



Alaska State Library – Historical Collections

Indigenous Peoples & Pandemics Conference and Workshop

Preliminary program

May 13, 15-16, 2023

Centre for Advanced Study

at The Norwegian Academy of Science and Letters

Oslo, Norway



**Centre for
Advanced Study**
Senter for grunnforskning

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Welcome!

Welcome to the Indigenous Peoples & Pandemics Conference and Pre-meeting Workshop held at the Norwegian Academy of Science and Letters in Oslo, Norway. The events have been organized by participants in the project *Social Science Meets Biology: Indigenous People and Severe Influenza Outcomes*, a 2022-23 program supported by and held at the Centre for Advanced Study (CAS). CAS is a research foundation associated with The Norwegian Academy of Science and Letters.

The sponsoring project was conceived of and chosen to be part of this year's CAS programs *before* the COVID-19 pandemic arrived on the scene and, largely due to that pandemic, it quickly expanded from a focus on influenza to more general examinations of the impacts of any infectious disease pandemics on indigenous peoples. Not surprisingly, COVID-19 has become a secondary focus. Fellows and short-term visitors associated with the project have come from Norway, the United States, New Zealand, Mexico, Australia, Canada, and Sweden.

This conference is the highlight of our 10½-month program and we think you will find much of interest. In addition to the countries represented by our Fellows and short-term visitors, we have speakers and participants from Portugal, Peru, South Africa, Denmark, Nigeria, Nepal, and India, almost half of whom are members of indigenous groups. Our keynote talk will be given by Dr. Malcolm King, Professor of Community Health and Epidemiology at the University of Saskatchewan in Canada and member of the Mississaugas of the Credit First Nation in Canada.

The talks you will hear have been divided into seven basic themes: infectious diseases in historical indigenous peoples, issues faced by indigenous students during the COVID-19 pandemic, communicating about health, the consequences of and responses to pandemics in indigenous communities, drivers of health inequalities affecting indigenous groups, healthcare implications for indigenous communities, and strategies to reduce inequitable services.

We are also holding a pre-meeting workshop intended to allow indigenous peoples from all over the world to discuss issues they have faced in their home cultures and to share ideas with others about modifying the negative impacts of present and past pandemics in their communities. This workshop will be followed up with a panel discussion at the end of the meeting at which all participants can contribute their thoughts and suggestions.

We wish you all an enjoyable and stimulating time here in Oslo!

The Indigenous Peoples & Pandemics organizing team: Svenn-Erik Mamelund, Lisa Sattenspiel, The "Social Science Meets Biology" Advisory Board (Peter Sköld, Per Axelson, Ann Ragnhild Broderstad, Christina Storm Mienna, Marama Muru-Lanning, Torunn Pettersen)

The wonderful staff at the Center for Advanced Study, especially Camilla Kottum Elmar, Kristin Løyning Reyes, and Rune Flaten

Conference Venue

The conference and pre-meeting workshop will both take place at the Norwegian Academy of Science and Letters, Drammensveien 78, 0271 Oslo, Norway. The building (pictured below) was built in 1871 and was once the private home of a wealthy Oslo resident and his family, but has been used by the Academy since 1911. The conference will be held in a modern lecture hall, The Kavli Hall, on the first floor; the dinner and concert will occur in historic parts of the house adjacent to the lecture hall. The pre-meeting workshop will be held in the Turret Room on the top floor. This room was the children's playroom in the original house (but looks more like an old library than a playroom).



Registration

Attendees participating in the pre-meeting workshop will meet in the Turret Room at 9:30 AM on Saturday, 13 May 2023. Directions for getting there are provided below. Please enter the building at the front and take the elevator in the small entry to the right up to the top floor.

Registration for the meeting itself will occur outside the lecture hall on the first floor of the Academy. Please register between 9 and 9:30 on 15 May. For our convenience, please wear your name tag throughout the meeting.

Wi-fi

Wi-fi will be available in the conference venues. Details will be provided at the pre-meeting workshop and during registration for the conference.

Contact Information

E-mail: Svenn-Erik Mamelund (masv@oslomet.no), Lisa Sattenspiel (sattenspiel@missouri.edu)

Web page: <https://cas-nor.no/events/indigenous-peoples-pandemics-conference>

Getting to the conference and pre-meeting workshop

If you are flying into Oslo, please use the train to get from the airport to Oslo center. Two options are available: an express train (the Flytoget) and a regional train (see <https://www.visitoslo.com/en/transport/transport-airport/oslo-gardermoen/> for more information). The most convenient stop if you are staying at Gabelshus or Frogner House Apartments is Nasjonalteateret (National Theater); the Oslo central station stop (Oslo S) will also take you to the city's center. From either stop you can use the Oslo public transportation company, Ruter. Tram 13 can be picked up near both train stations and will get you close to either Gabelshus or most Frogner House apartments. Tickets cannot be bought on buses or trams, but you can buy them in many locations. You must have a valid ticket *before* getting on the transports; they are usually valid for 1 hour after buying. See the Ruter website, <https://ruter.no>, for more information.

Please do not use taxis or the airport transport suggested by Frogner House – these are very expensive options.

All activities associated with the conference will occur at the Academy of Science and Letters, Drammensveien 78. Both Gabelshus and the Frogner House Apartments are within easy walking distance; Tram 13 can also be taken to the Skarpsno stop, which is very close to the Academy.

Instructions for presenters

Each presenter has 15 minutes dedicated in total, so **you should plan to speak for 12 minutes**. This will leave a few minutes for questions and discussion.

Bring your presentation on a USB stick to the front of Kavli Hall before your session starts. This can be done during coffee or lunch breaks. A projector and PC will be available in the lecture hall.

The Pre-meeting Workshop

We have designed the pre-meeting workshop for the purpose of fostering communication and building networks among indigenous participants in the conference, who have been drawn from countries and ethnic groups all over the world. The workshop will be held from 9:30 AM to 3 PM on Saturday, 13 May. The morning session is intended to provide an *informal* (no slides) opportunity for all participants to provide an introduction to who they are and health-related issues that they think are especially important in their home culture. Following a buffet lunch, the afternoon session will focus on discussion of potential strategies and policies that might

help to address the issues brought up in the morning session. Insights from this workshop will be discussed further among all meeting participants in the panel discussion, “Moving from pandemic science to policy”, to be held at the end of the meeting.

Social Events

Concert and Conference Dinner

The conference dinner will take place in a room near the Kavli Lecture Hall at the Norwegian Academy of Science and Letters on Monday, 15 May beginning at 17:00.

Prior to the dinner, from 16:00 to 17:00, we will be treated to a concert by the Karl Seglem band. Karl Seglem is an acclaimed Norwegian jazz star and has created his own identity, fusing the sound of his tenor sax and goat horns with the Norwegian Hardanger fiddle. Inspired by life and nature in the north he creates new journeys, painting with sounds.



Conference Schedule

Monday, 15 May

Abstracts are available below the conference schedule. Presenters indicated in bold-face.

9:00-9:30 Registration. 1st Floor, Norwegian Academy of Science and Letters

9:30-9:45 Welcome – Svenn-Erik Mamelund. Kavli Hall

9:45-10:45 Keynote lecture (**Dr. Malcolm King**), “Indigenous peoples and pandemics: Historical and current perspectives from Turtle Island”. Kavli Hall

10:45-11:00 Break

11:00-11:45 Contributed Session I – Infectious disease epidemics in historical indigenous groups I, Kavli Hall

11:00-11:15 ‘An apocalyptic angel’: Shifting patterns of endless disease and death in the Sault Ste. Marie borderlands, 1783-1883 – **Karl S Hele**

11:15-11:30 Influenza in Greenland, 1914-1921: untold stories and diverging patterns -- **Mathias Mølbaek Ingholt**, Lone Simonsen, and Maarten van Wijhe

11:30-11:45 Age-specific mortality as a result of isolation in the 1918-20 influenza pandemic: The ‘Spanish’ flu in Kautokeino and Karasjok, Norway – Ingrid Hellem Nygard, Hilde Leikny Sommerseth, Gerardo Chowell, Sushma Dahal, and **Svann-Erik Mamelund**)

11:45-13:15 Lunch. Dining room, 1st floor, Norwegian Academy of Science and Letters

13:15-14:00 Contributed Session II – Infectious disease epidemics in historical indigenous groups II, Kavli Hall

13:15-13:30 Social distancing in the age of assimilation: The influenza of 1918-1920 in Indian Country – **Mikaëla M Adams**

13:30-13:45 The 1918 influenza pandemic among indigenous groups in Alaska: Preliminary results – **Amanda Wissler** and Lisa Sattenspiel

13:45-14:00 A demographic comparison of deaths by indigenous status during the 1918 influenza pandemic in Alaska – **Emma Tinker-Fortel** and Lisa Sattenspiel

14:00-14:15 Break

14:15-15:00 Contributed Session III – Student characteristics during the COVID-19 pandemic, Kavli Hall

14:15-14:30 Investigating attitudes and behaviors of university students towards the COVID-19 pandemic in a predominantly Indigenous population in Mexico: A survey study – **Elienai Joaquin Damas**, Sushma Dahal, Ana Gloria Rivera Aguilar, Juana Garcia Morales, Lisa Sattenspiel, Svann-Erik Mamelund, and Gerardo Chowell

14:30-14:45 Intercultural universities in Mexico and COVID-19: Learning at a distance and from below – Guillermo López Verela and **Maria Manzano-Munguía**

14:45-15:00 Returning to school during *Dikos Ntsaaigii* (COVID-19): Effects of the pandemic on Diné (Navajo) student learning and mental health – **Joshua Allison-Burbank**

15:00-15:15 Break

15:15-16:00 Contributed Session IV – Communication about health interventions and education, Kavli Hall

15:15-15:30 Global perspectives of Indigenous wellness, and Wabanaki narratives of community-teachings during COVID-19 pandemic – **Juan C Rodriguez**

- 15:30-15:45 Indigenous knowledge to curb COVID-19 in India: Collective participation and cultural transmission through social media – **Nandini Tank**
- 15:45-16:00 Theatre-for-Development as additional information panacea on rural dwellers in Nigeria during a pandemic: Lessons from COVID-19 – Charles Okwuowulu, Ameh Dennis Akoh, **Osakue Stevenson Omoera**, Casmir Onyemuchara, Charles Emokpae, Christopher Akpa, and Michael Chinda

16:00-17:00 Concert, Karl Seglem Band, 1st floor Norwegian Academy of Science and Letters

17:00 – Conference Dinner, Dining Room, 1st floor Norwegian Academy of Science and Letters

Tuesday, 16 May

Abstracts are available below the conference schedule.

9:00-9:15 Arrive

9:15-10:00 Contributed Session V – Consequences of and responses to pandemics in indigenous communities, Kavli Hall

9:15-9:30 Impact of COVID-19 pandemic on livestock smallholders among indigenous farmers in Northern Kwa-Zulu Natal Province of South Africa – **Olusegun O Ikusika**, Conference T Mpendulo, Sabelo C Gajana, and Fabian N Fon

9:30-9:45 COVID-19 and climate change resilience among Shawi and Ashaninka Indigenous communities in Peru – **Victoria Chicmana-Zapata**, Carol Zavaleta-Cortijo, Ceci Anza-Ramirez, Ingrid Arotoma-Rojas

9:45-10:00 COVID-19 vaccine hesitancy in Indigenous peoples: a case study from Peru – **Ingrid Arotoma-Rojas**, Carol Zavaleta-Cortijo, Victoria Chicmana, Cecilia Anza-Ramirez, and The Covid Observatories Team

10:00-10:15 Break

10:15-11:00 Contributed Session VI – Drivers of health inequities, Kavli Hall

10:15-10:30 BMI as a risk factor for severe outcomes during the 1918 influenza pandemic – **Lauren E Steele**, Conor J Bloxham, Katina D Hulme, Eliesandra C Noye, Kyle Macauslane, Georgina McCallum, Melanie Wu, Agnes Carolin, Margarida Pereira, and Kirsty R Short

10:30-10:45 Ethnic health inequities have persisted across a century of pandemics in Aotearoa New Zealand – **Michael Baker**

10:45-11:00 Characterizing the COVID-19 diagnosis and deaths by indigenous status among hospitalized cases in Chile, 2020 – Sushma Dahal, Iris Delgado, Lisa Sattenspiel, Svenn-Erik Mamelund, and **Gerardo Chowell**

11:00-11:15 Break

11:15-12:00 Contributed Session VII – Healthcare implications for indigenous communities, Kavli Hall

11:15-11:30 How we work with Indigenous communities: Lessons from the *Qanuinnngitsiarutiksait* and the *Fisher River Traditional Gathering* studies – Josée G Lavoie and **Halle Cochrane**

11:30-11:45 Responses to COVID-19 in Indigenous Canada: Learning from the experiences – **Alexandra King** and Malcolm King

11:45-12:00 Justice implications of government responses on health and food security for Indigenous peoples during the COVID-19 outbreak in Peru – **Victoria Chicmana-Zapata** and Ingrid Arotoma-Rojas

12:00-13:30 Lunch. Dining room, 1st floor, Norwegian Academy of Science and Letters

13:30-14:15 Contributed Session VIII – lessening inequitable services, Kavli Hall

13:30-13:45 Vulnerable Whanau in rural communities: Living through COVID-19 – **Keri Ropiha**

13:45-14:00 The political determinants of health: Indigenous peoples, Canada, and the pandemic – **Jeremy Patzer** and Kiera Ladner

14:00-14:15 Cross-jurisdictional pandemic management: Providers speaking on the experience of Nunavut Inuit accessing services in Manitoba during the COVID-19 pandemic – **Josée G Lavoie**, Wayne Clark, Leah McDonnell, Judy Clark, Grace Clark, Tagaak Evaluardjuk-Palmer, Arvardluk Kusugak, Nuqallaq Brown, and Marti Ford

14:15-14:30 Break

14:30-16:00 Panel discussion “Moving from pandemic science to policy” (leaders to be decided), Kavli Hall

After the panel – Wrap-up

Abstracts

Contributed Session I

‘An Apocalyptic Angel’: Shifting Patterns of Endless Disease and Death in the Sault Ste.

Marie Borderlands, 1783-1883

Karl S. Hele

Anishinaabe, Member of Garden River First Nation, Mount Allison University, Sackville, NB, Canada

Divided by the St. Mary’s River and an international border, the Sault Ste. Marie borderlands have served as the transit point between Lakes Huron and Superior for centuries for Indigenous and Non-Indigenous peoples. As a result, from 1783 to 1883 the peoples living and travelling in the Sault Ste. Marie borderlands regularly experienced illness, disease, and death annually. While the severity and timing of outbreaks remained seasonally based, many were connected to national and international epidemics. Diseases were introduced during the summer shipping season, ran their course over fall and winter, then abated by spring. The cycle restarted with the opening of the new navigation season. As a result, people’s experience annual experiences with disease was akin to a long running epidemic.

My paper will identify the diseases present while discussing the effects of shifting patterns of disease on Indigenous peoples, as well as its impacts on events such as treaty payments, negotiations, and proselytisation. The paper is entirely based on archival sources from Canada and the United States, such as Indian Department, military, fur trade, and missionary records which enables identification of known and unknown diseases from 1783 to 1883 as well as indicating shifting patterns post-1850s.

This study is important for its identification of the multiple diseases and their effects on the peoples within the Sault Ste. Marie borderlands from c.1783-1883. It will also show that the creation of reserves and the development of civilization policies increasingly shifted disease types from epidemic (i.e. Cholera) to endemic (i.e. Tuberculosis) forms of illness tied to poverty, inadequate housing, and food. Finally, the paper will serve as a preliminary study for disease, illness, and epidemics among Indigenous people in the Upper Lakes in terms of transmission

pathways, outcomes, and overall health prior to and during the early Indian policies of Canada and the United States. It will also argue for broader understanding of 'epidemic' to account for the effects of un-abating disease outbreaks over multiple years on Indigenous peoples

Influenza in Greenland, 1914-1921: untold stories and diverging patterns

Mathias Mølbak Ingholt¹, Lone Simonsen¹, Maarten van Wijhe¹

¹PandemiX Center, Roskilde University, Denmark

Introduction: Mounting evidence has shown that mortality was high among the indigenous populations worldwide during the 1918-21 influenza pandemic. This has been documented in multiple North Atlantic settings, but little is known for Greenland.

Methods: We obtained data on mortality from parish registers preserved by the Greenlandic National Archives. These contained individual deaths records including specification of the cause of death. In addition to causes such as diphtheria, polio and tuberculosis, influenza and "Spanish flu" are listed as causes. For the period 1914-1921, we digitized the registers for 14 parishes. Crude death rates were calculated using censuses of 1911 and 1921. We also investigated patterns of travel to Greenland and connectivity between the parishes.

Results: During the study period 1914-1921, a total of 3426 deaths were recorded in the 14 select parishes. Influenza epidemics took place in 1916, 1919, 1920 and 1921, but not in 1918. The epidemics typically occurred between May and August. The epidemics between 1919 and 1921 can be considered pandemic waves due to mentions of "Spanish flu" in the parish registers. The pandemic hit parishes at different times, and mortality was high in all age groups.

Discussion & conclusion: During the study period, travel to Greenland began during the late summer, when the ice surrounding the fjords broke up. The arrival of ships brought the pandemic with it, explaining the summer seasonality of influenza. The introduction of influenza was delayed by a year relative to Copenhagen where a 1st wave peaked in July 1918. With small populations and limited connectivity by land and sea, influenza epidemics were rare in Greenland. This likely led to a lack of build-up of influenza immunity, which explains why all age groups were affected, and not just young adults as was the case in Copenhagen and worldwide.

Age-specific mortality as a result of isolation in the 1918-20 pandemic: The 'Spanish' flu in Kautokeino and Karasjok, Norway.

Ingrid Hellem Nygard, Hilde Leikny Sommerseth, Gerardo Chowell, Sushma Dahal and Svenn-Erik Mamelund

Background: The 1918-20 pandemic influenza is estimated to have killed between 50 and 100 million people worldwide. Previous research has shown that mortality varied between ethnic groups and geographical areas. In Norway, areas dominated by Sami people experienced 3-5 times higher mortality than the average of the country. We have for the first time analysed individual-level all-cause mortality data 1918-20 to calculate excess mortality by age and wave for two core areas of the Norwegian Sapmi, the parishes of Kautokeino and Karasjok. The age distribution of mortality has been examined based on

a hypothesis that relative isolation and less previous exposure to seasonal influenza has resulted in higher mortality and a different age distribution of mortality than that typical of Spanish flu in non-isolated majority populations.

Data and methods: Censuses and burial registers from church books are used to analyse time-series of monthly all-cause excess mortality 1910-1921 and excess mortality by age and wave of the 'Spanish' flu pandemic in 1918-20.

Results: An age-specific mortality pattern has been observed that differs from what is found in non-isolated populations with more mobility. The young adults (20-49 years) had the highest excess mortality, followed by also high excess mortality among elderly above the age of 50 and those under 19 years of age.

Conclusion: It was not the young adults alone who produced the high excess mortality in Kautokeino and Karasjok. We hypothesized that a high degree of isolation, less exposure and thus prior immunity caused a higher mortality among the elderly in both the first and second wave, and among those under 19 years of age in the first wave. A distinct and previously unrecognized outbreak of the pandemic in Karasjok in 1920 is also documented.

Contributed Session II

"Social Distancing in the Age of Assimilation: The Influenza of 1918-1920 in Indian Country."

Mikaëla M. Adams

University of Mississippi

Background and Aims: The influenza pandemic of 1918-1920 struck the United States during the age of assimilation, a time when the federal government endeavored to solve the country's so-called "Indian problem" by destroying tribal governments, allotting tribal land, and reeducating Indigenous children in boarding schools. Tribal communities were still reeling from these changes when a virulent new strain of influenza arrived. This paper investigates how federal agents responded to the threat of influenza by implementing social distancing protocols in Indian Country. It also explores how Indigenous peoples responded to these policies.

Methods: To tell this story, I make use of Indian Office records, including agency reports and correspondence, found in the National Archives in Washington, D.C. I complement these official records with oral histories conducted with Indigenous people in the 1930s and 1940s.

Findings: Installing quarantines, banning gatherings, and limiting contacts were some of the most effective tools available to combat influenza. Federal agents often implemented these protocols, however, with the ulterior motive of disrupting Indigenous cultural practices. Native Americans were thus suspicious of such efforts, especially after they witnessed inconsistencies in federal policies: although officials banned Indigenous cultural practices, they kept assimilationist boarding schools open, which led to the death of hundreds of Native children. The cultural chauvinism of federal agents spurred Indigenous resistance, which made this already at-risk population even more vulnerable to influenza.

Conclusions and Implications: The story of social distancing in Indian Country highlights the importance of consistent policies during moments of crisis. If people lack confidence in their leaders, they are less likely to implement social distancing measures. Cultural sensitivity is also essential. Only by respecting people's backgrounds, taking into account their concerns, and working together to find common understandings, can we hope to mitigate the ravages of deadly pandemics like influenza or COVID-19.

The 1918 influenza pandemic among Indigenous groups in Alaska: Preliminary results

Amanda Wissler, Lisa Sattenspiel

University of South Carolina, University of Missouri

Background & Aims: Indigenous people worldwide often experience high rates of pandemic morbidity and mortality. During the 1918 influenza pandemic, some Native villages in Alaska suffered up to 90% mortality and indigenous persons comprised nearly 80% of influenza deaths during the pandemic. Reasons for this high mortality are likely to be a combination of numerous factors, including lack of exposure to prior pathogens, types of social interactions, and access to medical resources. Additional inquiry is needed to fully understand how different factors intersected to shape Indigenous mortality. Here we present preliminary results of an interdisciplinary study to explore indigenous outcomes.

Methods: Data on age, sex, indigeneity, date of death, cause of death, and place of death were collected from over 7,000 death certificates from Alaska dating from 1915-1921. The territory was divided into regions at both the precinct level and at broader levels that correlated with predominant Indigenous groups. Daily numbers of deaths throughout the territory and in different regions were used to provide a timeline of the pandemic. Levels of mortality were mapped to illustrate the relative impact of the pandemic in different regions of the territory.

Findings: Results focus on the broad picture of the pandemic throughout the Alaska territory. The pandemic occurred in three waves: a severe wave that peaked in November 1918 and affected large parts of the territory, a small wave in 1919 that affected the Bristol Bay region, and another small wave in 1920 that had its greatest impact in interior regions near Fairbanks. Other results include an analysis of the broad patterns of geographic spread of the virus, and the age-at-death distribution of the pandemic.

Conclusions and Implications: These results are the foundation for future studies examining the effect of the 1918 influenza pandemic on the Indigenous populations of Alaska.

A demographic comparison of deaths by Indigenous status during the 1918 influenza pandemic in Alaska

Emma Tinker-Fortel and Lisa Sattenspiel

University of Missouri

Background: The 1918 influenza pandemic killed between 50-100 million people and infected at least 500 million people worldwide. During the 1918 flu, social and biological factors combined to create a marked heterogeneity of disease burden within populations, with socioeconomic, sociocultural and structural factors impacting both mortality and morbidity. Alaska, then a territory of the United States,

represents one area of particularly striking mortality-diversity from the pandemic. In Alaska, Indigenous populations (Alaska Natives) suffered the majority of disease burden during the 1918 influenza pandemic, skyrocketing death rates of entire districts.

In total, nearly 80% of deaths from the 1918 flu in Alaska were those of Alaska Natives. This study expands on baseline knowledge of mortality distributions within Alaska territory during the 1918 pandemic, and introduces crude death rates by indigenous status, sex and age. Its findings reinforce the importance of nuanced sociocultural analysis into pandemic deaths and highlight the need for increased understanding of pandemic impact on indigenous populations.

Methods: All available death certificates recorded in Alaska territory from 1915-1921 (n=7,175) were collated and analyzed. These reported deaths were compared with population reports from the United States census to explore crude death rates during the 1918 pandemic. A multilinear regression analysis was used to determine the relationship between demographic factors.

Findings: This study reports mortality distributions by indigenous status, sex and age in Alaska territory between 1918-1920. Crude death rates reveal significant differences in age and sex breakdowns of Alaska Natives compared with non-Alaska Natives.

Conclusions & Implications: Our findings indicate that mortality breakdowns are merely a first-step when analyzing pandemic deaths. Crude death rates allow for deeper investigation into mortality during the 1918 influenza pandemic, particularly when comparing mortality distributions by indigenous status.

Contributed Session III

Investigating attitudes and behaviors of university students towards the COVID-19 pandemic in a predominantly Indigenous population in Mexico: A survey study

Elienai Joaquin Damas^{1,2*}, Sushma Dahal³, Ana Gloria Rivera Aguilar⁴, Juana Garcia Morales¹, Lisa Sattenspiel^{2,6}, Svenn-Erik Mamelund^{2,6}, Gerardo Chowell^{2,3}

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⁴Department of Nutrition, Universidad de Chalcatongo, Tlaxiaco, Oaxaca, México

⁵Department of Anthropology, University of Missouri, Columbia, United States

⁶Centre for Research on Pandemics & Society (PANSOC) at Oslo Metropolitan University

Background: The COVID-19 pandemic has become one of the most devastating worldwide crises. Mexico, is one of the countries most heavily affected by COVID-19, globally. The pandemic has had significant repercussions, especially among vulnerable groups, including Indigenous communities. Appropriate knowledge and attitudes toward preventing SARS-CoV-2 are essential to combat the spread of the virus and mitigate its impact on health outcomes. Our study aimed to evaluate the attitudes and behaviors towards the care and prevention of COVID-19 in a university population of the Huasteca region, State of Hidalgo, Mexico.

Methods: A cross-sectional descriptive study based on a web survey was conducted in early February 2022 to obtain information from university students of the Universidad Tecnológica de la Huasteca Hidalguense, located in a predominantly Indigenous community. The survey consisted of closed-choice, multiple-selection, and multiple-choice Likert scale items on various topics, including prevention, vaccination, anthropometric data (weight, height), and food intake. We used the Wilcoxon test to evaluate differences between before and after the COVID-19 lockdown in Body Mass Index (BMI) and weight in total surveyed and between Indigenous and non-Indigenous groups.

Results: We obtained a high response rate of 79.5% (n=2392 students out of 3007 university students), with 984 students (41.1%) identifying themselves as belonging to an Indigenous group. In the sample, 3.1% of the Indigenous group reported COVID-19 deaths among family members older than 18 years; this rate was 3% in the non-Indigenous group. Interestingly, 36.7% and 39.8% of the parents of Indigenous and non-Indigenous groups were fully vaccinated against COVID-19, whereas 39.1% and 43% were vaccinated against influenza. Regarding attitudes toward COVID-19, we did not find significant differences between Indigenous and non-Indigenous. Finally, we found important differences in weight and Body Mass Index (BMI) between pre-pandemic baseline and two years after confinement in the general population as well as between Indigenous and non-Indigenous: general weight rose from 61.8 ± 13.7 kg to 63.8 ± 14.0 kg and general BMI increased from 22.9 ± 4.2 kg/m² to BMI 23.7 ± 4.2 kg/m². The weight of the indigenous group rose from 59.5 ± 12.3 kg to 61.2 ± 12.7 kg, and non-Indigenous weight increased from 63.5 ± 14.4 kg to 65.6 ± 14.6 kg. The BMI for Indigenous went up from 22.5 ± 3.8 kg/m² to 23.1 ± 3.9 kg/m² and BMI for non-Indigenous rose from 23.2 ± 4.4 kg/m² to 24.0 ± 4.3 kg/m².

Conclusion: Although we did not find substantial differences in attitudes and prevention of COVID-19 between the Indigenous and non-Indigenous populations, our study demonstrates vaccination disparities between our population and their parents. We conclude that the level of education and being a university student translate into better knowledge and prevention of COVID-19. Efforts to expand prevention and control campaigns (e.g., vaccination) to their families and surrounding communities could lead to significant public health gains and should be further investigated.

Intercultural Universities in Mexico and COVID-19:

Learning at a distance and from below

Guillermo López Varela¹

María Cristina Manzano-Munguía²

¹Intercultural University of the State of Puebla, campus San Marcos Tlacoyalco, Tlacotepec de Benito Juárez, Puebla

²Institute of Social Science and Humanities of the Benemérita Universidad Autónoma de Puebla, Puebla, Mexico.

Background & Aims: Our interest in studying social inequality in Indigenous regions made us aware of the need to explore the limits of distance education during confinement. Consequently, we documented, informally, the experiences of Indigenous students and professors at the Intercultural University of the State of Puebla in Huehuetla and San Marcos Tlacoyalco, Puebla, Mexico. Both universities enroll indigenous students from the following *pueblos originarios* who speak the following mother tongue: nahuatl, ngigua, totonaco, mazateco, among others. We considered the following

question: How confinement and distance education visibilized economic and social constraints among Indigenous students at Intercultural Universities?

Methods: Our data collection included qualitative methodology in the analysis of the social and educational lag during COVID-19 pandemia (March 2020- December 2021) through on-line interviews with teachers and students enrolled at the Intercultural University of the State of Puebla (Huehuetla and San Marcos). We also attended an on-line forum about virtual education and Intercultural Universities in times of pandemia (August 2020).

Findings: COVID-19 and distance education increased the visibility of social and economic inequalities in Mexico. For example, in deprived areas neither internet access nor technology was available for students and professors. The latter were also affected by precarious working and living conditions experienced in rural areas.

Conclusions & Implications: The lack of technology in rural communities made the process of e-learning detrimental, specifically among Indigenous populations. A high percent of school drop also resonated among Intercultural universities in rural areas. The future is uncertain with the inclusion of new teaching models where educational technologies represent a dilemma for many professors and students in rural areas. Including community response to COVID-19 restrictions.

Returning to School during Dikos Ntsaaígíí (COVID-19): Effects of the Pandemic on Diné (Navajo) Student Learning and Mental Health

Joshua D Allison-Burbank, PhD, CCC-SLP (Diné & Acoma Pueblo)

Johns Hopkins Bloomberg School of Public Health, Center for Indigenous Health

COVID-19 mortality was the highest amongst American Indian and Alaska Native (AI/AN) populations in the early months of the pandemic. Like schools across the United States, schools serving AI/AN communities shut their doors to in-person learning in the Spring of 2020 to curb infections. As school reopened, Project SafeSchools explored the mental health of Diné (Navajo) youth ages 4-16 as they navigated changing learning environments. Diné caregivers self-reported on their mental health and the mental health of one child in their care (N = 243). Our findings suggest that adults and youth who are experiencing significant mental health challenges report lower levels of academic self-efficacy and resilience. However, adults with a strong sense of cultural identity and communal mastery, as well as, higher levels of hope and self-esteem, report their children to have better academic self-efficacy and more resilience. Our findings also indicate a relationship between worse mental health and poorer academic self-efficacy and resilience. The PSS study identified associations between cultural connectedness and children's resilience and academic self-efficacy. As classrooms reopen to students on the Diné Nation, it is important for educators, researchers, and public health professionals to be mindful of ongoing stressors and support this transition in the upcoming years, so students are engaged with culturally responsive and trauma informed instruction. The PSS study results are guiding the rapid development of preventive interventions that aim to help Diné youth recover from pandemic-related stressors to improve their learning experience and foster social emotional learning. This includes the +Connection is Medicine randomized controlled trial that includes safety planning and text messaging for Diné youth with elevated mental health needs. This presentation will highlight how this study team collaborated with the Diné Nation to conduct community-based participatory research to employ a precision public health response to pandemic-related stress in Diné youth.

Contributed Session IV

Global perspectives of Indigenous wellness, and Wabanaki narratives of community-teachings during Covid-19 pandemic

Juan C Rodriguez

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Background & Aims: In Canada during the Covid-19 pandemic, a lack of support for Indigenous community-based organizations forced organizations and communities to face on their own, the effects produced by Covid-19 (1). Pandemics are mainly defined, surveyed, and addressed from western perspectives based on evidence and scientific approaches excluding ancestral knowledge perspectives. This research explores some of the key principles of Indigenous perspectives on health, to contribute with qualitative frameworks to reduce the lack of appropriate knowledge in epidemiology, health and biology fields. The paper describes the experience of Wabanaki teachers-in-training, restoring community connections during the Covid-19 pandemic. Narratives of “health pedagogies” are intersected with global texts where Indigenous health researchers describe their perspectives on health and mental health.

Methods: A qualitative-art narrative, community-based, and research-action method with a triangulation of knowledge perspective (2) was applied in exploring how teachers in training participants create and apply health interventions and health-educative programs to improve the strengths of their serving communities. Art-based models and narratives were shared between participants and in public through a virtual exhibition (3) and a publication in a virtual knowledge mobilization forum (4).

Findings: The loss of any life in a community was considered a loss of a relative under the principle of relationality, increasing the pain and negative consequences of death. Teachers’ narratives included the importance of maintaining relationality through the ceremony, talking circles, and learning. Teachers reported positive reception of their projects in their communities. The relevance of the Medicine Wheel teachings was also a commonly shared topic where wellness is mental, emotional, spiritual and physical. From a global perspective, the richness and diversity of Indigenous nations is a shared theme. As in “mangroves pedagogies” (5), the diversity and self-determination of Indigenous views and how those views are connected with “life projects”, were central meta themes.

Conclusions and implications: Culture is health, is a strong argument on how to address pandemics in support of Indigenous peoples. The lack of integrative, holistic and respectful views of Indigenous knowledge is also a topic to be included in training at universities and in health research programs.

Indigenous Knowledge to Curb Covid-19 in India: Collective Participation and Cultural Transmission through Social Media

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Despite the epidemiological changes and economic crisis caused by Covid-19, it is crucial to acknowledge that social media platforms have played a significant role in mobilizing the indigenous communities to curb the pandemic. Social Media has emerged as a space to examine political, social, and cultural concerns in the 21st century. Especially, Indigenous communities that have faced exploitation and discrimination, actively use social media platforms to negotiate and mobilize for collective cultural transmission of knowledge to fight such pandemics. Moreover, a report by UNESCO (2020) mentions that, ‘...we saw that indigenous peoples are helping each other; reaching out to remote communities and promoting solidarity across borders’. It cannot be denied that indigenous knowledge of medicine is still being researched and several studies have proved that the practices of traditional remedies have cured Covid-19.

Within this context, this paper addresses three major theme, first, the various ways indigenous people have transmitted their traditional knowledge of medicine, second, how has social media facilitated the indigenous youth to collective participate in curbing Covid-19, and third, what were the various indigenous knowledge shared on social media that helped to fight Covid-19. Using qualitative inductive analysis, the study gathers its data from a semi-structured interview of 50 Santhal and Munda youth of Jharkhand, India. It analyzes YouTube, Facebook, and Instagram posts that use hashtags related to Covid-19, pandemic, and indigenous knowledge. The results reveal that the affordances these social media sites provide helped the indigenous communities to curb Covid-19. Moreover, it encourages indigenous youth across the globe for cooperation and solidarity for a sustainable future.

Theatre-for-Development as Additional Information Panacea on Rural Dwellers in Nigeria during a Pandemic: Lessons from COVID-19

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Background & Aims: The subject of COVID-19 (corona virus) in Nigeria has been met with various misrepresentations and conspiracy theories such as the notion of COVID-19 as a forerunner of the Anti-Christ or commencement of a ‘New World Order’ occasioned by the 5G network. The information dissemination on corona virus in Nigeria was managed mainly by the Presidential Task Force (PTF), which hosted daily media briefings on its activities. This paper examined the PTF’s information dissemination structure and its impact on four indigenous communities in south-eastern Nigeria: Ikwo in Ebonyi State, Iva-Valley Forestry Hill Camp 1 in Enugu State, Umualumu Old Road in Imo State and Ogbagu Obukpa in Enugu State. It concentrated on the sensitization of the indigenous communities and how theatre-for-development (TfD) complemented other media platforms during the lockdown to keep the rural dwellers abreast of the situation and take necessary health precautions.

Methods: It employed Bertolt Brecht’s Epic Theatre Theory and Theatre for Development (TfD) methodology in four south-eastern indigenous communities in Nigeria to demonstrate how TfD could complement other media platforms available to the PTF in the dissemination of information on corona to rural dwellers.

Findings: Despite the robustness of the PTF's information dissemination structure, TfD considerably mobilised dwellers of the four indigenous communities in south-eastern Nigeria to understand in their local language of Igbo and take necessary precautions against corona virus. It was a critical additional information panacea on rural populace.

Conclusions & Implications: TfD was a potent means to reach out to remote communities that the PTF should have considered in its information dissemination on COVID-19 in Nigeria. It was suggested that a robust awareness infrastructure to confront the COVID-19 or any emerging pandemic should be replaced by the Nigerian government to accommodate rural dwellers through the use of TfD.

Contributed Session V

Impact of COVID-19 Pandemic on Livestock Smallholders Among Indigenous Farmers in Northern Kwa-Zulu Natal Province of South Africa

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Background and Aims: Keeping livestock such as poultry, pigs, cattle, sheep, and goats is common among the indigenous people of Zulu in South Africa, who live in rural areas for socioeconomic and food security purposes, which the Covid-19 pandemic has highly impacted. The research investigated the impact of the COVID-19 pandemic on livestock business among indigenous smallholders in Northern KwaZulu-Natal, South Africa.

Methods: A survey was conducted using structured questionnaires that measured the impact of COVID-19 on production, purchase of animal feed, yield, sales, income, and availability of animal medications, availability of extension officers pre-COVID-19 and during COVID-19. Indigenous rural farmers interviewed include those with backyard poultry, piggery, cattle, sheep and goats.

Findings: Most farmers (80.1 to 92.4%) reported having limitations in accessing medication and animal feeds during the COVID-19 pandemic. Results indicated a continuous decrease in carcass yield and low patronage of purchases for consumption and ceremonies. Average monthly income before and during the pandemic was reduced from R 2300 to R1050, respectively. Results showed that backyard poultry farmers among the indigenous Zulu people are mostly affected, while cattle, sheep and goats were the least affected. About 80% of backyard poultry farmers in the study area could not sustain their birds during the pandemic, thereby being out of the backyardpoultry business.

Conclusions and implications: The study demonstrated that COVID-19 lockdowns and movement restrictions adversely affected smallholder livestock farmers in rural areas and, by extension, people living in the communities. The livelihood and income of these indigenous smallholders have been threatened; hence policies and laws that would capture the plight of rural farmers during the pandemic should be considered.

COVID-19 and Climate change resilience among Shawi and Ashaninka Indigenous communities in Peru **Victoria Chicmana-Zapata, Carol Zavaleta-Cortijo Ceci Anza-Ramirez, Ingrid Arotoma-Rojas**

Background & Aims: COVID-19 pandemic impacting humanity offers an opportunity to collect Indigenous stories of resilience specially when climate change is already impacting their livelihoods. With the collaboration of Shawi and Ashaninka Indigenous organizations and communities, we identified and examined their responses to COVID-19 and climate change hazards.

Methods: Analysis is drawn from the COVID Observatories research programme that monitored and examined how COVID-19 interacted with multiple stresses to affect Indigenous communities globally. Methods used are baseline and monthly interviews, 57 interviews in total, 24 from Indigenous representatives and 33 from Indigenous community members (February 2021 – July 2022).

Findings: COVID-19 and climate change hazards jeopardised Shawi and Ashaninka health and food security. COVID-19 direct effects were infections, deaths and health consequences. COVID-19 indirect effects were limited access to markets and less income to buy food. Simultaneously, climate change hazards were reported. Higher temperature, changes in seasonality, flooding and cold waves endangered the quality and quantity of crops, water access, and the raising of small animals. Ashaninka and Shawi Indigenous peoples responded to face these shocks. They closed their community frontiers to prevent COVID-19 infections, treat COVID-19 symptoms with medicinal plants and produced and fed from food obtain in their lands, by farming, hunting or fishing. Indigenous organizations strengthen their proposal of food sovereignty, promoting diverse gardens with medicinal and food crops, and the valorisation and recovery of Indigenous knowledge regarding medicine and nutrition.

Conclusions & Implications: Indigenous communities and organizations actively responded to the COVID-19 and climate change shocks, using their own means, such as Indigenous knowledge, manage of biodiversity, and social organization. It is recommended further research on how to incorporate Indigenous peoples' responses on the planning and implementation of health adaptation interventions to global changes, such as pandemics and climate change.

Covid-19 vaccine hesitancy in Indigenous peoples: a study case from the Peruvian Amazon **Ingrid Arotoma-Rojas, Carol Zavaleta-Cortijo, Victoria Chicmana, Cecilia Anza-Ramirez, and The Covid Observatories team**

Background & Aims: Indigenous peoples have a different understanding of health and illness that is rooted in their knowledge systems and worldviews, often creating a gap in effective healthcare. During the COVID-19 pandemic, Indigenous peoples in Peru were prioritized for vaccination, however, hesitancy was high. This study aimed to analyse Indigenous peoples' perceptions about COVID-19 vaccines and the vaccination process to provide policy recommendations.

Methods: Data is drawn from 57 longitudinal in-depth interviews with 5 Indigenous representatives and 6 Indigenous community observers from February 2021 to July 2022. A research partnership was established with the Ashaninka and Shawi Indigenous peoples in the Peruvian Amazon. This study is part of the COVID Observatories research programme.

Findings: Indigenous peoples' hesitancy to COVID-19 vaccines was rooted in historical exclusion and

discrimination from the Peruvian government. Prioritization in the vaccination was understood as vaccine trials that triggered conspiracy theories of Indigenous peoples' extermination and control. Additionally, there were fears of sterilization as a consequence of COVID-19 vaccination based on forced sterilization by the Peruvian government during the 1990s decade. Also, some Adventist churches in the Peruvian Amazon were highly effective in persuading Indigenous peoples to believe that the vaccine was the mark of the devil, or that the vaccine made you homosexual, among others. These perceptions were dismissed by the Peruvian government as irrational beliefs and were not challenged in order to promote COVID-19 vaccination.

Conclusions & Implications: Our study highlights Indigenous peoples' perceptions about COVID-19 vaccine hesitancy that are coherent with historical and systemic discrimination from the Peruvian government. Pathways to effective healthcare in Indigenous communities should acknowledge the validity of different perceptions and fears, and instead of dismissing them as 'irrational', governments should address them as a priority in their public health strategy.

Contributed Session VI

BMI as a Risk Factor for Severe Outcomes During the 1918 Influenza Pandemic

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Background & Aims: Following the 2009 H1N1 influenza A virus pandemic, non-communicable diseases (NCDs) such as cardiovascular, pulmonary, renal, and metabolic disorders were associated with severe influenza outcomes. One such metabolic disorder that has been implicated as an independent risk factor for hospitalisation and death during influenza virus infection is obesity. During the 2009 pandemic, Indigenous populations had higher rates of influenza infection and greater disease severity. It has been hypothesised that the higher prevalence of NCDs, including obesity, within Indigenous populations play a role in increased influenza severity. Here, we investigate the association between body mass index (BMI) and increased disease severity during the 1918 influenza pandemic, with a particular focus on the Indigenous populations of Australia, New Zealand, and Canada.

Methods: Soldier records for individuals enlisted in 1918 or 1919 during WW1 in the Australian Imperial Forces (AIF), New Zealand Expeditionary Forces (NZEF), and the Canadian Expeditionary Forces (CEF) were obtained from the National Archives of Australia, Archives New Zealand, and the Library and Archives Canada, respectively. Soldiers were excluded if they were not hospitalised for influenza-like illnesses within the first six months of their enlistment. BMI was calculated using the formula, kg/m², with measurements taken from soldiers' medical evaluation on enlistment and will be categorised according to WHO cutoffs. Indigenous soldiers were identified when individuals were noted as having "dark" complexion and/or belonging to an Indigenous battalion.

Findings: Data are being mined from archives mentioned above.

Conclusions & Implications: To the best of our knowledge, no studies have been conducted to determine whether BMI was a risk factor in the 1918 influenza pandemic in either Indigenous or non-Indigenous populations. Identifying risk factors associated with severe outcomes during influenza pandemics, particularly within Indigenous populations, will inform on future pandemic preparedness and allocation of resources towards those populations at-risk.

Ethnic health inequities have persisted across a century of pandemics in Aotearoa New Zealand

Michael Baker

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Background & Aims: Infectious diseases show marked gradients in risk according to sociodemographic factors, notably age, socio-economic position, and ethnicity. This review used published and unpublished data to describe ethnic differences in mortality from infectious diseases pandemics from 1918 to 2022. It also aimed to summarise evidence for key drivers of these differences.

Methods: Review of mortality rates across 3 influenza pandemics (1918, 1957, 2009) and the Covid-19 pandemic (2000-22). Additional review of hospitalisations and vaccination rates for the Covid-19 pandemic. Comparison of outcomes by ethnicity, focussing on differences for indigenous Māori compared with the majority non-Māori-non-Pacific population.

Findings: Māori had markedly higher mortality from influenza across the last 3 pandemics: the Māori death rate in the 1918 pandemic was 7.3 times the European rate; in 1957 it was 6.2 times higher; and in 2009 it was 2.6 times higher (rate ratio 2.6, 95% confidence interval 1.3–5.3). For Covid-19 in 2022 (up to Nov), the cumulative age-standardised mortality rate for Māori was 1.9 times the European rate. Hospitalisation rates were 1.8 times higher for Māori. One pathway mediating these inequalities is vaccine coverage, which was markedly less for Māori, particularly for boosters (43% boosted compared with 67% for Europeans/others).

Conclusions & Implications: There are persisting ethnic inequities in the rates of serious outcomes from pandemic infectious diseases affecting indigenous people in Aotearoa New Zealand. In the case of Covid-19, one pathway is differential access and uptake of vaccines. Other pathways are less measurable, including the interacting effect of social deprivation, poorer access and uptake of healthcare, and higher prevalence of co-morbidities. Underlying drivers include racism, and the legacies of colonisation. The elimination strategy used in this country resulted in two years with very little SARS-CoV-2 virus circulating, potentially allowing measures to minimise ethnic inequities. That goal was not achieved.

***Acknowledgements:** Many colleagues have contributed to this research, including Nick Wilson, Jenn Summers, and Matire Harwood

Characterizing the COVID-19 diagnosis and deaths by indigenous status among hospitalized cases in Chile, 2020

Sushma Dahal, Iris Delgado, Lisa Sattenspiel, Svenn-Erik Mamelund, Gerardo Chowell

Introduction: Historically, indigenous populations suffer higher negative impacts of infectious disease pandemics than non-indigenous populations. Specifically, existing literature on the COVID-19 pandemic suggests variable effects in these groups across space and time in terms of infection and outcome. More research on the differential impacts of the COVID-19 pandemic on vulnerable groups is needed. In this study, we assess the COVID-19 diagnosis and deaths among the indigenous and non-indigenous groups at both national and subnational levels in Chile.

Methods: We obtained data on 781795 hospitalized cases corresponding to the registries made by 65 hospitals financed by Diagnosis Related Groups (DGR) payment mechanism in Chile in 2020. We used logistic regression analysis to estimate the unadjusted and adjusted odds ratio (OR) for the association between indigenous status and COVID-19 diagnosis and COVID-19 mortality among hospitalized cases. Using the Chi-Square test, we assessed the association between indigenous status and other socio-demographic and health-related variables separately for COVID-19 cases and deaths. We also report the top ten secondary diagnoses for cases and deaths with COVID-19 as primary diagnoses separately for indigenous and non-indigenous populations.

Results: Out of the total hospitalized cases recorded in the DRG database in 2020, 6.26% had a COVID-19 diagnosis, and 4.55% had COVID-19 as the primary diagnosis. The odds of COVID-19 diagnosis among the indigenous population were significantly lower than that of the non-indigenous population after controlling for sex, age group, type of hospital visit, length of hospital stay, comorbidity category, and death (adjusted OR: 0.55, 95% CI: 0.53, 0.57). Similarly, in the adjusted model, the odds of COVID-19 deaths among the indigenous population were significantly lower than that of the non-indigenous populations (adjusted OR: 0.91, 95% CI: 0.83, 0.99). There was a significantly higher proportion of type II diabetes mellitus and acute kidney failure as a secondary diagnosis among indigenous populations compared to non-indigenous for both primary diagnoses of COVID-19 cases and deaths. The average length of hospital stays and comorbidity count were statistically significantly higher in the non-indigenous population than the indigenous population in both COVID-19 cases and deaths.

Conclusion: Higher odds of COVID-19 diagnosis and deaths among non-indigenous hospitalized cases might be linked to a higher hospital stay duration and comorbidities. A more reliable comparison can be made between these two groups with the help of population-level data that includes both hospitalized and non-hospitalized cases.

Contributed Session VII

How we work with Indigenous Communities: Lessons from the Qanuinnngitsiarutiksait and the Fisher River Traditional Gathering studies

Josée G. Lavoie, Halle Cochrane

Background & aims: A recent review of review existing ethical guidelines that support Circumpolar Indigenous Peoples' engagement in health research highlighted that guidelines used in Canada appear to be the most comprehensive and include Indigenous-specific provisions not found in other

circumpolar Countries. The aim of this presentation is to highlight key provisions embedded in these guidelines, and showcase how these were used in the implementation of two studies.

Methods: This presentation brings findings from two inter-connected studies. The Canadian Institutes for Health-funded study is entitled Qanuinnngitsiarutiksait: Developing Population-Based Health and Well-Being Strategies for Inuit in Manitoba. This study was managed by a committee of Isumataiit Sivuliuqtii (Inuit Elders), researchers from the University of Manitoba and the Manitoba Inuit Association. Traditional Gathering in Fisher River is a result of a government initiative called Sistering Indigenous and Western Views of Science. The study was led by a non-Indigenous and Indigenous researcher from the University of Manitoba and the Elders' group in Fisher River.

Findings: Our presentation highlights different strategies for engagement (Qanuinnngitsiarutiksait), including partnering with an Indigenous organization to ensure that results resonate and have utility, guidance from Isumataiit Sivuliuqtii ensuring that an Inuit cultural lens informs all aspects of the study, alternative forms of knowledge translation, and continuous leveraging of relationships and professional capital to support the Inuit community. Historically, research has been done on Indigenous people without any ownership and respect for Indigenous people. The Traditional Gathering in Fisher River Study focused on intertwining traditional Indigenous knowledge with western science for a more holistic approach. By leading our own research, we know where to look and how to ensure our research benefits our communities.

Conclusions & Implications: International trends towards greater inclusion of Indigenous Peoples in research leadership roles are apparent in research ethics processes in Canada. In the Canadian context, Indigenous advocacy for meaningful Indigenous leadership in the planning and implementation of studies has resulted in transformative changes. We believe that Indigenous-centric ethics guidelines are a necessary requirement in all countries.

Responses to COVID-19 in Indigenous Canada: Learning from the experiences

**Alexandra King and Malcolm King
University of Saskatchewan, Canada**

Background & Aims: Indigenous (First Nation, Métis and Inuit) communities in Canada responded variably to COVID-19. This paper will examine the context of the pandemic response in Indigenous Canada, and look for policies that might have mitigated the responses.

Methods: Data on COVID-19 in Indigenous Canada were collected from various sources including federal and provincial governments. Stories illustrating the human aspects of the pandemic were provided by personal experiences and the media.

Findings: In the early months of the pandemic, most communities continued to thrive, safe from the coronavirus. However, in late 2020, when Canada experienced its second wave, serious outbreaks began to occur in a number of communities previously free of COVID-19. In many cases, the spikes in transmission were overwhelming, and were associated with underlying health determinants – overcrowded housing, lack of human and material resources, poverty. In general, the responses to the pandemic in Indigenous communities were uneven. Where outbreaks occurred, vigorous, coordinated

emergency response measures needed to be in place to prevent more outbreaks and protect population health.

Conclusions & Implications: Policies to better control access to communities need to be in place, as well as improved pandemic preparedness plans, backed up by human and material resources. Enhanced surveillance data should be collected, but these must be aligned with the principles of Indigenous data sovereignty and self-determination. Also, a Two-eyed Seeing approach to understanding and interpreting health data should be undertaken, where Indigenous and Western ways of knowing are brought together.

Justice implications of government responses on health and food security for Indigenous peoples during the COVID-19 outbreak in Peru

Victoria Chicmana-Zapata & Ingrid Arotoma-Rojas

Background & Aims: COVID-19 evidenced access to health disparities in Peru, specifically in attention for Indigenous people due to their pre-existing poor health and social conditions. Focusing on Shawi and Ashaninka Indigenous peoples, we evaluate the justice implications of four prioritized responses on health and food security: Amazonian Health Plan, food-aid, cash-aid, and COVID vaccinations.

Methods: Based on 71 in-depth interviews with Indigenous community members, Indigenous representatives, and government officials from February 2020 to June 2022, this research analyses if government responses were just with Indigenous peoples, considering distributional, recognition, and procedural dimensions of justice.

Findings: Our results highlight that budget distribution was not addressed as there was no financial support for Indigenous representatives across the responses. Regarding recognition, Indigenous food systems and livelihoods were limitedly incorporated into the food and cash aids. Additionally, consideration of Indigenous peoples' participation was restricted to passive recipients, which generated the Indigenous people's distrust of health measures.

Since government responses were not culturally appropriate, the resources could not generate capacities for Indigenous people to be healthy and well-nourished during the crisis.

Conclusions & Implications: Justice implications still need to be incorporated and strengthened to create and implement fairer responses for Indigenous people in future pandemics. Further research on the evaluation of the government responses regarding Indigenous people during health outbreaks is recommended.

Contributed Session VIII

Vulnerable Whanau in Rural Communities: Living Through Covid19

Keri Ropiha

Otago Polytechnic

Background & Aims: I come from a small town in New Zealand on the East Coast of the North Island called Porangahau. Porangahau is situated 45km from the nearest large town of Waipukurau on the East Coast of Central Hawke's Bay. Just over half of the district population live in rural or isolated areas and communities. The stark truth about the inequities in times of need, specifically Covid19 global pandemic, are highlighted, particularly for priority populations. Maori are impacted through the lack of health, disability, and social service access, telecommunications, high utilisation of acute inpatient services, ineffective messaging, government not engaging community led programmes and equitable distribution of assistance and information, all impacted by the increased cost of living. This is the scope of my research.

Methods: I define my research methodology as Mixed, both qualitative and quantitative data underpinned by Action Research and Kaupapa Maori Research – in the community with a cultural focus.

Findings: There are known unfair, unjust deficits in Maori health such as access to services that are timely, culturally safe, and responsive. There is evidence that in times of pandemics, Maori are at risk of receiving lower quality care. Maori are disproportionately affected by a range of mental health and addiction issues. Equity is integral to producing quality services.

Conclusions & Implications: I will identify issues for vulnerable whanau in rural communities to get equitable service and assistance in times of a global pandemic. The barriers to information, treatment, vaccines, transport, and health and disability services impact more on Maori. These situations require strategies to ensure reducing inequitable service for those most impacted. Accessibility to primary health care is vital in reducing barriers.

The Political Determinants of Health: Indigenous Peoples, Canada, and the Pandemic

Jeremy Patzer and Kiera Ladner

University of Manitoba

Background: This paper stems from a multinational research project, funded by the Canadian Institutes for Health Research, on the impact of the COVID-19 pandemic on Indigenous peoples and newcomers to Canada, the U.S.A., and Mexico. The authors of this paper work lead the prong examining Indigenous peoples. The aim of this paper is to integrate a critical Indigenous legal and political perspective that analyzes Canada's pandemic response in light of its constitutional landscape and its approach to Indigenous rights.

Methods: Five omnibus panel surveys have taken place throughout the pandemic and qualitative interviews with Indigenous participants in Canada are taking place from late 2022 to 2023. The authors combine this research with their background in Indigenous and Canadian law and politics.

Findings: Perhaps unsurprisingly, existing data bolster established social scientific observations on the social determinants of health, notably the association between social inequalities suffered by Indigenous peoples and negative health outcomes. The degree to which various jurisdictions were able to mitigate Indigenous inequities has been influenced by the complex jurisdictionalities in Canada and a difficult history between Indigenous peoples and Canadian institutions. Examining the plight of Indigenous peoples in the era of COVID-19 from a vantage of critical Indigenous law and politics, we also find the

pandemic has posed both complex governance challenges, and opportunities, for Indigenous peoples' self-determination.

Conclusions & Implications: A critical Indigenous legal-political approach on Indigenous health during the pandemic can offer deeper perspective on a variety of issues—including the question of vaccine hesitancy, the challenges of complex jurisdictionalities (federal, provincial, and Indigenous), and differential policy choices throughout the country. Such an approach also enables a reconceptualization of the determinants of health, highlighting the negative health ramifications of settler colonialism without losing sight of Indigenous agency, resistance, and assertions of sovereignty.

Cross-jurisdictional pandemic management: Providers speaking on the experience of Nunavut Inuit accessing services in Manitoba during the COVID-19 pandemic

Josée G. Lavoie, Wayne Clark, Leah McDonnell, Judy Clark, Grace Clark, Tagaak Evaluardjuk-Palmer, Arvardluk Kusugak, Nuqallaq Brown, Marti Ford

Background & aims: Across Canada, the COVID-19 pandemic placed considerable stress on territorial and provincial health care systems. For Nunavut, the need to continue to provide access to critical care to its citizen meant that medical travel to provincial points of care (Edmonton, Winnipeg and Ottawa) had to continue through the pandemic. This complexity created challenges related to the need to keep Nunavut residents safe while accessing care, and to manage the risk of outbreaks in Nunavut resultant from patients returning home.

Methods: This presentation brings findings from two inter-connected studies. The overarching Canadian Institutes for Health-funded study is entitled Qanuinnngitsiarutiksait: Developing Population-Based Health and Well-Being Strategies for Inuit in Manitoba. This study was managed by a committee of Isumatait Sivuliqtii (Inuit Elders), researchers from the University of Manitoba and the Manitoba Inuit Association. The second Fulbright-funded study, COVID-19 Public Health Outcomes in Arctic Communities: a Multi-site Case Study Analysis is being undertaken by a team of Fulbright Arctic Initiative Alumni and aimed to assess the positive and negative societal outcomes associated with the COVID-19 pandemic in Arctic communities. For these studies, we undertook interviews with 14 services providers.

Findings: A number of strategies were adopted to mitigate risk, including the expansion of virtual care, self-isolation requirements before returning to Winnipeg, and a level of cross-jurisdictional coordination previously unprecedented. Structural limitations in Nunavut however limited opportunities to expand virtual care, and to allow providers from Manitoba to access Nunavut's electronic medical records on patients requiring follow up. Thus, the known and long-standing issues exacerbated vulnerabilities within the Nunavut health care system.

Conclusions & Implications: We conclude that addressing cross-jurisdictional issues would be well served by the development of a more formal Nunavut-Manitoba agreement (and similar agreements with Ontario and Alberta), outlining mutual obligations and accountabilities.