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COVID-19 and Specific Vulnerabilities of Indigenous Populations

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Abstract

The ongoing COVID-19 pandemic has exacerbated many resources and laid bare the health disparities of many communities. Indigenous communities have been often overlooked in the analysis despite facing higher rates of health complications, increased risk of insecure housing, and lack of access of medical care when compared to non-Indigenous communities. In order to determine possible protective measures, a cross-country analysis of the governmental response to the pandemic in the United States, Brazil, New Zealand, and Australia was completed. Despite varying levels of success for overall pandemic response effectiveness, Indigenous communities remained at higher risk in all cases. Specific vulnerabilities of Indigenous communities were protected best by actions of the communities themselves, rather than the actions of a state or national government.

The COVID-19 pandemic has presented many new problems for governments to face as well as exacerbated many existing problems within the structures of health and wellness equity within many countries. Of particular concern for heightened risk of COVID-19 illness and complications are the 370 million Indigenous persons living around the world (Power et al. 2020, 2737). Historical and persisting oppression and inequality has led to worse health outcomes for these populations, placing them at a higher risk for COVID-19 difficulties and death. Various governmental responses have not placed sufficient emphasis on the health protection of these Indigenous communities. Although more cohesive and effective governmental public health responses to the pandemic have had significant impacts on protecting a country's general overall population, Indigenous communities still remain disproportionately affected by COVID-19 due to historic marginalization and systemic oppression of these communities.

While some risk factors and effects of oppression remain consistent across countries and Indigenous communities, this paper will examine the pandemic response of four different countries to better explore some of the particular vulnerabilities endured by different Indigenous communities. The first two country case studies will include The United States and Brazil who have both been characterized as having poor governmental responses due to persisting overall high numbers of cases and of deaths per capita. In contrast, Australia and New Zealand are two countries that have received praise for their successful responses to COVID-19 by keeping overall cases numbers and deaths per capita low. Despite the international recognition Australia and New Zealand received, their responses to the COVID-19 pandemic have not adequately protected the specific vulnerabilities of their Indigenous populations. Regardless of the overall effectiveness of a government's response to COVID-19, Indigenous populations have not

received adequate protection and remain at increased risk for disease and death, as well as future complications due to their current lower levels of overall health.

Risk Factors for Indigenous Persons across Countries

As past health crises have shown, Indigenous persons are at higher risk for both becoming infected with disease as well as having more severe illness, including death. Power et al. report that the Māori, who live in New Zealand, were seven times more likely than Europeans to die during the 1918 Spanish Flu pandemic (2020, 2737). During the 2009 H1N1 influenza pandemic, the Māori were 3.5 times more likely to die than Europeans (2737). As shocking as these figures already are, they are believed to be vast underestimates due to poor reporting and under-counting of cases and deaths. During the 2009 H1N1 influenza pandemic, the infection rate of Aboriginals was five times the infection rate of non-Indigenous Australians (2737). In the United States, Alaska Natives and American Indians were four times more likely to die from H1N1 infection than all other ethnicities combined (2737). The historical evidence of vast inequalities during public health crises should have been a clear indicator that Indigenous populations would once again be at risk during the COVID-19 pandemic and additional prevention measures for these communities should have been implemented. Unfortunately, many of these health inequalities stem from larger systemic inequalities that have yet to be adequately addressed by many governments.

One of the largest persisting health detriments that Indigenous communities face is systemic poverty. As a whole, Indigenous peoples are more likely to live in multidimensional poverty, which often includes food and housing insecurity, as well as lower rates of education and functional literacy (Power et al. 2020, 2737-2740). Multidimensional poverty has a significant impact on the health of both individuals and populations. Lower rates of functional

literacy inhibit the comprehension of health information, such as the ability to read and understand guidance on a government public health website. Furthermore, the existing concerns of housing and food security have only been exacerbated during this global public health crisis as jobs are lost and global supply chains are disrupted.

Even prior to the COVID-19 pandemic, some of the most rudimentary preventative health measures were unattainable to some Indigenous persons. In the Navajo Nation in the United States, 40% of households are without water and 30% are without electricity (Power et al. 2020, 2738). The lack of electricity, running water, and soap is also experienced in many Indigenous communities living in Latin America (Ávila and Guereña 2020, 4). Without soap and clean water, taking the basic health measure of handwashing is near impossible. As governments prepared their responses to COVID-19 they left those without rudimentary hygiene systems behind and at significantly increased risk for contracting COVID-19.

Beyond concerns about the prevention of infectious diseases, Indigenous populations often face a higher rate of non-communicable diseases per capita than non-Indigenous populations. Wade explains that "American Indians and Alaska Native have higher rates of obesity, diabetes, asthma, and heart disease than white Americans, as well as higher rates of suicide" (2020). Not only are these populations more likely to experience lifetime illness or struggles with mental health, but the mortality rate for preventable diseases, such as asthma or diabetes, in Native Americans is three to five times higher than that of non-native Americans (Godin 2020). In Australia, 50% of Aboriginal people live with one major chronic disease, like cancer or chronic kidney disease, and 25% of Aboriginals have at least two chronic diseases (Godin 2020). With concern for COVID-19, the presence of even one chronic disease can significantly worsen the impact of the disease, meaning Indigenous populations are more likely

to experience the most severe effects of the disease due to their higher prevalence of existing health conditions.

Not only are Indigenous people more likely to have at least one chronic disease, and die from preventable chronic diseases, but the average age of onset for these illnesses is significantly earlier in life than for non-Indigenous populations. In a study of the Māori, onset of chronic disease is anywhere from ten to twenty years earlier than that of non-indigenous people (McLeod et al. 2020, 254). This is true for Native Americans as well, who are described as having lives that are "challenging and short" (Curtice and Choo 2020, 1753). The persisting structural problems such as healthcare inequality and the compounding effects of generational poverty are placing these populations in a significantly worse position to be able to handle the effects COVID-19 pandemic.

Country-Specific Risk Factors for Indigenous Populations

Native Americans and Alaska Natives in the United States

The United States has led the world in infections of COVID-19 since March 2020 (Taylor 2020). Characterized by a slow and unorganized response, The United States surpassed 400,000 deaths from COVID-19 in late January 2021, less than one year after the first COVID-19 death was reported in the country (Maxouris and Hanna 2020). For the most part, state governments have determined their own policies on lockdowns, mask mandates, and other public health measures with the federal government passing bills for economic stimulus relief and organizing some distribution of medical supplies. Because of this, few specific government protections have been provided for the millions of Indigenous persons living within The United States despite reports of higher infection and mortality rates for Native Americans and Alaska Natives.

Although there is ample data showing a higher proportion of infections and deaths of Indigenous persons in the United States due to COVID-19, the health data is not always reported sufficiently or used appropriately. One report that collected data from only 14 states showed morbidity from COVID-19 can be two times higher for Native Americans or Alaska Natives than white people (Cirruzzo 2020). Another report that used data from only 23 states reported that infection rates can be three and a half times as high for these indigenous populations (Wade 2020). The harsh reality is that these reports are still vast under representations of the health reality in Indigenous communities. Wade continues to critique the data report from 23 states, explaining how the data used still only reported race and ethnicity 70% of the time. Not only does this data represent less than half of U.S. states, but it doesn't even fully represent the diversity of populations in states recorded. The need for appropriate data collection that disaggregates by race and ethnicity will help to provide a clearer picture of the health not only of Indigenous communities but for all different races and ethnicities that are represented in The United States' population.

Unfortunately, the lack of appropriate health data collection for Indigenous groups is nothing new in the United States. The U.S. Census began in 1790 and did not include Native Americans until 1860; only in 1900 did the U.S. Census include Native Americans who were not living on reservations (Wade 2020). The lack of appropriate health data allows for the government to ignore the existing and worsening health plights of the Indigenous communities living within the country. The willful ignorance in excluding these communities from health and policy decisions is very bad and goes to show how terribly impactful the systemic issues are in affecting the health of these Indigenous populations and inflaming the current public health crisis of COVID-19.

The need for data disaggregated by race and ethnicity is needed for a larger scope than just the COVID-19 pandemic. Oftentimes, the collection of race and ethnicity data lumps Native Americans and Alaska Natives into an ambiguous "other" category, such as on hospital intake forms (Wade 2020). Data that is disaggregated down to the tribal level would be supremely beneficial in creating public health decisions for specific Indigenous communities (Goodluck 2020). However, at the beginning of the pandemic, the Centers for Disease Control (CDC) initially refused to share information about testing and confirmed cases with tribal epidemiology centers despite sharing this information with state governments (Wade 2020). Allowing for the sharing of health data would allow tribal leaders to make more informed decisions about the health of their community, as well as allow for more appropriate allocation of health resources to communities who need them. Without the appropriate dissemination of health data, health discrimination can continue against Indigenous communities through lack of access to funding that created a systemic healthcare problem as well as the current COVID-19 crisis.

In April of 2020, the United States Congress passed an economic stimulus bill that included $8 billion in relief to Native American communities (Godin 2020). However, the distribution of this relief money did not come without a fight. The Navajo Nation had to sue the U.S. Treasury in order to access the portion of funds that were allocated to them (Godin 2020). The time lost through having to litigate to get funds meant that the Navajo Nation was unable to purchase essential personal protective equipment (PPE) or other supplies until mid-May, three months after the first confirmed cases of COVID-19 were reported in the United States (Godin 2020). Some of the community's hospitals had no other choice but to temporarily close without access to essential health supplies (Godin 2020). Not only have Indigenous groups been left out of being afforded any particular protections from the government's response, but they are also in

many ways unable to protect themselves without the economic resources that other non-indigenous state and county hospitals were afforded.

In an effort to protect themselves and their communities, many Indigenous groups have taken action independently of the federal or state governments. As of May 2020, the Navajo Nation was the 3rd highest group for per capita infections, only behind the states of New York and New Jersey (Power et al. 2020, 2738). With 4,243 positive cases and 146 deaths as of May 2020, the Navajo Nation imposed their own mask-mandate for their community as well as a stay-at-home order; breaking either one of these could result in a $1,000 fine (2738). In South Dakota, the Cheyenne River Sioux tribe was one of the first communities to set up checkpoints along roads that went through the reservation as well as setting up testing for those living on the reservation (PRNewswire 2020). The efforts of indigenous communities to protect themselves, even when these actions were opposed by state governments, were essential in providing some sense of security to the Indigenous communities at risk for COVID-19 transmission and severe disease due to the virus.

Indigenous Communities in the Amazon River Basin (Brazil)

In contrast with the United States where many of the Indigenous communities have more official ways of connecting with non-indigenous communities such as the interstate-highway system, the Indigenous communities of the Amazon region often live in much more remote communities. Approximately 200 different Indigenous groups are already in voluntary isolation from non-Indigenous communities (Ávila and Guereña 2020, 3). There are over 45 million Indigenous persons living in Latin America, with many of them living in the Trapeze region of the Amazon, where Peru, Colombia, and Brazil’s borders meet (Ávila and Guereña 2020, 3 and

Tisdale 2020). The primary focus of the governmental response of this region will be that of Brazil, since the majority of the Amazon Rainforest lies within their borders.

Brazil's national government's response to COVID-19 can hardly be qualified as a response. President Jair Bolsonaro left local governments to try and implement their own public health responses, which he has actively undermined by participating in anti-lockdown and anti-mask rallies (CBS This Morning 2020). As of January 24, 2021, Brazil trailed behind the United States for total coronavirus deaths by approximately 200,000 and was third in the world for total number of COVID-19 cases, with 8,844,577 (Johns Hopkins University). The concern for the Indigenous communities of the Amazon region is not only that of individual health and survival, but survival of entire cultures. Of the 800 different Indigenous groups in Latin American, 500 groups were already at risk of disappearing due to low population numbers prior to the COVID-19 pandemic (Ávila and Guereña 2020, 3). Due to the relative isolation of these communities, any disease that comes from outside of the Indigenous community poses a high threat due to lower levels of immune response (3). Existential threats such as the COVID-19 pandemic threaten to destroy the knowledge about traditional medicine, cultural history, and forest protection, as well as the elder leadership of Indigenous communities in the Amazon region.

While it may seem that the relative isolation of these communities may serve as a protecting factor, it is also a severe detriment in the case that medical care is needed. Not only must the Indigenous individuals surmount language differences, which also act as barriers to accessing health information about COVID-19, but there are few medical facilities available in the Trapeze region of the Amazon. Tisdale reports that despite there being over 6,000 confirmed cases of COVID-19 as of May 2020, there are no ICU beds and only two ventilators in this region of the Amazon (2020). Even if a community member were to be able to surpass these

obstacles in seeking medical care, they very well might be refused healthcare treatment as they do not have any documentation (Ávila & Guereña 2020, 4). This is terrifying news, especially as Brazil already reports that the mortality rate for Indigenous persons is twice that of non-Indigenous persons (Tisdale 2020).

For the few regions in Brazil that have implemented some lockdowns in an attempt to slow the spread of COVID-19, the effect has been disproportionately negative in impacting the lives of Indigenous communities. Many Indigenous peoples live on the outskirts of larger towns where they work in informal sectors of the economy (Ávila & Guereña 2020, 4-5). Because of the pandemic, many of the jobs that would traditionally be done by Indigenous persons are simply not available. Losing a job is devastating for many, and especially so for those who are already more likely to be living in poverty and experiencing housing and food insecurity.

Additionally, the ever-changing patchworks of lockdown in Brazil has prevented environmental activists and Indigenous leaders from being allowed to travel between communities while still allowing miners and loggers to continue to travel and work near Indigenous communities (Tisdale 2020). Without the ability of activists or Indigenous leaders to travel, miners or loggers that illegally encroach on Indigenous lands are not reported to the appropriate authorities (Tisdale 2020). Not only is the encroachment onto Indigenous lands a violation of their territorial rights, it is also a very likely mode of COVID-19 transmission into the Indigenous communities. Furthermore, the continual logging and mining of the Amazon Rainforest draws attention to the larger concern of environmental degradation. For the Indigenous communities living in the Amazon, the health of the environment is directly tied to their well-being as they rely on the land to survive (Tisdale 2020).

While many countries have found varying degrees of success in implementing lockdowns to slow the spread of COVID-19 the effects of lockdowns have been disproportionately affecting the Indigenous communities. The lockdowns have prevented the ability to get medical attention, report illegal activity, and monitor the health and safety of communities. In order to better protect Indigenous communities, a more nuanced public health guidance that still allowed for travel for medical treatment and legal enforcement should have been implemented. The lack of attention paid to the Indigenous communities and their health and wellbeing for today and their future survival is shocking. However, the lack of attention paid to the Indigenous communities by the Brazilian government is not news. Environmental activists have long been silenced by companies wishing to exploit the resources of the Amazon and President Bolsonaro's economics-first view of governing, even pre-pandemic, has loosened environmental restrictions and embolden these companies to act in such aggressive ways of trespassing onto Indigenous lands.

Māori of New Zealand

New Zealand received much international praise for their quick action and ability to completely curb the community-transmission of COVID-19 through a strict lockdown that kept COVID-19 deaths to only five per one million (Worldometer 2020). While the ability to stop the virus from sweeping through the general population is important for protecting the health of everyone living in New Zealand, there is little evidence to show specific protections for the Māori. Without specific protections that took into account the impacts of a lockdown and quarantine measures as well as the present health status of the Māori, New Zealand failed to protect the specific vulnerabilities of the Māori population.

One of the first concerns for the Māori is the ability to self-isolate in their homes if they were to come into close contact with someone who had tested positive for COVID-19. One in five Māori live in a crowded household, which is also oftentimes multi-generational (McLeod et al. 2020, 253). Living in a crowded household has already shown increased rates of transmission for other diseases such as influenza, meningococcal disease, and tuberculosis (253). With many Māori also living in multi-generational households, the concern is that one member becoming infected with COVID-19 will mean an increased likelihood of transmission to other family members. New Zealand's public health advice was not a reasonable solution for many Māori, and they were not provided with an appropriate option to help them prevent the spread, such as quarantine hotels, as was seen in other countries such as China.

Furthermore, there is little evidence that the New Zealand government took into account the particular health concerns of comorbidities of the Māori in their public health response to COVID-19. As previously mentioned, chronic disease can appear ten to twenty years earlier in the Māori than in non-Indigenous populations. Additionally, the Māori tend to have multiple comorbidities, such as cardiovascular disease, cancer, pulmonary disease, renal problems, or endocrine disease (McLeod et al. 2020, 253). The overall effect of multiple comorbidities on COVID-19 is still relatively unknown, they could have an additive effect, making the disease worse, or a duplicative effect, substantially worsening the effects and outcomes of COVID-19 for the Māori (253). It is extremely important to recognize the populations that are at heightened risk for COVID-19 and work to offer specific protections, as well as work to study the effects, as the COVID-19 pandemic is ongoing and still poses a threat to the global population.

As is the case in the United States and Brazil, there are many reported existing inequalities within the current healthcare system of New Zealand for the Māori. Prior to the

COVID-19 pandemic, members of the Māori community reported higher rates of hospitalization for conditions that were avoidable either through prevention efforts or lack of previous appropriate healthcare as well as higher rates of unmet healthcare needs (McLeod et al. 2020, 254). Increased access to healthcare, as well as earlier access to healthcare could help treat and improve the health status of many members of the Māori. An overall improvement in health, such as controlling and preventing chronic diseases can help the Indigenous community be better protected from the effects of infectious diseases, such as COVID-19. There are also problems of both implicit and explicit bias against the Māori when searching for and receiving medical treatment (255). This problem would only worsen if healthcare professionals were put into a situation wherein supplies were limited, and the health system was under major stress. While the government of New Zealand was able to control the COVID-19 pandemic, there are still many remaining concerns for the health outcomes of the Māori population, and more effort is needed to eliminate the systemic problems of unequal healthcare access that remain.

While the overall governmental response to COVID-19 was very effective in keeping overall case numbers and death rates low in New Zealand, it did little to address the structural and systemic problems that remain detrimental to the health and wellbeing of the Māori. In moving forward in improving the healthcare system, more attention must be paid to the multi-faceted problems of poverty and poor health that affect many of the Māori, so that they can be better protected from all infectious diseases, not just COVID-19.

Aboriginal and Torres Strait Islanders in Australia

Similar to New Zealand, Australia was also able to mount a governmental response that has kept their overall case numbers and mortality rates low. The Australian government also implemented a strict lockdown for citizens as well as provided access to testing and imposed a

14-day quarantine for any travelers to prevent the spread of COVID-19 (Mercer 2020). While questions about the health and well-being of all citizens in a lockdown were raised, with particular concern domestic violence, little in the terms of specific protections were extended to the Aboriginal and Torres Strait Islanders that make up Australia's Indigenous population. Measures that served to specifically protect the Indigenous populations of Australia were mounted by the Indigenous communities themselves with little evidence of governmental aid.

The first challenge begins with the fact that many Aboriginal people live in remote areas of Australia, making access to resources, particularly food, a challenge. Prior to the COVID-19 pandemic, one in three Aboriginal people had reported running out of food and being unable to purchase more (Power et al. 2020, 2738). Because of the remote locations of many of their communities, many Aboriginal communities only have one grocery store nearby, where prices for commodities such as food can cost up to 60% more (2738). Prior to the pandemic, many community members would travel to more populated areas where food prices would be lower. However once lockdown measures were put into place, they were unable to travel to locations where food was more affordable, throwing their ability to feed themselves and their families into danger.

There is also significant concern for the mental health and possible traumatic response that could have occurred because of the government lockdown. From the 1890s to the 1970s, Aboriginal persons or Torres Strait Islanders were forced to leave their communities and live on missions where they could not participate in any part of their cultural identity, such as speaking their native languages. Those forced to live on the missions were not allowed to leave; the fear is that the government-mandated lockdown could have triggered memories of the oppression of missions for many of the older Aboriginal and Torres Strait Islander community members

(Power et al. 2020, 2738). The lockdown also prevented Indigenous communities from participating in other cultural traditions, such as Sorry Business which involves traveling between communities to go to funerals and grieve for lost lives (2739). This is another way in which the traumatic memories of the missions could have been brought up, as well as the mental and emotional effect of not being able to participate in traditional coping methods.

Furthermore, crowded housing is another common issue for the Indigenous communities in Australia. Aboriginal and Torres Strait Islanders are sixteen times more likely to live in a crowded household than non-Indigenous Australians (Godin 2020). In order to help protect older community members, younger members would camp out in the bush to ensure they were not bringing home the virus (Godin 2020). All these are important actions by the Indigenous communities to help protect themselves when the Australian government fell short in providing specific protections for their specific vulnerabilities.

The lockdowns and food insecurity also prompt concern for the safety of Aboriginal and Torres Strait Islander women. As the primary providers of food, the previously described stress of finding affordable food options for Indigenous women can have serious consequences (United Nations). Not only may family members go hungry, but Aboriginal women are thirty-two times more likely to be hospitalized due to family violence than non-Aboriginal (Power et al. 2020, 2738). Further complications of the pandemic ensue, as women may not be able to leave their homes to try and access help due to lockdown measures.

Despite the lack of governmental aid in supporting and protecting Aboriginal and Torres Strait Islander populations, Indigenous communities in Australia were able to mount their own public health responses and provide means of social protection to their at-risk populations. Many Aboriginal-led health services provided health information in Indigenous languages to ensure

better access to information (Godin 2020). Leaders of Indigenous communities also moved to quietly close their borders before the government announced any border closures in order to prevent any cases from arriving within their communities (Godin 2020). As of July 2020, the entire country of Australia had reported around 10,000 COVID-19 cases; Aboriginal communities only reported sixty cases, none of which required hospitalization or resulted in death (Keck 2020). The use of consistent public messaging through social media using Indigenous athletes as well as Aboriginal radio stations allowed for the dissemination of culturally sensitive information to the Aboriginal communities (Keck 2020). So far, this strategy has proved to be massively effective in providing understandable public health information to the targeted audience and has helped to prevent any significant spread within the community.

Future Impacts on Indigenous Communities

While vaccination campaigns have commenced in a number of countries around the world, the COVID-19 pandemic is far from being over. The effect of systemic oppression and mistreatment of Indigenous populations must be addressed by global governments, not just to protect from future infectious disease, but to vastly improve the quality of life for millions. The COVID-19 pandemic will have long-lasting impacts on Indigenous communities. In order to help support Indigenous communities going forward, governments should seek to fund Indigenous healthcare as well as disability programs, addiction, prison health, housing and homelessness, and family violence as well as mental health; all thing that are likely to have been impacted greatly by the pandemic (McLeod et al. 2020, 255).

There is also much concern for the loss of community elders due to the pandemic. With them, communities can lose access to their histories, traditions, language, cultural identity, as well as the pain that comes with losing a community member. Governments must seek to support

the remaining communities through health as well as supporting their traditional ways of life in order to avoid losing important cultural aspects such as languages, traditions, and knowledge of land conservation and history.

Conclusion

The COVID-19 global pandemic has only served to highlight the existing structural inequalities and barriers that Indigenous communities face today. Healthcare access, education, and rights to territory are all essential to the survival of Indigenous communities and the continuation of entire cultures. Governments must act now in areas where the pandemic is still raging to boost hospital capacity, distribute culturally appropriate and language-specific information as well as provide essential supplies. These acts must continue beyond the immediate threat of the COVID-19 pandemic and extend into funding schooling and continuation of accessible health care, food, and education.

While the cultural aspects of each group of Indigenous people are unique, they are all tied through their history of colonization, mistreatment, and systematic oppression. There are numerous factors that place Indigenous populations at high-risk for disease and death than non-Indigenous populations. Governments must act in ways that will support the needs of these communities to help build them stronger and preserve their cultural identities while also supporting their health and well-being. In order to better protect these communities in the next public health crisis, healthcare infrastructure and access needs to be improved as well as access to basic resources such as affordable food and education. Governments must actively work against the institutional structures of racism against Indigenous communities in order to decrease their specific vulnerabilities to public health crises.

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