized the impact and spread of the influenza outbreak to prevent damaging public morale for the war.¹⁷

President Wilson’s tactics would lead to increased influenza morbidity and mortality rates in the U.S.,¹⁸ and produce rampant mistrust in the public and create fractures in communities. Barry summarizes the effects of the U.S. government’s decisions, stating “they generally failed to keep the community together. They failed because they lost trust. They lost trust because they lied. [...] And they lied for the war effort.”¹⁹ The mistrust caused by poor communication manifests as public uncertainty which transforms into fear.²⁰

¹² Barry, *supra* note 3 at 126, 171.

¹³ *Ibid* at 171.

¹⁴ *Ibid* at 128.

¹⁵ *Ibid*.

¹⁶ *Ibid* at 203.

¹⁷ *Ibid* at 94, 181, 221.

¹⁸ *Ibid* at 302.

¹⁹ *Ibid* at 396.

²⁰ *Ibid* at 335.

Barry argues that for a government to respond effectively to an infectious disease threat, officials must be able to handle the truth of the situation.²¹ Handling the truth requires communication of that truth to the public. As stated by Barry “if there is a single dominant lesson from 1918, it’s that governments need to tell the truth in a crisis.”²² If the government loses the trust of the people, then the public will stop listening to the government even if they start to tell the truth.²³ An inability to change course to act in accordance with the truth of the situation feeds into both mistrust in the government and the science that can save lives.

An Unwillingness to Change Course of Action

Government and public health officials’ unwillingness to change their course of action, even when evidence dictates otherwise, impacts their ability to communicate effectively, as exemplified by the U.S. government’s response to the 1918 influenza pandemic. A measles epidemic swept through the U.S. army camps prior to the influenza pandemic demonstrating the encampments were susceptible to infectious disease outbreaks.²⁴ Despite this “test run” army and government officials did not take action to address overcrowding of soldiers or stockpile medical supplies to prevent the influenza pandemic.²⁵ Officials still refused to change their approaches even once the influenza pandemic began. Overcrowded overseas transfers and failure to implement quarantines on incoming troops allowed the virus to spread around the world.²⁶

Slowness to alter course in a time of crisis exacerbates the outbreak’s impact and influences how the public responds when the plan is changed. Public health officials in 19th

²¹ *Ibid* at 459.

²² *Ibid* at 460.

²³ *Ibid* at 330.

²⁴ *Ibid* at 148.

²⁵ *Ibid* at 96, 146-8.

²⁶ *Ibid* at 304, 308.

century London believed that the miasma theory, the idea that foul or bad air carry disease, explained the origins of cholera outbreaks.²⁷ Officials refused to accept evidence that cholera is waterborne when epidemiologist and physician John Snow first introduced the theory in 1849 leading to future outbreaks of the disease.²⁸

Pursuant to miasma theory, public health officials in London dumped the city's sewage into the Thames River to clean the air and streets prior to 1854.²⁹ Johnson describes that this plan was "an elaborate scheme that would deliver the cholera bacteria directly to the mouths of Londoners."³⁰ Officials hesitantly accepted the waterborne theory during the outbreak in 1854, but only to the extent that they would remove the handle to the Broad Street pump, the source of the outbreak.³¹ The public berated and harassed the officials who took this action since "learning to listen to reason takes time, particularly among the general public of Broad Street, who had heard nothing but superstition from the authorities."³²

Change can be slow, an unfortunate reality in comparison to the ability of infectious diseases to spread rapidly. Some experts continued to advocate for the miasma theory until the late 1930s and as an explanation for the 1918 influenza pandemic, despite the theory being disproven in 1854.³³ Officials are capable of changing course albeit hesitantly or begrudgingly. In 1665 public campaigns ensued to eradicate dogs and cats in London as officials believed the animals to be carriers of the Plague.³⁴ Instead officials inadvertently removed the natural

²⁷ Johnson, *supra* note 2 at 112-4.

²⁸ *Ibid* at 75.

²⁹ *Ibid* at 120-1.

³⁰ *Ibid*.

³¹ *Ibid* at 163.

³² *Ibid*.

³³ Barry, *supra* note 3 at 50.

³⁴ Johnson, *supra* note 2 at 120.

predators of Plague-carrying rats.³⁵ Officials understood the ability of rats to carry infectious diseases by WWI and took efforts to eradicate rats in European trenches to prevent illness amongst troops.³⁶

Canadian governments have been slow to accept that the COVID-19 virus is airborne,³⁷ despite legal recognition by a provincial court in Alberta.³⁸ Continued masking and proper ventilation are shown to decrease COVID-19 transmission, but governments continue to enact, and advocate for, measures that address droplet transmission.³⁹ Cleaning high-touch surfaces regularly, 2-metre social distancing, and plexiglass barriers which may decrease air flow that removes viral particles are still recommended.⁴⁰ This mixed advice on the transmission of COVID-19 creates confusion for Canadians on what measures they should be following.⁴¹ The continued promotion of ineffective measures diverts limited resources from more beneficial efforts, primarily proper air filtration.⁴²

The ability for government and public health officials to change direction can be the mark of a successful epidemic or pandemic response. Australia is considered to have been successful in their response to the 1918 influenza pandemic. The government was quick to implement quarantine procedures for incoming ships and did not censor the press in regard to information about the virus.⁴³

³⁵ *Ibid.*

³⁶ *Supra* note 3 at 119.

³⁷ Justin Ling, "The Plexiglass Problem", *Maclean's* (29 October 2021), online:

<www.macleans.ca/society/health/the-plexiglass-barrier-problem/> [perma.cc/G95H-HQT6].

³⁸ *R v Pruden*, 2021 ABPC 266 at para 56.

³⁹ *Supra* note 37.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ Barry, *supra* note 3 at 375-6.

The Norwegian government is praised for their response to COVID-19, as the nation changed course quickly to address emerging evidence and maintained public support and trust.⁴⁴ New Zealand is widely believed to have responded the best to COVID-19 with low case numbers due to their early and aggressive response to the virus.⁴⁵ The government of New Zealand is lauded for their consistent and accessible messaging, strong leadership, and emphasis on COVID-19 testing throughout the pandemic.⁴⁶

In the Absence of Good Communication, Rumours Prevail

The absence of proper communication from officials creates space that can be filled with rumours. In 1918, a rumour began to circulate around the U.S. that the virus was the Plague, and not influenza, which heightened fear.⁴⁷ During this time another rumour began that dogs carried the influenza virus leading to the police and civilians to euthanize their pets.⁴⁸ Law enforcement officials encouraged citizens to ingest heroin to treat upset stomachs in the daily newspapers in 1854 London.⁴⁹ Rumours can promote discriminatory beliefs and actions as described further in Theme 3. The majority of rumours are not grounded in evidence making them harmful, or at the bare minimum useless.

When a novel virus appears on the global stage, and as the virus mutates, there is an inherent degree of uncertainty as scientists strive to understand more about the nature of the disease itself. Government and public health officials must be able to communicate this

⁴⁴ Eirik Holmøyvik “Independent Commission Finds Lack of Preparedness for the Pandemic, But Praises the Nordic Model”, *Lex-Atlas: COVID-19* (21 April 2021), online: <lexatlas-c19.org/independent-commission-finds-lack-of-preparedness-for-the-pandemic-but-praises-the-nordic-model/> [perma.cc/NV92-82TM].

⁴⁵ Ian Bremmer, “The Best Global Responses to the COVID-19 Pandemic, 1 Year Later”, *Time* (last modified 23 February 2021), online: <time.com/5851633/best-global-responses-covid-19/> [perma.cc/63E7-M3E7].

⁴⁶ *Ibid.*

⁴⁷ Barry, *supra* note 3 at 224.

⁴⁸ *Ibid* at 350.

⁴⁹ Johnson, *supra* note 2 at 49.

uncertainty clearly to the public. Failure to handle uncertainty allows other groups to control the narrative and use the presence of uncertainty as evidence to support misinformation. For example, anti-vaccine groups have taken advantage of officials' poor communication around adverse reactions to COVID-19 vaccines and minimization of the importance of immunizing children.⁵⁰ These groups spread misinformation about the vaccines and the risks associated with their use in attempts to undermine public uptake.⁵¹

Pseudoscience in particular is used to fill the gaps in science where there is uncertainty. In all three novels the authors discussed the use and prevalence of remedies and treatments that lacked a scientific evidence base.⁵² These fake remedies can be dangerous in themselves. Defoe describes how Londoners in attempt to defend themselves against the Plague began "storing themselves with such Multitudes of Pills, Potions, and Preservatives, as they were call'd; that they not only spent their Money, but even poison'd themselves before-hand."⁵³ During the 1918 influenza pandemic individuals resorted to "every kind of folk medicine or fraudulent remedy available or imaginable" including wearing garlic, gargling disinfectant, and overheating rooms.⁵⁴

A variety of fake and pseudoscience treatments have emerged during the COVID-19 pandemic. Ivermectin, an antiparasitic medication, lacks evidence as a treatment for COVID-19, but nonetheless use increased.⁵⁵ Individuals resorted to using versions of the medicine developed

⁵⁰ Rachel Schraer & Nicola Morrison "COVID: Misleading Vaccine Claims Target Children and Parents", *BBC News* (13 October 2021), online: <www.bbc.com/news/health-58783711> [perma.cc/4RB7-7E76].

⁵¹ *Ibid.*

⁵² Defoe, *supra* note 1 at 27; Johnson, *supra* note 2 at 46; Barry, *supra* note 3 at 29, 355.

⁵³ *Supra* note 1 at 35.

⁵⁴ *Supra* note 3 at 355.

⁵⁵ Leslie Young "Don't Use Ivermectin for COVID-19, Health Canada Warns as Poison Control Calls Increase", *Global News* (20 October 2021), online: <www.msn.com/en-ca/news/canada/don-e2-80-99t-use-ivermectin-for-covid-19-health-canada-warns-as-poison-control-calls-increase/ar-AAPKVhz?ocid=BingNewsSearch> [perma.cc/J5QY-TH7S].

for livestock and calls to poison control centres increased subsequently.⁵⁶ Former President Donald Trump recommended the use of hydroxychloroquine, and the ingestion or injection of household cleaners, to treat COVID-19.⁵⁷ Both measures have been disproved as effective treatments for COVID-19 and demonstrate the harms of governments purporting false cures.⁵⁸

Lessons Learned

Clear and honest communications from government and public health officials is essential to an effective epidemic or pandemic response. Good communication is critical to maintaining the public's trust and support needed to make public health measures and vaccination campaigns successful. Officials who choose to minimize the impact of a disease, even when people are experiencing the severity of the outbreak, contribute to the public's terror. Barry describes this approach in 1918: "But as horrific as the disease itself was, public officials and the media helped create that terror – not by exaggerating the disease but by minimizing it, by trying to reassure."⁵⁹

Officials must be able to communicate the risks associated with public health measures and the uncertainties or limitations of the scientific evidence base. Failure to communicate in these areas can lead to the spreading of false rumours, harmful fake treatments, and create fear. Governments must be able to change course as the evidence base for the disease at-hand evolves.

⁵⁶ *Ibid.*

⁵⁷ Nicholas Reimann, "Some Americans are Tragically Still Drinking Bleach as a Coronavirus 'Cure'", *Forbes* (24 August 2020), online: <www.forbes.com/sites/nicholasreimann/2020/08/24/some-americans-are-tragically-still-drinking-bleach-as-a-coronavirus-cure/?sh=57f73abb6748> [perma.cc/A6B7-92U9].

⁵⁸ *Ibid.*

⁵⁹ Barry, *supra* note 3 at 460.

Theme 2: Cognitive Dissonance

In these circumstances, cognitive dissonance refers to an inability to comprehend or believe the realities of the infectious disease epidemic or pandemic. Expressions of cognitive dissonance are strong at the time of initial disease outbreak for both individuals and governments. Cognitive dissonance follows the wave-like nature of infectious diseases. Initial feelings of cognitive dissonance can dissipate as cases rise and the effects of the disease are realized. A return to the denial of the existence of the disease or a minimization of its effects can occur when case numbers drop and affect the extent of the next wave.

The Initial Belief that the Pandemic Will Not Affect Me

The events of the Plague in 1665, cholera in 1854, and influenza in 1918 demonstrate that cognitive dissonance can stem from several lines of thought: discriminatory and stigmatizing attitudes towards the spread of illness, an inability to comprehend events, and competing priorities. Cognitive dissonance can amount to the individual belief that they will not get ill, or the illness will not be serious, despite the presence of the disease elsewhere.⁶⁰ Defoe states the people in London in 1665 “began to hope, that [the Plague] was chiefly among the People at that End of the Town, it might go no farther.”⁶¹

Cognitive dissonance poses a particular danger when the belief is held by government or public health officials. Governments determine the preparations and response of the nation to an epidemic or pandemic, whereas individuals possess a smaller sphere of influence. Government and public health officials who do not believe in the existence or severity posed by an infectious disease will not respond accordingly, or will delay their response, exacerbating the duration and

⁶⁰ Defoe, *supra* note 1 at 101-2, 162; Barry, *supra* note 3 at 341.

⁶¹ *Supra* note 1 at 15.

extent of an outbreak's impacts. Johnson said, "if they do recognize that they are living through a historical crisis, it's often too late."⁶² Governments who do not believe in the disease will not prepare appropriately. Defoe in regard to London in 1665 states:

Surely never City, at least, of this Bulk and Magnitude, was taken in a Condition so perfectly unprepared for such a dreadful Visitation, whether I am to speak of the Civil Preparations, or Religious; they were indeed, as if they had no Warning, no Expectation, no Apprehension, and consequently the least Provision imaginable was made for it in a public Way.⁶³

Early in 2020, when the COVID-19 pandemic first began U.K. Prime Minister Boris Johnson exemplified cognitive dissonance. The Prime Minister did not believe that the COVID-19 virus presented a significant threat as he was someone who did not get ill frequently or understand the nature of disease.⁶⁴ The U.K. government was therefore slow to respond. The Prime Minister changed his opinion on COVID-19 and enacted public health measures once he himself caught the disease and ended up in intensive care.⁶⁵ Apart from changing Johnson's attitude towards the pandemic, his case reinforced the severity of COVID-19 to the British public.⁶⁶

In some cases, cognitive dissonance does not dissipate. Early in 2020, the president of Turkmenistan banned the use of the word coronavirus.⁶⁷ The country continues to claim no confirmed cases of COVID-19 and zero deaths related to the disease, despite implementing

⁶² Johnson, *supra* note 2 at 32.

⁶³ Defoe, *supra* note 1 at 84.

⁶⁴ Linda Geddes "'It Made Boris Seem like a Normal Person': How Did Johnson's COVID Change Him?", *The Guardian* (15 December 2020), online: <www.theguardian.com/lifeandstyle/2020/dec/15/it-made-boris-seem-like-a-normal-person-how-did-johnsons-covid-change-him> [perma.cc/SBE6-BR3U].

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ Daniel Van Boom "Turkmenistan Fights COVID-19 by Banning the Word 'Coronavirus'", *CNET* (31 March 2020), online: <www.cnet.com/health/turkmenistan-fights-covid-19-by-banning-the-word-coronavirus/> [perma.cc/26E9-5537].

minor COVID-19 control measures and the administration of over seven million vaccines.⁶⁸ The response from the Turkmenistan government to COVID-19 may seem dramatic, but it is not unprecedented. Woodrow Wilson, the President of the U.S. during the 1918 influenza pandemic, never publicly acknowledged the existence of the pandemic or its effects.⁶⁹ National government officials followed the lead of President Wilson and never issued a public acknowledgement.⁷⁰

Discriminatory Beliefs

The prevalence of discriminatory beliefs can lead to the idea that one cannot contract the disease as they are not a member of a stigmatized group commonly associated with the illness. Several outbreaks of cholera occurred throughout Europe in the late 1700s and early 1800s.⁷¹ These outbreaks did not particularly affect England which caused “the pundits of the day to trot out an entire military parade of racist clichés about the superiority of the British way of life.”⁷² London would as a result be ill-prepared and have difficulty grasping the presence of future cholera epidemics that did affect them. More will be said in regard to discrimination and stereotyping under Theme 3.

An Inability to Comprehend

Fear can make it difficult for someone to grapple with the existence and magnitude of a disease outbreak. Under these circumstances, people can deem it easier to deny the disease’s existence altogether. In London under the influence of the Plague “there were great Numbers

⁶⁸ *Ibid*; World Health Organization, “Turkmenistan” (last modified 29 November 2021), online: *WHO Coronavirus Disease (COVID-19) Dashboard with Vaccination Data* <covid19.who.int/region/euro/country/tm> [perma.cc/4FN3-WMDY].

⁶⁹ Barry, *supra* note 3 at 302, 308.

⁷⁰ *Ibid* at 334.

⁷¹ Johnson, *supra* note 2 at 33.

⁷² *Ibid*.

frightened to other Extremes, some frightened out of their Senses, some out of their Memory, and some out of their Understanding.”⁷³

Many individuals and officials fall into the logical fallacy that because an outbreak did not occur before, or reach the same magnitude, that a severe endemic or pandemic cannot occur now. This belief is particularly ironic as humanity does in fact have a long history fighting with infectious diseases. An outbreak of measles struck the army camps in the U.S. prior to influenza in 1918.⁷⁴ Instead of recognizing that army camps were susceptible to infectious disease outbreaks and responding appropriately, the general belief was that influenza in comparison “seemed like nothing to worry about.”⁷⁵ Public health officials would continue to minimize the effects of influenza, repeatedly expressing the sentiment “[t]his was influenza, only influenza.”⁷⁶ Public buy-in for public health restrictions and immunization campaigns is difficult to achieve when the people are consistently told the disease is mild.

Competing Priorities

The existence of competing priorities can lead to cognitive dissonance when one decides to deprioritize their response to the disease. On an individual level, this form of cognitive dissonance means that a person may choose not to take precautions to protect themselves. Defoe describes feeling conflicted about leaving London for the Plague-free countryside when the opportunity arises, and ultimately decides not to leave.⁷⁷ This decision is partially influenced by Defoe’s commitment to maintaining his business in London and watching his brother’s vacated

⁷³ Defoe, *supra* note 1 at 56.

⁷⁴ Barry, *supra* note 3 at 148.

⁷⁵ *Ibid* at 169.

⁷⁶ *Ibid* at 310.

⁷⁷ Defoe, *supra* note 1 at 18-9.

home.⁷⁸ Defoe expresses placing his curiosity over caution as he chose to visit the town's death pits where they buried those who passed from the Plague despite fears of contracting the illness.⁷⁹

The effects of competing priorities at a governmental level can be understood from the U.S. government's lack of response to the 1918 influenza pandemic. Theme 1 discussed how the government prioritized their war efforts and refused to take any action against the pandemic that would divert attention or resources from WWI. Barry states that in the U.S., as in much of the world in 1918, "[t]hose in control of the war's propaganda machine wanted nothing printed that could hurt morale."⁸⁰ Political, social, and economic priorities can all divert governments attention and resources from responding to epidemics and pandemics.

Caution Decreases as Cases Decrease

Infectious disease outbreaks follow wave-like patterns.⁸¹ Cases of the disease will peak and then decrease. If mutations to the virus occur, or if public health measures are removed too soon, cases will again increase, potentially surpassing the rates of previous waves.⁸² Decreasing case numbers can lead to the false belief that the epidemic or pandemic is over.⁸³ At these points, cognitive dissonance can return making it difficult to reinstate public health measures when the next wave starts.

The relief stemming from decreasing case numbers can lead to the abandonment of public health measures, such as the closure of shops and bans on public gatherings, and

⁷⁸ *Ibid.*

⁷⁹ *Ibid* at 59.

⁸⁰ Barry, *supra* note 3 at 179.

⁸¹ *Ibid* at 174.

⁸² *Ibid* at 174-6; Defoe, *supra* note 1 at 191.

⁸³ See *supra* note 3 at 174.

caution.⁸⁴ Defoe describes that many Londoners believed that since they survived the initial wave of the Plague that “the Sickness would not reach them, or that if it did, they should not die.”⁸⁵ Barry describes a similar experience during the influenza pandemic:

[W]hen town after town had congratulated itself on surviving it – and in some places where people had the hubris to believe they had defeated it – after health boards and emergency councils had cancelled orders to close theatres, schools, and churches and to wear masks, a third wave broke over the earth.⁸⁶

Once cognitive dissonance sets in again at this stage it is difficult to reintroduce public health measures. Defoe discusses how doctors in London tried to warn the public of the dangers of abandoning caution, but “they might as well have talk’d to the Air, for the People of London thought themselves so Plague-free now.”⁸⁷ Failure to respond early to the risks of subsequent waves of disease can lead to increased infections and death.⁸⁸

The revival of cognitive dissonance between waves of disease and a poor government response to these changes can be seen in the Alberta government’s handling of the fourth wave of COVID-19. The Alberta government removed all public health measures to combat COVID-19 in July 2021 at the end of a third wave, declaring the pandemic had become endemic.⁸⁹ By September, cases surged as the province entered the fourth wave, but the Alberta government refused to reimplement any public health measures. The Alberta government finally reintroduced measures after widespread criticism and backlash,⁹⁰ but the delay meant COVID-19 cases and

⁸⁴ *Supra* note 1 at 191.

⁸⁵ *Ibid.*

⁸⁶ *Supra* note 3 at 373.

⁸⁷ Defoe, *supra* note 1 at 193.

⁸⁸ *Ibid* at 191-2.

⁸⁹ Don Braid “Braid: With Denials Flying, Kenney Finally Tackles a Crisis Far Advanced”, *Calgary Herald* (16 September 2021), online: <calgaryherald.com/opinion/columnists/braid-with-denials-flying-kenney-finally-tackles-a-crisis-far-advanced> [perma.cc/6GP6-NT4U].

⁹⁰ *Ibid.*

hospitalizations reached an all-time high. Alberta required military intervention to help the overburdened healthcare system.⁹¹

Lessons Learned

Cognitive dissonance can slow governments' responses to infectious disease threats. Governments should prepare for epidemics or pandemic before outbreaks occur, including building Personal Protective Equipment stockpiles and creating health infrastructure capable of handling an outbreak. This preparedness should continue once an epidemic or pandemic starts and between waves of disease. Preparing for future infectious diseases in the absence of an actual outbreak presents government and public health officials an opportunity to grapple with the idea of such a crisis, but in a low-pressure environment and in the absence of fear. The importance of preparedness can be encapsulated by Barry, "to sum it up in a single word, 'preparedness.' And now is the time to prepare."⁹²

The governments of several states have been criticized for a lack of preparedness for the COVID-19 pandemic. In the U.K., public health officials warned the government of the need to create a Personal Protective Equipment stockpile, develop a contact tracing app, and create quarantine plans four years before the COVID-19 pandemic.⁹³ The government failed to heed these warnings. An independent commission found the Norwegian government ill-prepared to handle a national disease outbreak despite warnings that such an outbreak could likely occur.⁹⁴

⁹¹ Ian Austen "Alberta's 'Best Summer Ever' Ends With an Overwhelmed Medical System", *The New York Times* (24 September 2021), online: <www.nytimes.com/2021/09/24/world/canada/canada-alberta-covid-cases.html> [perma.cc/2W4M-KHV7].

⁹² Barry, *supra* note 3 at 390.

⁹³ Jemma Crew "Government Warned of Need for PPE Stockpiles Four Years Before Pandemic", *Evening Standard* (8 October 2021), online: <www.msn.com/en-gb/news/uknews/government-warned-of-need-for-ppe-stockpiles-four-years-before-pandemic/ar-AAPh4Yb?ocid=BingNewsSearch> [perma.cc/FFG4-J75Y].

⁹⁴ Holmøyvik, *supra* note 44.

Norway's successful response to COVID-19 occurred only because the government reacted quickly once the pandemic started.

In relation to Theme 1, clear communication by government and public health officials to the public about the presence and risk of an infectious disease is critical and should reject any discriminatory beliefs that arise. Proper messaging could help combat cognitive dissonance present in the public. The importance of communication continues as cases decrease to combat the risk of future waves. Epidemic and pandemic responses should be grounded in the available scientific evidence and not the individual beliefs of officials. Consultations with human behaviour experts to understand how people will respond to infectious disease outbreaks could be beneficial to governments.

Theme 3: Stigmatization and Discrimination

Stigmatized and disadvantaged groups traditionally bear disproportionate burdens of disease due to poor living and working conditions, low economic means, and lack of access to healthcare. Health inequities can create and reaffirm stereotypes and discriminatory behaviours. Johnson states that infectious disease outbreaks “shed light on the poverty and despair of inner-city life, illuminating everyday suffering with the bright light of extraordinary despair.”⁹⁵

The Disproportionate Burden of Disease

Individuals of stigmatized or historically excluded groups typically bear a larger burden of infectious diseases. In 1918, industrial workers in the U.S. experienced mortality rates similar to those in the hardest hit army camps where influenza prospered.⁹⁶ This disproportionate burden of disease between groups is attributable to differences in working and living conditions. John

⁹⁵ Johnson, *supra* note 2 at 171.

⁹⁶ Barry, *supra* note 3 at 362.

Snow described a cholera outbreak in a mine in 1831 as “rooted in the social conditions of [the] impoverished workers – and not in any innate susceptibility to disease.”⁹⁷

Rates of disease are often higher in areas with overcrowded housing conditions and poor sanitation services.⁹⁸ The cholera epidemic in 1854 occurred in the London community of Soho. Johnson describes the community as “an island of working poverty and foul-smelling industry.”⁹⁹ Barry describes similar conditions in Philadelphia in 1918, a city particularly hard-hit by the influenza pandemic, describing the “living conditions in its slums, where most tenements still had outhouses servicing dozens of families.”¹⁰⁰ WWI caused a mass flux of workers into cities to work in factories. Cities could not accommodate such large populations and many workers shared beds and crowded into single rooms.¹⁰¹ These conditions made Philadelphia “fertile ground for epidemic disease.”¹⁰²

Individuals of lower economic means may not be able to take the precautions available to others to avoid illness and to keep themselves safe. Defoe illustrates how wealthy families left London for the countryside to avoid the Plague, stating “and the richer sort of People, especially the Nobility and Gentry, from the West-part of the City throng’d out of Town.”¹⁰³ Those who did not possess the same means or who did not have country homes could not leave the city.

At the same time, many individuals who stayed in London “cou’d not lay up Provisions, and there was a necessity, that they must go to Market to buy.”¹⁰⁴ Many servants and lower-

⁹⁷ *Supra* note 2 at 59.

⁹⁸ *Supra* note 3 at 408.

⁹⁹ *Supra* note 2 at 19.

¹⁰⁰ Barry, *supra* note 3 at 197-8.

¹⁰¹ *Ibid* at 131-2.

¹⁰² *Ibid* at 198.

¹⁰³ Defoe, *supra* note 1 at 16.

¹⁰⁴ *Ibid* at 73.

income individuals had to go to the markets daily for provisions and caught the Plague. Staying home is not an option available to all people. Studies found that individuals who could not stay home and rest when they contracted influenza had worse outcomes than those that could stay home and access quality care. Barry points out that this finding means “that the poor died in larger numbers than the rich.”¹⁰⁵

Quebec imposed a provincial curfew to stem the spread of COVID-19.¹⁰⁶ The order disproportionately affected individuals experiencing homelessness who did not have safe shelter to go to once curfew started.¹⁰⁷ The Superior Court of Quebec ruled that the curfew order would no longer apply to individuals experiencing homelessness as the order placed their lives, safety, and health at risk.¹⁰⁸ The role of the legal situations in these circumstances is to protect those that are disadvantaged by society when the government fails to do so in their policies.

All trade ceased due to the Plague in London causing rates of unemployment to rise.¹⁰⁹ Individuals who still retained employment could not work from home to protect themselves and their families from contracting the illness. Defoe summarizes “that tho’ the Plague was chiefly among the Poor yet, were the Poor the most Venturous and Fearless of it, and went about their Employment, with a Sort of brutal Courage.”¹¹⁰ Poor working conditions and an inability to work from home contributed to several COVID-19 outbreaks at large factories and warehouses,

¹⁰⁵ *Supra* note 3 at 408.

¹⁰⁶ Isaac Olson “Quebec Curfew Does Not Apply to Homeless People, Judge Says”, *CBC News* (last modified 27 January 2021), online: <www.cbc.ca/news/canada/montreal/quebec-court-ruling-homeless-curfew-1.5889075> [perma.cc/CW9L-C2NG].

¹⁰⁷ *Ibid.*

¹⁰⁸ *Ibid.*

¹⁰⁹ Defoe, *supra* note 1 at 86-7.

¹¹⁰ *Ibid* at 82.

including Amazon warehouses,¹¹¹ a Maple Leaf Foods plant,¹¹² and the Cargill meat-processing plant.¹¹³ The latter outbreak is considered Canada's largest COVID-19 outbreak with more than 1,500 related cases and several deaths.¹¹⁴

Groups with lower economic statuses are unable to afford medicines needed to treat their illness. Both Defoe and Johnson describe the lack of access to treatment during the Plague epidemic and cholera epidemic, respectively.¹¹⁵ Defoe describes the situation as “the Misery of that Time lay upon the Poor, who being infected, had neither Food or Physick; neither Physician or Appothecary to assist them, or Nurse to attend them.”¹¹⁶ The then Lord Mayor of London appointed physicians to care for the poor, made orders to increase access to cheap remedies, and provided charity to low-income groups during the Plague.¹¹⁷

Significant inequities in access to COVID-19 vaccines still exist globally.¹¹⁸ Least developed nations have minimal access and subsequently have only vaccinated small percentages of their populations compared to the high vaccination rates in wealthy nations.¹¹⁹ Increasing access to healthcare both domestically and internationally is a critical component of an effective government response.

¹¹¹ Joel Dryden “Alberta Declares COVID-19 Outbreak at Amazon Warehouse Near Calgary”, *CBC News* (1 May 2020), online: <www.cbc.ca/news/canada/calgary/calgary-amazon-covid-warehouse-outbreak-1.5553126> [perma.cc/2DC8-N6PA].

¹¹² Mike De Souza & Andrew Russell “1 Dead, 24 Maple Leaf Foods Employees Infected with COVID-19 at Montreal Plant”, *Global News* (15 May 2020), online: <globalnews.ca/news/6948106/maple-leaf-foods-montreal-covid-19/> [perma.cc/M3DT-5SPK].

¹¹³ Sarah Rieger “3rd Death Linked to Canada's Largest COVID-19 Outbreak at Alberta Slaughterhouse”, *CBC News* (last modified 12 May 2020), online: <www.cbc.ca/news/canada/calgary/3rd-covid-19-death-cargill-meat-processing-plant-high-river-1.5565265> [perma.cc/55MB-JTBZ].

¹¹⁴ *Ibid.*

¹¹⁵ *Supra* note 1 at 79; Johnson, *supra* note 2 at 47.

¹¹⁶ Defoe, *supra* note 1 at 79.

¹¹⁷ *Ibid* at 39, 88, 188.

¹¹⁸ Henrik Pettersson et al, “Tracking COVID-19 Vaccinations Worldwide” (last modified 29 November 2021), online: *CNN* <www.cnn.com/interactive/2021/health/global-covid-vaccinations/> [perma.cc/RUG8-U3L7].

¹¹⁹ *Ibid.*

The Belief that Disease is for the Poor and Racialized

Disproportionate burdens of disease can lead to the false belief that the disease originated in disadvantaged groups. Johnson exemplifies these beliefs by stating that “[p]overty and depravity and low breeding created an environment where disease prospered, as anyone of good social standing would tell you.”¹²⁰ This belief echoes back to the ideas expressed in Theme 2 that the stigmatization of a disease, or as Johnson states “[r]aw social prejudice,”¹²¹ can feed into beliefs of cognitive dissonance.

Those individuals who are not members of the stigmatized group gain a false sense of security.¹²² Johnson explains that “[t]he idea of one’s internal constitution shaping the manifestation of disease was not just useful in affirming social prejudices about the moral depravity of the lower classes,” but helped support misleading theories of disease.¹²³ Supporters of the phrenological and miasma foundations of infectious disease used class and ethnic biases held by the public as evidence to support their theories during the cholera epidemic.¹²⁴

Several government and public health officials report the existence of co-morbidities when listing COVID-19 fatalities. Public listing of co-morbidities can be problematic as groups with underlying health conditions can be stigmatized as a result.¹²⁵ Further, this practice can create misunderstandings in the public about the nature of the disease and who is affected.¹²⁶ Reporting co-morbidities in relation to fatalities can be used as a tactic by groups to minimize an

¹²⁰ Johnson, *supra* note 1 at 21.

¹²¹ *Ibid* at 132.

¹²² *Ibid* at 33.

¹²³ *Ibid* at 133.

¹²⁴ *Ibid* at 132.

¹²⁵ Wallis Snowdon “Alberta’s Reporting of Comorbidities Questioned After Boy, 14, Removed from COVID-19 Death Count”, *CBC News* (last modified 15 October 2021), online: <www.cbc.ca/news/canada/edmonton/covid-comorbidities-alberta-spitzer-1.6212510> [perma.cc/VP48-N5HJ].

¹²⁶ *Ibid*.

illness.¹²⁷ The issues with reporting co-morbidities can further support experiences of cognitive dissonance.

The origins of epidemics and pandemics are often erroneously attributed to those that are impoverished in society and blame the individual rather than their social and environmental conditions. Poverty and disability are not the only stereotypes resorted to in times of an epidemic or pandemic, but groups are often racialized. Several public health officials across the U.S. blamed Italian populations or Indigenous peoples for the spread of influenza in their cities.¹²⁸ In November 2020, Premier Jason Kenney appeared to blame the South Asian community in Alberta for the rapid spread of COVID-19.¹²⁹ Premier Kenney's comments suggested that the community frequently held large family gatherings driving the spread of the disease.¹³⁰ Many groups have argued that these high case numbers are likely due to many members of the community working in service jobs that cannot be done from home.¹³¹

Racialization can lead to violence. In 1918, rumours spread that Germany had started the pandemic as a form of germ warfare during WWI.¹³² This belief led to the arrest, and deaths, of several individuals believed to be German spies in the U.S.¹³³ The COVID-19 pandemic produced a rise in anti-Asian sentiments and bigotry in North America.¹³⁴ A mass shooting at several spas in Georgia in March 2021 is largely believed to be racially motivated as the majority

¹²⁷ *Ibid.*

¹²⁸ Barry, *supra* note 3 at 395.

¹²⁹ Mark Villani "Calgary's South Asian Community Demands Premier Apologize After 'Wake Up Call' Comments", *CTV News* (last modified 30 November 2020), online: <calgary.ctvnews.ca/calgary-s-south-asian-community-demands-premier-apologize-after-wake-up-call-comments-1.5210563> [perma.cc/EX8V-MP2A].

¹³⁰ *Ibid.*

¹³¹ *Ibid.*

¹³² Barry, *supra* note 3 at 344.

¹³³ *Ibid.*

¹³⁴ "The Pandemic Appears to Have Sparked a Rise in Anti-Asian Bigotry", *The Economist* (23 March 2021), online: <www.economist.com/graphic-detail/2021/03/23/the-pandemic-appears-to-have-sparked-a-rise-in-anti-asian-bigotry> [perma.cc/FAW5-VM3V].

of the victims were Asian.¹³⁵ Reports of violent assaults on individuals of Asian descent have also risen since the pandemic began.¹³⁶

Lessons Learned

Appropriate government supports are required to help low-income groups during epidemics and pandemics to minimize disproportionate burdens of disease and address stigmatization. Supports can be financial to improve housing conditions and to ensure access to essential goods. Legislation supporting paid sick days for all workers can help stop the spread of disease as infected workers can stay home when ill without creating additional financial strain. Appropriate health and safety policies in the workplace are also critical. Governments may need to work in tandem with other organizations, such as churches or the Red Cross,¹³⁷ to provide appropriate services to meet the needs of disadvantaged groups. Increased access to healthcare services and treatments, such as vaccines, must be facilitated through government actions.

Not all individuals' circumstances allow adherence to public health measures. When creating and implementing public health restrictions, decision-makers must be cognizant of how the policy will affect those who are systemically disadvantaged. Failure to consider the circumstances of all groups could result in already disadvantaged groups bearing the negative impacts of legislation and policy.

In relation to Theme 1, government and public health officials must clearly challenge and refute any stereotypes that arise. Stigmatization can lead to further harm and violence.

¹³⁵ *Ibid.*

¹³⁶ *Ibid.*

¹³⁷ Defoe, *supra* note 1 at 58-9; *Supra* note 3 at 344.

Governments play a critical role in denouncing such behaviours and negating rumours that stereotype and discriminate against certain groups.

Theme 4: The Role of Religion

The relationship between religion and science produces unique considerations for epidemic or pandemic responses. Both religion and science invoke, and can challenge, ideas of life, death, and suffering. Religious institutions can be powerful allies to governments when both parties work in tandem to respond to an infectious disease crisis. Likewise, when religious institutions are in opposition to government and public health officials, they can undermine public health efforts.

Religion as a Basis for Disease and Survival

Some individuals turn to religion to explain infectious disease. This approach was particularly prevalent in London's non-secular society in 1665. During this time many individuals believed that a higher power brought the Plague and determined survival. These beliefs led many individuals to rely on their faith to get them through the epidemic, rather than choosing to take additional safety precautions. This idea can be understood through Defoe's quote: "[F]rom that Momenet I resolv'd that I would stay in the Town, and casting my self entirely upon the Goodness and Protection of the Almighty, would not seek any other Shelter whatever."¹³⁸

Societies have largely moved away from religious underpinnings for infectious diseases as modern science evolved and secularism increased. The major divergence from these previously held religious beliefs can be seen in the 1918 influenza pandemic.¹³⁹ The influenza

¹³⁸ Defoe, *supra* note 1 at 21.

¹³⁹ Barry, *supra* note 3 at 14.

pandemic represented humanities' first large-scale disease outbreak with the tools of modern-day science at their disposal, including germ theory, established scientific institutions, and the ability to create vaccines.¹⁴⁰ Barry states the influenza pandemic of 1918:

[W]as the first great collision between a natural force and a society that included individuals who refused either to submit to that force or to simply call upon divine intervention to save themselves from it, individuals who instead were determined to confront this force directly, with a developing technology and with their minds.¹⁴¹

The Important Role of Religious Institutions

Despite the rise of modern science, religious institutions can still play a large role in communities. How officials choose to respond to these roles can help or hinder public health efforts.

Supporting Communities Through Disease

Since the Plague epidemic in 1665, religious institutions have been able to support responses to infectious disease outbreaks with personnel and resources. This support can be critical when the need for frontline workers is high, but staffing is low due to burnout and spread of disease. During the influenza pandemic “[t]he archbishop released nuns for service in hospitals [...] and allowed them to violate rules of their orders, to spend overnight away from the convent, to break vows of silence.”¹⁴²

Throughout the history of infectious diseases religious institutions have played large roles in the handling of the bodies of those who passed from the disease. In several circumstances when the rates of disease mortality are high, officials have been unable to keep up with demand for handling bodies. Barry describes this role in the quote: “And as priests had done in the

¹⁴⁰ *Ibid* at 5.

¹⁴¹ *Ibid*.

¹⁴² *Ibid* at 329.

bubonic plague, in 1918, even in Philadelphia, [...] priests would drive horse-drawn wagons down the streets, calling upon those behind doors shut tight in terror to bring out their dead.”¹⁴³

Beyond physical resources, religious institutions can provide an important source of comfort to the public during epidemic and pandemic times. The need for this comfort can draw large crowds as depicted by Defoe, “so it was surprising how it brought them to crowd into the Churches, they inquir’d no more into who they sat near to, or far from [...] they came to the Churches without the least Caution, and crowded together.”¹⁴⁴ The crowding of religious institutions is an important consideration for governments.

Governments during the COVID-19 pandemic implemented gathering restrictions for places of worship.¹⁴⁵ This practice occurred in 1918 across the U.S. to slow the spread of influenza.¹⁴⁶ But the need for a source of comfort during difficult times can lead to violations of such orders. Barry describes one church in California that “met outdoors, a technical violation of the closing order but a response to the congregation’s need for prayer.”¹⁴⁷ Governments need to consider the role religious institutions play within the community when implementing gathering restrictions on places of worship.

¹⁴³ *Ibid* at 5.

¹⁴⁴ Defoe, *supra* note 1 at 150.

¹⁴⁵ See e.g. Government of Alberta, “Gathering Restrictions” (last modified 5 October 2021), online: *COVID-19 Public Health Actions* <[www.alberta.ca/covid-19-public-health-actions.aspx?utm_source=bing&utm_medium=cpc&utm_campaign=2021%20COVID-19%20-%20Search%20-%20All%20Alberta%20-%20Stage%203%20-%20\(July%201%202021\)&utm_term=restrictions%20on%20gatherings&utm_content=COVID%20-%20Sept%2015%20-%20New%20restrictions](http://www.alberta.ca/covid-19-public-health-actions.aspx?utm_source=bing&utm_medium=cpc&utm_campaign=2021%20COVID-19%20-%20Search%20-%20All%20Alberta%20-%20Stage%203%20-%20(July%201%202021)&utm_term=restrictions%20on%20gatherings&utm_content=COVID%20-%20Sept%2015%20-%20New%20restrictions)> [perma.cc/C7PF-KFNM].

¹⁴⁶ Barry, *supra* note 3 at 221, 336.

¹⁴⁷ *Ibid* at Picture 21.

Religious Leaders and Messaging

Religious leaders are well-positioned to provide important insights into their respective communities' needs and behaviours. Leaders may know their communities better than government and public health officials. Defoe describes this positioning in London during the Plague saying, "but Time made it appear, the Church-Wardens knew the Condition of the Parish better then they did" in reference to government officials.¹⁴⁸ Henry Whitehead, a local curate in London during the 1854 cholera epidemic, is a significant example of the impact of religious leaders.

During the cholera epidemic, Whitehead used his intimate knowledge of the affected communities to assist John Snow in proving the Broad Street pump's water to be the source of infection.¹⁴⁹ Johnson states that "Whitehead's local knowledge gave him a crucial edge in this investigation, in that he was uniquely able to track down the hundreds of residents who had fled the neighbourhood," to provide a more fulsome picture of the spread of cholera.¹⁵⁰ Whitehead proved to be a critical ally in the fight against cholera.

Religious leaders can help disseminate and reinforce public health messaging as respected members of society. Ministers read posters and pamphlets from public health officials to their Sunday congregations during the influenza epidemic.¹⁵¹ Pope Francis publicly stated that he received the COVID-19 vaccine and getting the vaccine is a life-saving, ethical obligation.¹⁵² The Pope is vocal about the need to increase access to COVID-19 vaccines for vulnerable

¹⁴⁸ Defoe, *supra* note 1 at 58.

¹⁴⁹ Johnson, *supra* note 2 at 167.

¹⁵⁰ *Ibid* at 173.

¹⁵¹ Barry, *supra* note 3 at 339.

¹⁵² Jason Horowitz "Pope Calls Coronavirus Vaccinations an Ethical Obligation", *The New York Times* (last modified 17 August 2021), online: <www.nytimes.com/2021/01/09/world/europe/pope-coronavirus-vaccinations.html> [perma.cc/YZ6R-3KAT].

populations with limited to no access.¹⁵³ The Mennonite Church Canada stated that they would not seek a religious exemption to the COVID-19 vaccine for their followers.¹⁵⁴ The Church clarified that their faith does not justify exemptions and reiterated the importance of receiving the vaccine.¹⁵⁵ Religious support can help build public trust and complement scientific efforts.

Religious leaders can equally have adverse impacts on public health responses. Several large protests occurred at a church that refused to follow public health restrictions for COVID-19 on places of worship in Alberta.¹⁵⁶ The church had to be closed by public health officials due to violations of restrictions.¹⁵⁷ The Pastor of the church was previously jailed for violations of public health orders.¹⁵⁸ Several churches and related individuals filed lawsuits against the Alberta government claiming public health restrictions violate their constitutional rights.¹⁵⁹

Lessons Learned

Religion may now hold a different role in society than it did in 1665 London, but religious institutions and personnel can still play important roles in epidemic and pandemic outcomes. Support from religious leaders can facilitate adherence to public health measures and increase vaccine uptake. Failure by officials to work and communicate effectively with religious institutions can create conflicts that undermine support and trust.

¹⁵³ *Ibid.*

¹⁵⁴ Dave Baxter “Mennonite Church Says it Won’t Seek Exemptions for COVID-19 Vaccinations”, *The Star* (18 October 2021), online: <www.thestar.com/news/canada/2021/10/18/mennonite-church-says-it-wont-seek-exemptions-for-covid-19-vaccinations.html> [perma.cc/K63M-RLXK].

¹⁵⁵ *Ibid.*

¹⁵⁶ “Hundreds Rally Outside Alberta Church Closed by Health Officials”, *CBC News* (11 April 2021), online: <www.cbc.ca/news/canada/edmonton/rally-gracelife-closed-1.5983436> [perma.cc/P5D9-SSB7].

¹⁵⁷ *Ibid.*

¹⁵⁸ *Ibid.*

¹⁵⁹ Carrie Tait “Alberta Churches File Legal Challenge of COVID-19 Restrictions”, *The Globe and Mail* (last modified 3 February 2021), online: <www.theglobeandmail.com/canada/alberta/article-alberta-churches-file-legal-challenge-of-covid-19-restrictions/> [perma.cc/YQN8-4753].

Religious leaders can be well-placed within communities to provide important insights to guide policy decisions. This placement allows religious institutions to provide support with resources and personnel to help mitigate the effects of disease outbreaks. Religion can provide emotional comfort during trying times. The significance of this comfort should not be ignored by government and public health officials when creating their responses. Governments should view religious institutions as important partners in the fight against infectious disease spread.

Conclusion

The three novels by Defoe, Johnson, and Barry on the Plague epidemic of 1665, the cholera epidemic in 1854, and the 1918 influenza pandemic, respectively, demonstrate commonalities across the three crises. These similarities are still apparent during the ongoing COVID-19 pandemic that began in early 2020. The commonalities that appeared across infectious diseases, time, and place can be condensed into four main themes: government and public health leaders' communication; cognitive dissonance; stigmatization and discrimination; and the role of religion.

Government and public health officials must be able to communicate with the public clearly and honestly to maintain trust and support for public health measures. Communication methods can be influenced by a government's unwillingness to change course of action despite contradictory evidence. If officials fail to communicate, then misinformation can take control of the narrative through rumours. The ability of officials to be able to communicate effectively can be used as a tool to mitigate the issues that arise under the other themes.

Expressions of cognitive dissonance can stem from several sources during a disease outbreak and be held by both individuals and governments. Cognitive dissonance in officials can

determine their ability to respond appropriately to the threat of disease. When constructing policies and laws, officials should consider how individuals will respond based on patterns of human behaviours and ensure their responses are grounded in scientific evidence. Preparing for outbreaks in non-epidemic or pandemic times can help mitigate the effects of cognitive dissonance.

Social and economic structures can produce disproportionate burdens of disease in systemically excluded or disadvantaged populations. The unequal distribution of disease across society can lead to false beliefs that the disease originates in, or only affects, these groups. False beliefs can translate into harmful discrimination and stigmatization that must be addressed by governments in their epidemic or pandemic responses.

Prior to the development of modern science, religion played a dominant role in the explanation and understanding of disease. While religion is utilized less as a plausible theory for disease in modern society, religious institutions and personnel can still play important roles due to their positioning within communities and their resources. Governments should reach out to religious institutions for support and work with institutions to ensure messaging is consistent.

The four themes discussed in this paper create important lessons for law and policy creation that should be considered by government and public health officials in their responses to ongoing and future infectious disease threats. The re-emerging themes across disease outbreaks and time demonstrate that officials possess a tendency to fall into the same patterns that constitute ineffective responses to the crisis at hand. Accounts show that examples of successful responses also exist, such as Australia in 1918 and New Zealand and Norway during the

COVID-19 pandemic.¹⁶⁰ Understanding the history of infectious disease and its implications for the human condition allow future efforts to follow the examples of countries like Australia, New Zealand, and Norway.

¹⁶⁰ Barry, *supra* note 3 at 375-6; Holmøyvik, *supra* note 44; Bremmer, *supra* note 45.

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