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- Building Better: Neighbourhoods to benefit children with disability

DeJohn, Amber : Florida State University

- Migration across the life course and adaptations to extreme heat
- Negotiating Mobility: Methodological Insights from Older Adults' Activity Diaries

Del Rosario, Lauren : The University of Sydney

- Incorporating nature in walkability indices

Delamater, Paul : University of North Carolina at Chapel Hill

- The changing geography of vaccination uptake in Calfornia, US
- Identifying spatial patterns of travel behavior responses to heatwaves using high- resolution cell phone mobility data in North Carolina

Delgado, Adrian : School of Nursing, University of British Columbia Okanagan

- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages

Deng, Susie : Department of Geography and Planning, School of Environmental Sciences, University of Liverpool, Liverpool, UK

- Construction of a multidimensional, longitudinal, lived-experience-informed geographic index of social environmental determinants in England

Dennett, Adam : University College London (UCL)

- A Geospatial Analysis of Clustering of Fast-Food Outlets around Schools in London (UK) and Associations with Childhood Obesity: A Longitudinal, Ecological Study

Desjardins, Michael : Johns Hopkins Bloomberg School of Public Health
- Spatial-Temporal Associations between Alcohol Outlet Access and Neighborhood Gun Violence Risk in Washington, D.C.

DeVerteuil, Geoffrey : cardiff university
- Social geography and health geography: Emerging and missed opportunities

Dhillon, Satveer : University of Waterloo
- Co-producing an innovative social prescribing pilot for individuals living with lupus: A study protocol
- Life-Course Transitions and the Geographies of Health: Macro- and Micro-Level Predictors of Self-Rated Health from Childhood to Adulthood
- Places of life in fear: the necropolitics of violence against children

Diamantidis, Clarissa : Wake Forest University School of Medicine
- “People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Dibben, Chris : University of Edinburgh
- Association between neighbourhood greenspace availability and the development of multiple long-term conditions, a follow-up study in urban areas of Scotland

Dickin, Sarah : Uppsala University
- Women, water and building back better: a case study of WASH and COVID-19 in East Africa
- Beyond planetary boundaries: Towards a geography of planetary health

Dickinson, Katherine : University of Colorado Anschutz
- Beyond Home Loss: Exploration of Physical Health Pathways for Residents of Smoke-Damaged versus Destroyed Homes after a WUI Fire

Dickson-Gomez, Julia : Medical College of Wisconsin
- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Dimova, Elena : Glasgow Caledonian University
- Alcohol outlet density and wholly attributable hospitalisations in Scotland: an individual level follow up study across two time periods

Discenza, Catherine : University of Illinois Urbana-Champaign
- Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health

Dixon, Jenna : University of British Columbia Okanagan
- Understanding and operationalizing equity in global health research: a critically reflective analysis of approaches to equity across the Canadian global health ecosystem

Do, Anna : Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada
- Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Dodd, Warren : University of Waterloo
- Determinants of Awareness and Use of HIV Self-Test Kits Among Men in Three African Countries: A Cross-Sectional Study
- Characterizing the health impacts of artisanal and small-scale gold mining (ASGM) across the life course: An umbrella review
- Women, water and building back better: a case study of WASH and COVID-19 in East Africa

Dodge, Janine : Queen's University
- Re-imagining the Sandbox: Playfulness, Place, and Social Connection in Later Life

Dogra, Harsimran : Toronto Metropolitan University, CHANGE Research Lab, DEPtH Lab

- Climate Care Toronto: Digital Citizen Science for Equitable Climate Action, Health, and Urban Futures
- DiScO: Reimagining Real Time Public Health Crises Response through Human Centred AI and Digital Transformation

Dorkenoo, Selasi : Toronto Metropolitan University

- Improving the health care landscape of early pregnancy emergency care: A qualitative GIS approach

Driedger, Michelle : University of Manitoba

- “I had to load up a car full of people to get tested”: Rural and Remote Red River Metis experiences of COVID-19

Drysdale, Alice : Centre for Ecology and Conservation, University of Exeter

- Socio-spatial inequalities in UK urban tree canopy cover

DuBois, Tesla : Temple University, Department of Geography, Sidney Kimmel Comprehensive Cancer Center, Jefferson Health

- Responsible GeoAI for Cancer Research: Synthesizing GeoAI and CancerAI with a Case Study of Early-Onset Colorectal Cancer

Dufour, Isabelle : Sherbrooke University

- Potential Spatial Accessibility to Primary Health Care in The Province of Quebec Over Time: Associations with Gentrification
- Conceptualizing Healthcare Gentrification: Results From a Scoping Review

Duke-Williams, Oliver : UCL

- Shepherds and Shopkeepers: Homeworking and health in the Covid-19 Lockdown

Dunn, James : McMaster University

- A Strategic Implementation Framework for Affordable Housing in Hamilton, Ontario

Dupéré, Sophie : Laval University

- Potential Spatial Accessibility to Primary Health Care in The Province of Quebec Over Time: Associations with Gentrification
- Conceptualizing Healthcare Gentrification: Results From a Scoping Review

Dzakuma, Drumond : University at Buffalo

- Access Without Arrival: Rethinking Health Equity Through the Geography of Deferred Care

Early, Regan : Centre for Ecology and Conservation, University of Exeter

- Socio-spatial inequalities in UK urban tree canopy cover

Eddy, Tasma : Social Equity Research Centre, RMIT University

- Building Better: Neighbourhoods to benefit children with disability

Eggleton, Phoebe : GeoHealth Laboratory & Geospatial Research Institute, University of Canterbury, New Zealand

- Beyond Residence: Rethinking Environmental Exposure Assessment in Health Geography Using Mobile Phone Location Data
- Mental wellbeing and loneliness in Aotearoa, New Zealand: A spatial microsimulation approach

Ehi, Gwen : York University

- Geographic Patterns of Domestic Violence and Abuse: Sexual Orientation Disparities in Ontario
- Geographies of Housing Insecurity: Equity Transitions for Gender Diverse Households in Canada
- Uneven Geographies of Preventable Acute Care: Sexual Orientation Inequities in Ambulatory Care-Sensitive Conditions in Ontario, Canada

El-Geneidy, Ahmed : McGill University

- Measuring the Impacts of a New Light Rail System on Work Performance and Health Outcomes in the Greater Montréal Region

Eliot, Emmanuel : Université de Rouen-Normandie

- Using agent-based simulation to reconstruct historical disease landscapes,: the example of malaria in Cyprus

Elliott, Susan : University of Waterloo

- Co-producing an innovative social prescribing pilot for individuals living with lupus: A study protocol
- Frames of neglect: necropolitics and the discursive construction of Ghana's galamsey environment-health Crisis
- Life-Course Transitions and the Geographies of Health: Macro- and Micro-Level Predictors of Self-Rated Health from Childhood to Adulthood
- Understanding Climate-Health Intersections: Embodied Political Ecology of Health and Wellbeing
- A Dose of Nature: Stakeholder Perspectives on Nature-Based Social Prescriptions
- Water inequities in low-income communities in high- and upper-middle-income countries: a political ecology of wellbeing
- Understanding and operationalizing equity in global health research: a critically reflective analysis of approaches to equity across the Canadian global health ecosystem
- Characterizing the health impacts of artisanal and small-scale gold mining (ASGM) across the life course: An umbrella review
- A Relational Approach to Food Security: Participatory Research With Youth in Western Kenya
- Women, water and building back better: a case study of WASH and COVID-19 in East Africa

Elliott, Susan J. : University of Waterloo

- Reflecting on a decade of health and medical geography: A systematic review
- Places of life in fear: the necropolitics of violence against children

Ellis-Davies, Kate : Swansea University

- Ambient Air Pollution Exposure and Preterm Birth in Wales: A Population-Scale Cohort Study

Emch, Michael : University of North Carolina- Chapel Hill

- Ecology and Evolution of Swine Influenza in the United States
- Spatiotemporal Determinants and Unintended Consequences of Inequitable Safe Drinking-Water Access in Rural Bangladesh
- Ecological drivers of swine influenza H3N2 transmission in the USA: a phylogeographic approach

Emslie, Carol : Glasgow Caledonian University

- Alcohol outlet density and wholly attributable hospitalisations in Scotland: an individual level follow up study across two time periods

Espinoza Suarez, Nataly : Université Laval

- Conceptualizing Healthcare Gentrification: Results From a Scoping Review

Esposito, Michael : University of Minnesota

- Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk

Everhart, Avery : University of British Columbia, Department of Geography

- Geographic Access to Gender-Affirming Hormone Therapy Across Major US Metropolitan Areas
- Pathways to Trans Care: Travel Patterns, Information Seeking & Geographic Access to Gender-Affirming Hormone Therapy

Fagherazzi, Guy : Luxembourg Institute of Health (LIH)

- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress

Falkenberg, Timo : University Bonn, UKB, Institute for Hygiene and Public Heath, GeoHealth Centre

- Positive and Negative Health Effects of Urban Biodiversity: Assessment in urban green spaces in Cologne and Bonn, Germany

Fancello, Giovanna : Sorbonne Université, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, Equipe Nemesis, Paris, France

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Fath (Sandborn), Hilary : University of North Carolina at Chapel Hill

- Comparative evaluation of COVID-19 hospital admission models with and without population health information

Fatima, Munazza : The Islamia University Bahawalpur
- A Comprehensive Scoping Review on Smart City and Mental Health Historical Evolution, Developments, and Future Directions
- Geographical Variations in the Prevalence and Determinants of Severe Underweight Children Under Five in Pakistan: A Multiscale Geographically Weighted Regression Analysis

Fattah, Md. Abdul : Florida State University
- Migration across the life course and adaptations to extreme heat

Feick, Rob : University of Waterloo
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Feng, Xiaoqi : The University of New South Wales
- Incorporating nature in walkability indices

Feng, Xin (Selena) : University of Oklahoma
- Spatial Optimization for Equitable PrEP Access: Comparing HIV Testing Site Adaptation and New Provider Siting in Atlanta

Fenn, Larissa : Hamilton-Oshawa Port Authority
- Jurisdictions in Response to Public Health Emergencies from the Burlington Skyway Bridge: A Collaboration between the Hamilton-Oshawa Port Authority and Brock University

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- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages

Ferguson, Mark : European Centre for Environment & Human Health, University of Exeter
- Socio-spatial inequalities in UK urban tree canopy cover

Finlay, Jessica : University of Colorado Boulder
- “It’s Not Top Of Mind”: Emerging adults’ views of neighborhoods and cognitive aging
- Beyond Home Loss: Exploration of Physical Health Pathways for Residents of Smoke-Damaged versus Destroyed Homes after a WUI Fire
- Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk

Fisher, Victoria : Michigan State University
- Sprawling Out: Extending Research on Links between Urban Form and Health to Consider Additional Metropolitan Characteristics

Fleuret, Sebastien : ESO-University of Angers
- Vulnerabilities in Touristic Areas (VITA) : Mental health and the development of tourism in Quintana Roo, Mexico

Foley, Ronan : Maynooth University, Ireland
- Trace and the Sanitorium: Assembling a Hydro-Relational Geography

Forbes, Abbey : McMaster University
- Caregiving as a Human Right

Ford, Allison : University of Stirling
- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024

Friemel, Thomas : Department of Communication and Media Research, University of Zurich, Zurich, Switzerland
- Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research

Fry, Rich : Swansea University

- Ambient Air Pollution Exposure and Preterm Birth in Wales: A Population-Scale Cohort Study
- Disentangling the 'coastal effect': A population-scale joint modelling analysis of melanoma risk and ambient sunshine in Wales
- The association between long-term air pollution exposure and suicide mortality during adolescence: a population-based retrospective longitudinal cohort study

Gadri, Mandela : University of Illinois Urbana-Champaign

- Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health

Gaither, Claudia : University of North Carolina- Chapel Hill

- Ecology and Evolution of Swine Influenza in the United States
- Ecological drivers of swine influenza H3N2 transmission in the USA: a phylogeographic approach

Garrett, Camrin : University of Illinois Urbana-Champaign

- Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health

Gbadamosi, Faithwin : University at Buffalo

- Environmental Change and Spatial Patterns of Vegetation Disturbance Related to Artisanal Refining in the Niger Delta

Ge, Haoxuan Peter : University of Toronto, University of Toronto Mississauga

- Investigating the Relationship Between Psychological Stress and Physical Activity through Individual-Based Geographic Ecological Momentary Assessment

Gerber, Philippe : Luxembourg Institute of Socio-Economic Research (LISER)

- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress

Gericke, Chiara : University College London (UCL)

- A Geospatial Analysis of Clustering of Fast-Food Outlets around Schools in London (UK) and Associations with Childhood Obesity: A Longitudinal, Ecological Study

Ghanem, Ibrahim : Department of Geography and Geomatics, UTM

- Measuring the Unmeasured: Investigation of Perceived Neighbourhood Walkability and Adaptation of the Neighborhood Environment Walkability Survey (NEWS) for Racialized Communities in Canada

Ghosh, Debarchana : University of Connecticut

- A critical analysis of barriers and facilitators in accessing healthcare among transgender and gender diverse people in urban India
- Where You Are and Who You Are: Intersectionality and Traces of Health Perceptions Across African American Communities in the U.S.
- Science, Interrupted: Anxiety, Adaptation, and an NIH Grant Renewal
- Residential segregation, housing cost, and smoking behaviors in Black Americans

Gilligan, Jonathan : Vanderbilt University

- Integrated Geospatial Framework for Equitable PFAS Contamination Response in Community Water Systems

Gilliland, Jason : The University of Western Ontario

- A collaborative geospatial analysis of access to high quality parks with youth in London, Ontario, Canada
- Additive, Compensation, or Spillover? A Spatio-Temporal Analysis of the Contribution of Active School Travel to Children's Weekly Physical Activity
- Evaluating the Impact of Spatial Accessibility to Cannabis Retailers on Youth Cannabis Use in Canada from 2018 to 2023
- Bounded Mobilities: Exploring Adolescents' Mobility Habits and Constraints in High-Rise Urban Environments

Giovenco, Daniel : Columbia University Mailman School of Public Health

- Identifying barriers and facilitators to the implementation of zoning policies to equitably reduce neighborhood tobacco retailer availability

Girum, Laila : Department of Geography & Environment, Western University
- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages

Gizaw, Zemichael : Department of Geography and Planning, University of Saskatchewan
- Climate Change and Waterborne Diseases in Temperate Regions: A Systematic Review

Global Health Research Team, OPEN : University of British Columbia Okanagan
- Understanding and operationalizing equity in global health research: a critically reflective analysis of approaches to equity across the Canadian global health ecosystem

Goel, Varun : University of South Carolina
- Ecology and Evolution of Swine Influenza in the United States
- Spatiotemporal Determinants and Unintended Consequences of Inequitable Safe Drinking-Water Access in Rural Bangladesh
- The Uneven Malaria Burden of Floods: Spatial Heterogeneity in Flood-Driven Malaria Risk across Tanzania

Gómez, Myrriah : University of New Mexico
- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Gonzales, Raven : 1. Faculty of Health Disciplines, Athabasca University, Canada
- Problematic Social Media Use, Loneliness, and Neighbourhood Social Cohesion: A study of Canadian Adolescents

Gosselin, Veronique : Université de Montréal
- Power Dynamics in the Implementation of Street Rebalancing Initiatives: Implications for Urban Health Equity

Gruebner, Oliver : University of Lucerne
- A Comprehensive Scoping Review on Smart City and Mental Health Historical Evolution, Developments, and Future Directions
- Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research
- Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Guetterman, PhD, Timothy : University of Michigan, Ann Arbor, MI
- Cross-sectional correlations between county-level flooding and incidence of flood-related diagnoses
- Visualizing the location and utilization of health resource vending machines as part of an opioid overdose intervention through a local health department

Guhlincozzi, Aída : University of Missouri
- Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO
- Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study

Guo, Longhao : Department of Geography, Texas A&M University, College Station, Texas, USA
- Spatial Accessibility to Hemodialysis Centers and Chronic Kidney Disease Disparities Across Racial/Ethnic Compositions in Houston, Texas

Guthrie, Bruce : University of Edinburgh
- Association between neighbourhood greenspace availability and the development of multiple long-term conditions, a follow-up study in urban areas of Scotland

Hall, Ed : University of Dundee
- Cripping care: reimagining the landscape of disability care and support

Hamid, Asiya : Scottish Centre for Social Research

- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024

Harris, Alan : Michigan State University

- Charting the Evolution of a County EMS System through Service Privatization: A Probable Case of Hotelling's Law

Hart, Colton : Southwest Ontario Aboriginal Health Access Centre

- Reclaiming Urban Indigenous Food Sovereignty: Navigating Relational Methodologies in Community-Academic Partnerships

Hart-Thompson, Hayes : University of Colorado Boulder

- "It's Not Top Of Mind": Emerging adults' views of neighborhoods and cognitive aging
- Claiming Epistemic Ground: Immigrant Youth-Led Spatial Inquiry Framework at the Intersection of Education and Health Geographies in Boston
- Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk

Hartono, susan : University of Canberra

- Exploring the impact of neighbourhood social fragmentation on early childhood developmental vulnerability

Harvey, Heather : City of Hamilton

- The CIHR Healthy Cities Research Initiative: Partnering for Active School Transportation in Hamilton, Ontario, Integrating Learnings from Helsinki, Finland

Hass, Fiona : University of California, Santa Barbara

- Reproductive Health across the Life Course: Linking Early Menarche to Disease

Hegarty, Justin : Reflo

- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin

Henry, Kevin : Temple University, Fox Chase Cancer Center

- Associations between Long-Term Residential Exposure to Historical Redlining and High-Poverty and Prostate Cancer Stage at Diagnosis.
- Responsible GeoAI for Cancer Research: Synthesizing GeoAI and CancerAI with a Case Study of Early-Onset Colorectal Cancer

Heo, Seulkee : Yale School of the Environment

- Paths Forward for Environmental Health: Survey Results

Hewitt, Christopher : University of Western Ontario, Canada

- Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Hildago, Julia : Université de Toulouse, Laboratoire Interdisciplinaire Solidarités Sociétés Territoires (LISST), CNRS, Toulouse, France

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Hill, Allison : University of Iowa

- Individual and Community Determinants of Adolescent HPV Vaccination in Iowa

Hills, Samuel : Bournemouth University

- Association between air temperature and unintentional drowning risk in the United Kingdom 2012-2019: a geospatial nationwide case-crossover study
- The water incident database (WAID) 2012 to 2019: a systematic evaluation of the documenting of UK drownings

Hirni, Megan : University of Missouri, Educational, School & Counseling Psychology

- Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study

Hobbs, Matthew : University of Canterbury
- Association between air temperature and unintentional drowning risk in the United Kingdom 2012-2019: a geospatial nationwide case-crossover study
- The water incident database (WAID) 2012 to 2019: a systematic evaluation of the documenting of UK drownings

Hoh, Nicole : University of Toronto Department of Geography and Planning
- Impacts of the built environment, seasonality, and transport on commuting mode choice and health in university students

Holmes, Martin : University of Toronto
- Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access

Holtge, Jan : Resilience Research Centre, Dalhousie University
- Flourishing Youth (FLY) Zones - A Population Health Framework for Identifying and Studying Place-Based Youth Well-being

Home, Philip : University of Nottingham
- The Diminishing Returns of Greenness: A Spatially Adjusted Temporal Analysis of Taxon-Specific Biodiversity and Community Mental Health

Horner, Mark : Florida State University
- Migration across the life course and adaptations to extreme heat

Huang, Xin : Southern University of Science and Technology
- Extreme Weather Triggers Cascading Disruptions Across Ambulance Response Stages
- Compound Temperature-humidity Extremes Increase Acute Mental Health Outcomes: A 12-year Case-crossover Metropolitan Study
- Development and Validation of a Machine Learning based Site Selection Model for Primary Healthcare Facilities in Metropolitan China

Hugonnier, Jérémy : Université de Sherbrooke
- Neighbourhood revitalization, changes in housing, and young adult health and well-being: insights from go-along interviews in Sherbrooke, Canada

Hurst, Patricia : Brock University
- Jurisdictions in Response to Public Health Emergencies from the Burlington Skyway Bridge: A Collaboration between the Hamilton-Oshawa Port Authority and Brock University

Hylton-Pelaia, Jayda : Ontario Tech University
- Supporting Girls' Sport Participation: Development and Evaluation of an Evidence-Informed Parental Digital Toolkit

Ienciu, Kristine : York University
- Geographic Patterns of Domestic Violence and Abuse: Sexual Orientation Disparities in Ontario
- Geographies of Housing Insecurity: Equity Transitions for Gender Diverse Households in Canada
- Uneven Geographies of Preventable Acute Care: Sexual Orientation Inequities in Ambulatory Care-Sensitive Conditions in Ontario, Canada

Iqbal, Zafar : Peer Research Assistant
- Medical Uncertainty, Structural Inequities and Disease: The Experiences of Long-COVID Among Racialized Immigrants and Racialized Non-Immigrants in Canada

Isham, Amy : Swansea University
- Ambient Air Pollution Exposure and Preterm Birth in Wales: A Population-Scale Cohort Study

Ishaque, Ali : University of Maryland - Eastern Shore

- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Ishimaru, Tomona : University of Tsukuba, Graduate School of Comprehensive Human Sciences

- Spatial Clustering Patterns of Short-Stay Care Services in Designated Cities in Japan

Islam, Md Sirajul : International Centre for Diarrhoeal Disease Research, Bangladesh (icddr, b), Dhaka, Bangladesh

- Spatiotemporal Determinants and Unintended Consequences of Inequitable Safe Drinking-Water Access in Rural Bangladesh

Iwas, Tanya : Department of Geography & Environment, Western University

- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages

Iyer, Sindhuja : McMaster University

- The Healing Home Project: Inclusive Therapeutic Design to Support Mental Health of South Asian Elders in GTA Retirement Homes

Jackson, Rebecca E : University of Nottingham

- Participation, Performance, and Potential for Health: Towards Critical Geographies of Health and Sport

Jamal, Sherin : Fraser Health Authority

- Barriers and Builders to Belonging: Insights from Community Organizations on Supporting Older People Living with HIV in Long-Term Care and Assisted Living in British Columbia's Fraser Health Region

James, Alexandra : University of Missouri

- Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO

Janikowski, Courtney : Medical College of Wisconsin

- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin

Januel, Edouard : Sorbonne Université, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, Equipe PEPITES, Hôpital Fondation A. de Rothschild, Neurology Department and Clinical Research Unit, Paris, France

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Jayashankaramma Shankar raj, Mohan Raju : University Medical Centre, Amsterdam

- Mapping the retail food environment at high resolution across Europe

Jebuni, Julius : School of Kinesiology and Health Studies, Queen's University, Canada

- Frames of neglect: necropolitics and the discursive construction of Ghana's galamsey environment-health Crisis
- Exploring the intersections of climate change, Indigenous food systems, and gendered adaptation in sub-Saharan Africa: A systematic review

Jerrett, Michael : University of California, Los Angeles

- Exposure Reconstruction for Environmental Health Research

Jewett, Ray : University of Toronto

- Designing a Framework for Measuring Equitable Access to Health Services

Jewitt, Sarah : University of Nottingham

- Participation, Performance, and Potential for Health: Towards Critical Geographies of Health and Sport

jha, Pinky : Medical college of wisconsin

- Scorching Inequality: Occupational Heat Stress and Kidney Injury Among Nepali Migrant Workers

John, Ann : Swansea University

- The association between long-term air pollution exposure and suicide mortality during adolescence: a population-based retrospective longitudinal cohort study

Johnson, Paul : Vanderbilt University

- Integrated Geospatial Framework for Equitable PFAS Contamination Response in Community Water Systems

Jungbluth, Julia : Research Center for Public, Planetary and Digital Health (P^2D), IU International University of Applied Sciences

- Therapeutic Landscapes Between Meaning and Measurement

Jurkus, Meya : School of Public Health Sciences, Faculty of Health, University of Waterloo, Waterloo, ON, Canada

- A Qualitative Study Exploring People Who Use Drugs' Understandings of Safety at the Intersection of Built Environments and the Toxic Drug Poisoning Crisis
- From Risk to Care: Exploring the Role of the Built Environment in Shaping Overdose Survivability Among People Who Use Drugs in British Columbia: A Qualitative Case Study

Kaburia, Joan : University of Waterloo

- A Relational Approach to Food Security: Participatory Research With Youth in Western Kenya

Kafle, Birat : Temple University

- Associations between Long-Term Residential Exposure to Historical Redlining and High-Poverty and Prostate Cancer Stage at Diagnosis.

Kahl, Amanda : University of Iowa

- Individual and Community Determinants of Adolescent HPV Vaccination in Iowa

Kampman, Halie : Pennsylvania State University

- Responsibilizing Health and the Changing States of Care

Kandlakuti, Bhargav : Department of Geography & Environment, Western University

- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages

Kangmennaang, Joseph : Queen's University

- 'We did not know stroke, and we also did not know ulcers': A qualitative study of perceived health impacts of food systems globalization on smallholder farmers in northern Ghana
- Frames of neglect: necropolitics and the discursive construction of Ghana's galamsey environment-health Crisis
- Exploring the intersections of climate change, Indigenous food systems, and gendered adaptation in sub-Saharan Africa: A systematic review
- Coping with non-communicable diseases in a changing climate: A mixed methods study of coping strategies of smallholder farmers living with non-communicable diseases in northern Ghana
- Women, water and building back better: a case study of WASH and COVID-19 in East Africa

Karanja, Diana : COHESU

- Women, water and building back better: a case study of WASH and COVID-19 in East Africa

Katapally, Tarun Reddy : University of Western Ontario

- DiScO: Reimagining Real Time Public Health Crises Response through Human Centred AI and Digital Transformation
- Impacts of Climate Change in Rural Pune, India: Qualitative Findings from the Climate Care India initiative

Katende, Dan : Uganda Harm Reduction Network

- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Kearns, Robin : University of Auckland

- Traces and spaces: the past's presence on the quarantine islands of Aotearoa's archipelago

Keenan, Katherine : University of St Andrews
- Association between neighbourhood greenspace availability and the development of multiple long-term conditions, a follow-up study in urban areas of Scotland

Keith, Scott : Jefferson University
- Associations between Long-Term Residential Exposure to Historical Redlining and High-Poverty and Prostate Cancer Stage at Diagnosis.

Kempski, Alice : The Football Association
- Participation, Performance, and Potential for Health: Towards Critical Geographies of Health and Sport

Khadilkar, Anuradha : Hirabai Cowasji Medical Research Institute
- Impacts of Climate Change in Rural Pune, India: Qualitative Findings from the Climate Care India initiative

Khan, Wania : McMaster University
- The Invisible Toll: Women's Caregiving and the Hidden Labour of Enduring Climate

Khurana, Mishika : Toronto Metropolitan University
- Healthcare Access for Precarious Populations: A spatial analysis of Toronto, Canada

Kiconco, Arthur : Medical College of Wisconsin
- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Kiely, Ed : Queen Mary University of London
- Care in Crisis: Involuntary psychiatric detention as a violent practice of care

Kim, Hyun : University of Tennessee
- Spatial Optimization Approach for Assessing Spatial Vulnerabilities in Healthcare Access

Kim, Rebekah : Department of Geography and Environmental Management, University of Waterloo, Canada
- Frames of neglect: necropolitics and the discursive construction of Ghana's galamsey environment-health Crisis

King, Brian : Pennsylvania State University
- The Financialization and Digitalization of Opioid Treatment
- Responsibilizing Health and the Changing States of Care

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- Problematic Social Media Use, Loneliness, and Neighbourhood Social Cohesion: A study of Canadian Adolescents

Kintigh, Bethany : Iowa Department of Health & Human Services
- Individual and Community Determinants of Adolescent HPV Vaccination in Iowa

Kirkpatrick, Sharon : University of Waterloo
- Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access

Kis, Anne : HafenCity University, Hamburg
- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Kish, Antonia : University of Canberra

- Exploring the impact of neighbourhood social fragmentation on early childhood developmental vulnerability

Klassen, Ann : Drexel University
- Associations between Long-Term Residential Exposure to Historical Redlining and High-Poverty and Prostate Cancer Stage at Diagnosis.

Klein, Olivier : Luxembourg Institute of Socio-Economic Research (LISER)
- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress

Klein, Sylvain : Luxembourg Institute of Socio-Economic Research (LISER)
- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress

Kloss, Olena : Manitoba Metis Federation
- “I had to load up a car full of people to get tested”: Rural and Remote Red River Metis experiences of COVID-19

Kocbach Bølling, Anette : Norwegian Institute of Public Health
- Burden of disease from road traffic noise and associations with socioeconomic marginalization in Toronto, Canada

Kolak, Marynia : University of Illinois Urbana-Champaign
- Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health
- Design and Community Engagement in Spatial Web-Based Applications for Public Health: A Web Mapping Application Evaluation Framework

Kong, Amanda : Wake Forest University School of Medicine
- Identifying barriers and facilitators to the implementation of zoning policies to equitably reduce neighborhood tobacco retailer availability
- “People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Konkor, Irenius : School of Public Health Sciences, University of Waterloo
- Trust and Zoonotic Disease Surveillance Among Nomadic Pastoralists in Sub-Sahara Africa: A Scoping Review
- Determinants of Awareness and Use of HIV Self-Test Kits Among Men in Three African Countries: A Cross-Sectional Study

Kreidler, Nicole : West Virginia University
- Home as Therapeutic Landscape: The Role of Residential Environments in Healing

Kristensen, Kathleen : University of Illinois Chicago
- Housing Instability and Transitions Among People Who Inject Drugs in Chicago and Surrounding Suburbs: A Hidden Markov Model Analysis

Krügel, Falko : Faculty of Environmental Sciences, Chair of Geoinformatics, Technical University Dresden
- Therapeutic Landscapes Between Meaning and Measurement

Krzywania, Monika : PhD Candidate, University of Northern British Columbia
- Blizzards, boom and bust cycles, and… babies? How physical and cultural geographies of northern Ontario shape regional perinatal health inequities.

Kwan, Mei-Po : The Chinese University of Hong Kong
- Sampling The City: Revisiting The Neighborhood Effect Averaging Problem Through The Interplay Between Mobility And Socio-spatial Contexts

L. Frohlich, Katherine : Université de Montréal

- Who Shapes Children's Mobility ? Parent-Child Discrepancies and Urban Environment interactions in Montreal.
- Power Dynamics in the Implementation of Street Rebalancing Initiatives: Implications for Urban Health Equity
- Imagining Ideal School Streets Through Minecraft: A Child-Centred Participatory Mapping Approach

Lafreniere, Don : Michigan Technological University

- Sprawling Out: Extending Research on Links between Urban Form and Health to Consider Additional Metropolitan Characteristics

Lakerveld, Dr. Jeroen : University Medical Centre, Amsterdam

- Mapping the retail food environment at high resolution across Europe

Lakshman, Maya : Johns Hopkins Bloomberg School of Public Health

- Vicious Terrain and the Production of Premature Death: Validating a Structural Violence Index in Necropolitical Geographies

Landwehr, Andre : University of Hamburg

- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Larson, Trent : North Carolina Agricultural and Technical State University

- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Lartey, Benjamin Nii Badu : Department of Geography, Simon Fraser University, Burnaby, BC, Canada

- A Qualitative Study Exploring People Who Use Drugs' Understandings of Safety at the Intersection of Built Environments and the Toxic Drug Poisoning Crisis
- From Risk to Care: Exploring the Role of the Built Environment in Shaping Overdose Survivability Among People Who Use Drugs in British Columbia: A Qualitative Case Study

Laughlin, Sarah : University of Colorado Boulder

- Beyond Home Loss: Exploration of Physical Health Pathways for Residents of Smoke-Damaged versus Destroyed Homes after a WUI Fire

Lawson, Erica : Western University

- Multisectoral Approach to Managing Disease Outbreaks in Post-Conflict Settings: The Ebola situation in Liberia

Layden, Daniel : University of Guelph

- Local Online Spaces, Rural Wellbeing, and 2SLGBTQ+ Exclusion: Rethinking Digital Geographies of Health in Rural Ontario
- Beyond Service Deserts: Mapping Lived Healthcare Landscapes in Rural Ontario Using Survey and GIS Methods

Leatherdale, Scott : University of Waterloo

- Evaluating the Impact of Spatial Accessibility to Cannabis Retailers on Youth Cannabis Use in Canada from 2018 to 2023

Lee, Minyong : North Carolina Agricultural and Technical State University

- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Leroux, Janette : School of Kinesiology & Health Studies, Queen's University

- Down the drain: A feminist framing analysis of public washrooms in Canadian news media during the first year of the COVID-19 pandemic
- Policy imagination in health policy education: a SoTL study of critique and possibility

Levasseur, Mélanie : Univeristé de Sherbrooke

- How are public participation processes experienced in the context of urban regeneration initiatives? A descriptive interpretive qualitative study.

Levitskaya, Elena : York University
- To what extent do patterns of IPV-related emergency department visits differ across sexual orientations, and do these disparities vary by sex?

Lewis, Shaniqua : Wake Forest University School of Medicine
- “People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Lewkowitz, Shawna : The University of Western Ontario
- A collaborative geospatial analysis of access to high quality parks with youth in London, Ontario, Canada

Li, Chunjiang : University of Toronto
- Contextualized urban food environment research

Li, CONGPING : university of toronto
- Spatiotemporal Dynamics of Urban Amenity Accessibility and Its Lagged Effects on Long-Term Mental Well-Being: A Case Study of Mississauga, Canada

Li, Meifang : Department of Geography, Dartmouth College, Hanover, NH
- Integrating Long-Term Residential Histories into Environmental Epidemiology: A Spatiotemporal Approach to ALS and Airborne Lead Exposure

Li, Tianyu : The University of Hong Kong
- Acute Stress Responses and Mental Health Impacts: Rapid Evidence from the Deadly Tai Po Fire in Hong Kong

Li, Wenwen : Arizona State University
- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes

Lin, Qi : Department of Civil and Urban Engineering, Tandon School of Engineering, New York University, Brooklyn, NY 11201, USA
- Quantifying Causal Effect of Extreme Heat on Dog Bite Incidents in New York City: A Spatio-Temporal Analysis of Community Vulnerability

Lin, Qinyun : University of Gothenburg
- Measuring Differential Exposure, Susceptibility, & Adaptability as Dimensions of Vulnerability for U.S. Counties Across the Pandemic

Lin, Zihan : Cleveland State University
- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Liu, Bochu : Tongji University
- Contextualized urban food environment research
- Socioeconomic inequalities in online fresh food delivery use and associations with the neighborhood food environment

Liu, Chang : Nanjing University
- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes

Liu, Chuhao : The University of Tokyo
- Socioeconomic inequalities in online fresh food delivery use and associations with the neighborhood food environment

Llewellyn, Clare : University College London (UCL)
- A Geospatial Analysis of Clustering of Fast-Food Outlets around Schools in London (UK) and Associations with Childhood Obesity: A Longitudinal, Ecological Study

Lo, Ryan : Urban Minds
- Bounded Mobilities: Exploring Adolescents' Mobility Habits and Constraints in High-Rise Urban Environments

Loftus, Rachel : University of Illinois Urbana-Champaign
- Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health

Loignon, Christine : Sherbrooke University
- Gentrification and young adults in a mid-size Canadian city: how does it shape young adult mental health?
- Potential Spatial Accessibility to Primary Health Care in The Province of Quebec Over Time: Associations with Gentrification
- Conceptualizing Healthcare Gentrification: Results From a Scoping Review

Lovell, Sarah : University of Canterbury
- The disutility of health reform? Leaders' responses to change in an over-constrained system

Luan, Hui : University of Texas Southwestern Medical Center
- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes
- Spatial Optimization for Equitable PrEP Access: Comparing HIV Testing Site Adaptation and New Provider Siting in Atlanta

Luginaah, Isaac : Western University
- Frames of neglect: necropolitics and the discursive construction of Ghana's galamsey environment-health Crisis
- Misconceptions and Misdiagnosis of Hypertension: Comparing and Contrasting the Determinants of Self-Reported and Measured Hypertension
- Multisectoral Approach to Managing Disease Outbreaks in Post-Conflict Settings: The Ebola situation in Liberia
- HIV Anti-Stigma Empowerment Readiness Among Service Providers in Canada: A Post-intervention Assessment of Sustained Impact
- Coping with non-communicable diseases in a changing climate: A mixed methods study of coping strategies of smallholder farmers living with non-communicable diseases in northern Ghana

Lunel, Nathan : Sherbrooke University
- Potential Spatial Accessibility to Primary Health Care in The Province of Quebec Over Time: Associations with Gentrification

Luy Tan, Emily : Department of Geography, Dartmouth College, Hanover, NH
- Integrating Long-Term Residential Histories into Environmental Epidemiology: A Spatiotemporal Approach to ALS and Airborne Lead Exposure

Lyeo, Joonsoo : McMaster University
- Understanding the place of urban nature in the therapeutic landscapes literature: A scoping review
- Using a Gaming Intervention to Increase Awareness of and Therapeutic Benefits from Urban Nature
- Perceptions of Polar Regions as Therapeutic Landscapes: A Qualitative Exploration

Lynch, Shannon : Fox Chase Cancer Center
- Responsible GeoAI for Cancer Research: Synthesizing GeoAI and CancerAI with a Case Study of Early-Onset Colorectal Cancer

Lyu, Yilin : University of Illinois Urbana-Champaign
- Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health

MacGregor, Andy : Scottish Centre for Social Research
- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024

Mackesy-Amiti, Mary Ellen : University of Illinois Chicago
- Housing Instability and Transitions Among People Who Inject Drugs in Chicago and Surrounding Suburbs: A Hidden Markov Model Analysis

Mackintosh, Anne Marie : University of Stirling

- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024

Macklean, Kyomya : Alliance of Women Advocating for Change
- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Magezi, Resty : Alliance of Women Advocating for Change
- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Mah, Sarah M. : University of Vermont
- Capturing Dynamic Neighborhood Exposures and Population Health: A New Application of Vermont's All-Payer Claims Data

Maier, Ryan : University of Manitoba
- "I had to load up a car full of people to get tested": Rural and Remote Red River Metis experiences of COVID-19

Mandlik, Rubina : Hirabai Cowasji Medical Research Institute
- Impacts of Climate Change in Rural Pune, India: Qualitative Findings from the Climate Care India initiative

Mang, Shari : Centre for Ecology and Conservation, University of Exeter
- Socio-spatial inequalities in UK urban tree canopy cover

Mann-Jackson, Lilli : Wake Forest University School of Medicine
- "People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt": Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Mant, Madeleine : University of Toronto Mississauga
- Medical Uncertainty, Structural Inequities and Disease: The Experiences of Long-COVID Among Racialized Immigrants and Racialized Non-Immigrants in Canada

Marek, Lukas : GeoHealth Laboratory & Geospatial Research Institute, University of Canterbury, New Zealand
- Beyond Residence: Rethinking Environmental Exposure Assessment in Health Geography Using Mobile Phone Location Data
- Mental wellbeing and loneliness in Aotearoa, New Zealand: A spatial microsimulation approach

Mariathasan, Azvin : UCL
- Shepherds and Shopkeepers: Homeworking and health in the Covid-19 Lockdown

Marie-Dit-Chirot, Clement : ESO-University of Angers
- Vulnerabilities in Touristic Areas (VITA) : Mental health and the development of tourism in Quintana Roo, Mexico

Marsh, Pauline : University of Tasmania
- Understanding the place of urban nature in the therapeutic landscapes literature: A scoping review

Marshall, Alan : University of Edinburgh
- Association between neighbourhood greenspace availability and the development of multiple long-term conditions, a follow-up study in urban areas of Scotland

Martel, Esther : McMaster University
- Active Commuting and Air Pollution Risk Perception in a Changing Urban Environment: Evidence from Markham, Ontario

Martin, Gina : Athabasca University
- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages
- Problematic Social Media Use, Loneliness, and Neighbourhood Social Cohesion: A study of Canadian Adolescents
- Evaluating the Impact of Spatial Accessibility to Cannabis Retailers on Youth Cannabis Use in Canada from 2018 to 2023

Masselot, Pierre : London School of Hygiene and Tropical Medicine, Public Health and Policy, London, United Kingdom

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Masson, Valery : Université de Toulouse, CNRM, Météo-France, CNRS, Toulouse, France

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Mastrosavvas, Andreas : UCL

- Shepherds and Shopkeepers: Homeworking and health in the Covid-19 Lockdown

MATSUOKA, Yuka : NAGOYA University

- Reform of community care and wellbeing for individuals with mental health problems in Japan

Mavinga, Laurent : TAS Goma

- Trauma, mapepo, and the limits of “treatment gaps” in Ituri, Democratic Republic of Congo

McAnirlin, Olivia : Clemson University

- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

McCullough, Emily : School of Kinesiology & Health Science, Faculty of Health, York University

- Down the drain: A feminist framing analysis of public washrooms in Canadian news media during the first year of the COVID-19 pandemic

McDonald, Yolanda : Vanderbilt University

- Integrated Geospatial Framework for Equitable PFAS Contamination Response in Community Water Systems

McDuffee, Laura : Wake Forest University School of Medicine

- “People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

McMahon, Claire : University of Missouri

- Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO

McNair, Christopher : Sidney Kimmel Comprehensive Cancer Center, Jefferson Health

- Responsible GeoAI for Cancer Research: Synthesizing GeoAI and CancerAI with a Case Study of Early-Onset Colorectal Cancer

Meaney, Mark : Public Health Law Center

- Identifying barriers and facilitators to the implementation of zoning policies to equitably reduce neighborhood tobacco retailer availability

Medeiros, Adam : University of Guelph

- “Take Care of the People, the People Take Care of the Business”: Exploring the Municipal Economic Development Role in Rural Wellbeing through Disruption, Recovery, and Resilience

Meho-Akakpo, Pascal : Queen's University

- Trust and Zoonotic Disease Surveillance Among Nomadic Pastoralists in Sub-Sahara Africa: A Scoping Review

Meho-Akakpo, Pascal : School of Kinesiology and Health Studies, Queen’s University, Canada

- Frames of neglect: necropolitics and the discursive construction of Ghana’s galamsey environment-health Crisis

Melchert, Johannes : Heidelberg University

- Tracing Biosocial Ambiguities: Young People with Disabilities Negotiating Everyday Spaces

Members 2024/25, HEALYAC : The University of Western Ontario

- A collaborative geospatial analysis of access to high quality parks with youth in London, Ontario, Canada

Mena Arredondo, Carla : Wake Forest University School of Medicine

- “People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Miller, Matthew : University of Colorado Boulder

- Beyond Home Loss: Exploration of Physical Health Pathways for Residents of Smoke-Damaged versus Destroyed Homes after a WUI Fire

Milne, Emma Sage : University of Guelph: School of Environmental Design & Rural Development

- Is This the New Normal?: The Escalation & Normalization of Emergency Department Closures in Ontario

Minaker, Leia : University of Waterloo

- Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access
- Bounded Mobilities: Exploring Adolescents’ Mobility Habits and Constraints in High-Rise Urban Environments

Misera, Jan : Heidelberg University

- Tracing Biosocial Ambiguities: Young People with Disabilities Negotiating Everyday Spaces

Missling, Allyson : Luxembourg Institute of Socio-Economic Research (LISER)

- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress

Mitchell, Richard : University of Glasgow

- Alcohol outlet density and wholly attributable hospitalisations in Scotland: an individual level follow up study across two time periods
- Woodland interventions for healthier child development.
- Incorporating nature in walkability indices

Mithani, Akber : Fraser Health Authority

- Barriers and Builders to Belonging: Insights from Community Organizations on Supporting Older People Living with HIV in Long-Term Care and Assisted Living in British Columbia’s Fraser Health Region

Mizen, Amy : Swansea University

- Ambient Air Pollution Exposure and Preterm Birth in Wales: A Population-Scale Cohort Study
- Disentangling the ‘coastal effect’: A population-scale joint modelling analysis of melanoma risk and ambient sunshine in Wales
- The association between long-term air pollution exposure and suicide mortality during adolescence: a population-based retrospective longitudinal cohort study

Mlacha, Yeromin : Ifakara Health Institute, Tanzania

- The Uneven Malaria Burden of Floods: Spatial Heterogeneity in Flood-Driven Malaria Risk across Tanzania

Mohammed, Kamaldeen : Department of Geography & Environment, Western University

- Misconceptions and Misdiagnosis of Hypertension: Comparing and Contrasting the Determinants of Self-Reported and Measured Hypertension

Mokrzycki, Paul : McMaster University

- Sport as Crisis Infrastructure: Displacement, Governance, and Belonging Amid a Humanitarian Crisis

More, Chidvilas : Hirabai Cowasji Medical Research Institute

- Impacts of Climate Change in Rural Pune, India: Qualitative Findings from the Climate Care India initiative

Morgan, Amber-Jane : University of Stirling

- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024

Morgan, Halston : McMaster University

- Shaping Support: Federal Funding and Policy Divisions for Canada's Compassionate Care Benefit

Morioka, Wataru : Department of Geography and Geosciences, Salisbury University, Salisbury, Maryland, USA

- "My Paycheck Makes Me Happy, But Place Relieves My Stress": Mental Health, Income, and Therapeutic Landscapes among Migrant Care Workers in Japan

Morlighem, Camille : Sorbonne Université, INSERM, Institut Pierre Louis d'Épidémiologie et de Santé Publique, Nemesis research team

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Morris, Courteney : Western University

- Who Gets to Be Well? Indigenous Fat Bodies, Sovereignty, and the Limits of Health Geography

Morton Ninomiya, Maya : Western University

- Environmental Repossession in the City: Urban Indigenous Youth Reclaiming Place, Community, and Land in London, Ontario.

Munn, Joseph : The Hospital for Sick Children, ICES, University of Toronto

- Residential odour impact and well-being in a steel manufacturing city

Murphy, Lisa : Point Park University

- GeoArt for Policy conversation and holistic wellbeing

Murphy, Rachel : University of British Columbia

- Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access

Musah, Cynthia : Department of Geography and Environmental Management, University of Waterloo, Canada

- Frames of neglect: necropolitics and the discursive construction of Ghana's galamsey environment-health Crisis

Nakawooya, Hadijja : University of South Carolina

- The Uneven Malaria Burden of Floods: Spatial Heterogeneity in Flood-Driven Malaria Risk across Tanzania

Naude, Katica : University of British Columbia, Department of Geography

- Geographic Access to Gender-Affirming Hormone Therapy Across Major US Metropolitan Areas
- Pathways to Trans Care: Travel Patterns, Information Seeking & Geographic Access to Gender-Affirming Hormone Therapy

Neeb, Lisa : Reflo

- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin

Neely, Abigail : Department of Geography, Dartmouth College

- "I Had to Go There for My Own Safety": Negotiations of Access and Autonomy among DC Birth Settings

Nelson, Sarah : University of Nebraska at Omaha

- Geographies of COVID-19: Hindsights and Insights for Health Geography

Newbold, Bruce : McMaster University

- Sport as Crisis Infrastructure: Displacement, Governance, and Belonging Amid a Humanitarian Crisis
- Later-Life Mobility as a Relational Process: Insights from Older Adult Migration Data
- Active Commuting and Air Pollution Risk Perception in a Changing Urban Environment: Evidence from Markham, Ontario

Nickel, Nathan : University of Manitoba
- “I had to load up a car full of people to get tested”: Rural and Remote Red River Metis experiences of COVID-19

Nkemka, Chibueze : Wilfrid Laurier University
- Explaining Negative Affect across Los Angeles in the Aftermath of Nipsey Hussle’s Death: The Role of Neighborhood Context

Noennig, Jörg : HafenCity University, Hamburg
- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Norman, Paul : The University of Leeds
- Inequalities in midlife mortality (1991-2019) in England by intersecting structural neighbourhood characteristics: A longitudinal application of eco-intersectional modelling

North, Laura : Swansea University
- The association between long-term air pollution exposure and suicide mortality during adolescence: a population-based retrospective longitudinal cohort study

Norton, Amanda : Department of Statistical Sciences, University of Toronto, Department of Geography and Planning, University of Toronto
- Climate, Overdose, and Resilience: Combining Open Source Data to Examine Seasonality in Opioid Overdose and Shelter Utilization in Toronto

Nowak, Sarah : Larner College of Medicine, University of Vermont
- Capturing Dynamic Neighborhood Exposures and Population Health: A New Application of Vermont’s All-Payer Claims Data

Nunbogu, Abraham : United Nations University Institute for Water, Environment and Health
- Places of life in fear: the necropolitics of violence against children

Nuzhat, Samiha : Department of Geography, University of South Carolina, USA
- Spatiotemporal Determinants and Unintended Consequences of Inequitable Safe Drinking-Water Access in Rural Bangladesh

Nyantakyi-Frimpong, Hanson : University of Denver
- Assessing Agroforestry for Climate Change Mitigation in Semi-arid Ghana from a Human-Environment Health Perspective

O'Brien, Mallory : Johns Hopkins Bloomberg School of Public Health
- Spatial-Temporal Associations between Alcohol Outlet Access and Neighborhood Gun Violence Risk in Washington, D.C.

Odell, Nicole : Michigan State University
- Factors influencing the relationship between an objective walkability index and device-derived physical activity in low-income neighborhoods in Detroit

Ogledzinski, MD, Matt : Creighton university School of Medicine, Omaha, Nebraska 68178
- Visualizing the location and utilization of health resource vending machines as part of an opioid overdose intervention through a local health department
- Methods - Extracting historical National Weather Service warning, watch, and advisory data from the Iowa Environmental Mesonet for spatial analysis

Ogletree, Scott : University of Edinburgh
- Woodland interventions for healthier child development.

Oiamo, Tor : Department of Geography and Environmental Studies, Toronto Metropolitan University
- Burden of disease from road traffic noise and associations with socioeconomic marginalization in Toronto, Canada
- Traffic noise impacts on elementary school standardized test scores in Toronto, Canada

Okoduwa, Edoseawe (Godwin) : Medical College of Wisconsin
- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Okoth, Charles : Alliance of Women Advocating for Change
- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Olsen, Jonathan : The University of Queensland
- Incorporating nature in walkability indices

Olymbios, Georgia : Yellow Door Kids
- Building Better: Neighbourhoods to benefit children with disability

Omura, Miho : University of Tsukuba, Institute of Human Sciences, Department of Disability Sciences
- Spatial Clustering Patterns of Short-Stay Care Services in Designated Cities in Japan

Orbann, Carolyn : University of Missouri, College of Health Sciences
- Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study

Osima, Sarah : Tanzania Meteorological Authority
- The Uneven Malaria Burden of Floods: Spatial Heterogeneity in Flood-Driven Malaria Risk across Tanzania

Ototo, Ednah : University of Waterloo
- Women, water and building back better: a case study of WASH and COVID-19 in East Africa

Ouellet, Julie : Université de Sherbrooke, Université Laval
- Conceptualizing Healthcare Gentrification: Results From a Scoping Review

Ouma, Simple : The AIDS Support Organisation
- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Overvelde, Alexandra : Queen's University
- Essential, Precarious, and Newsworthy: An Analysis of News Coverage on Canadian Grocery Workers during the COVID-19 Pandemic

Owen, Rhiannon : Swansea University
- Disentangling the ‘coastal effect’: A population-scale joint modelling analysis of melanoma risk and ambient sunshine in Wales

Pabayo, Roman : University of Alberta
- Association Between Public Health Unit Finding and Deaths of Despair in Ontario Before and During COVID-19

PADONOU, Edoro Serge Léon : Ecole de santé publique de l' Université de Montréal, Centre de recherche en santé publique (CReSP), Université de Montréal
- Who Shapes Children’s Mobility ? Parent-Child Discrepancies and Urban Environment interactions in Montreal.

Paguay, Emilia Ramírez : University of Missouri, Communications
- Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study

Palmer, Mark : University of Missouri
- Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO

Papaconstantinou, Efrosini : Ontario Tech University

- Supporting Girls' Sport Participation: Development and Evaluation of an Evidence-Informed Parental Digital Toolkit

Papeix, Caroline : Hôpital Fondation A. de Rothschild, Neurology Department and Clinical Research Unit, Paris, France

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Parashar, Surita : B.C. Centre for Excellence in HIV/AIDS

- Barriers and Builders to Belonging: Insights from Community Organizations on Supporting Older People Living with HIV in Long-Term Care and Assisted Living in British Columbia's Fraser Health Region

Parnisari, Elena : Université de Montréal

- Power Dynamics in the Implementation of Street Rebalancing Initiatives: Implications for Urban Health Equity

Parsons, Joanne L : University of Manitoba

- Participation, Performance, and Potential for Health: Towards Critical Geographies of Health and Sport

Pearce, Jamie : University of Edinburgh

- Alcohol outlet density and wholly attributable hospitalisations in Scotland: an individual level follow up study across two time periods
- Woodland interventions for healthier child development.
- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024
- Association between neighbourhood greenspace availability and the development of multiple long-term conditions, a follow-up study in urban areas of Scotland

Pearson, Amber : Michigan State University

- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health
- Factors influencing the relationship between an objective walkability index and device-derived physical activity in low-income neighborhoods in Detroit
- Science Interrupted: Grant Terminations, Political Interference, and the Struggle to Sustain Trust in U.S. Research

Peprah, Emmanuel : New York University

- Depression in a Rapidly Urbanising African City: Urban Environment, Neighbourhood Stress, and Spatial Risk in Accra, Ghana

Perchoux, Camille : Luxembourg Institute of Socio-Economic Research (LISER)

- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress
- Investigating the dose-response effect of walking in virtual urban environments on stress levels
- Effects of the Number and Sequence of Environmental Exposure Episodes on Stress Responses

Perera, Chrishma D. : Western University, Canada

- Co-developing a community-based recipe book to support Urban Indigenous Food Sovereignty

Perry, Lucy : Swansea University

- Ambient Air Pollution Exposure and Preterm Birth in Wales: A Population-Scale Cohort Study

Peters, Mariah : Department of Geography & Environment, Western University

- Misconceptions and Misdiagnosis of Hypertension: Comparing and Contrasting the Determinants of Self-Reported and Measured Hypertension

Petet, Tatem : University of Missouri

- Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO

Pfeiffer, Karin : Michigan State University

- Factors influencing the relationship between an objective walkability index and device-derived physical activity in low-income neighborhoods in Detroit

Philipneri, Anne : Public Health Ontario
- Evaluating the Impact of Spatial Accessibility to Cannabis Retailers on Youth Cannabis Use in Canada from 2018 to 2023

Pietroniro, Alain : Schulich School of Engineering, University of Calgary
- Climate Change and Waterborne Diseases in Temperate Regions: A Systematic Review

Pincham, Mitchell : Te Ngira; Institute for Population Research, University of Waikato, Aotearoa New Zealand
- Climate change impacts on inequitable access to healthcare in Aotearoa New Zealand

Pineault, Justine : Université de Sherbrooke
- Gentrification and young adults in a mid-size Canadian city: how does it shape young adult mental health?
- Conceptualizing Healthcare Gentrification: Results From a Scoping Review

Plamondon, Katrina : University of British Columbia Okanagan
- Building consensus for future pandemic readiness through deliberative dialogues on trust in mRNA vaccines
- Understanding and operationalizing equity in global health research: a critically reflective analysis of approaches to equity across the Canadian global health ecosystem

Polintan, Miesha : Queen's University
- “They have my number, but they have not called to check up on me”: Exploring trust in the health care system among sex workers living with HIV in Kumasi, Ghana
- Interventions to improve health and the determinants of health among sex workers living with HIV in Sub-Saharan Africa: a systematic review

Poppe, Louise : Ghent University
- Investigating the dose-response effect of walking in virtual urban environments on stress levels

Power, Andrew : University of Southampton
- Care as Place-Making: Ambivalent atmospheres towards ‘feeling at home’ in Supported Housing

Prasad, Hema : University of Missouri, Sociology
- Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study

Pronk, Jeroen : Netherlands Organisation for Applied Scientific Research (TNO)
- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Pugach, Oksana : University of Illinois Chicago
- Housing Instability and Transitions Among People Who Inject Drugs in Chicago and Surrounding Suburbs: A Hidden Markov Model Analysis

Quansah, Reginald : University of Ghana
- Depression in a Rapidly Urbanising African City: Urban Environment, Neighbourhood Stress, and Spatial Risk in Accra, Ghana

Quinsey, Sam : Centre for Australian Research into Accessibility, Deakin Rural Health, Australia
- Climate change impacts on inequitable access to healthcare in Aotearoa New Zealand

Rainham, Daniel : Dalhousie University
- Neighbourhood social and environmental conditions for children and youth in Canada’s 30 largest cities

Rakowska, Scarlett : University of Toronto Mississauga

- Residential odour impact and well-being in a steel manufacturing city

Ransome, Yusuf : Yale University
- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes

Rao, Smitha : The Ohio State University
- Climate Change & Health Experiences among Queer Communities: Learnings from Research Collaborations in the United States

Ratnapradipa, Dhitinut : Creighton University School of Medicine, Omaha, NE 68178
- Cross-sectional correlations between county-level flooding and incidence of flood-related diagnoses
- Opioids in the Extreme Weather? An In-Depth Look at Temporospatial Distribution of Opioid Overdose
- Visualizing the location and utilization of health resource vending machines as part of an opioid overdose intervention through a local health department
- Methods - Extracting historical National Weather Service warning, watch, and advisory data from the Iowa Environmental Mesonet for spatial analysis

Rausch, Rebecca : Department of Geography & Environment, Western University
- Reclaiming Urban Indigenous Food Sovereignty: Navigating Relational Methodologies in Community-Academic Partnerships

Rawat, Angeli : University of British Columbia Okanagan
- Building consensus for future pandemic readiness through deliberative dialogues on trust in mRNA vaccines
- Understanding and operationalizing equity in global health research: a critically reflective analysis of approaches to equity across the Canadian global health ecosystem

Reece, Ryan : Hurley Medical Center
- Charting the Evolution of a County EMS System through Service Privatization: A Probable Case of Hotelling's Law

Reid, Colleen : University of Colorado Boulder
- Beyond Home Loss: Exploration of Physical Health Pathways for Residents of Smoke-Damaged versus Destroyed Homes after a WUI Fire

Reilly, Kandice : Wake Forest University School of Medicine
- Identifying barriers and facilitators to the implementation of zoning policies to equitably reduce neighborhood tobacco retailer availability

Reuben, Aaron : University of Virginia
- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Rey-Coyrehourcq, Sébastien : Université de Rouen-Normandie
- Using agent-based simulation to reconstruct historical disease landscapes,: the example of malaria in Cyprus

Richmond, Chantelle : Western University, Canada
- Co-developing a community-based recipe book to support Urban Indigenous Food Sovereignty
- Environmental Repossession in the City: Urban Indigenous Youth Reclaiming Place, Community, and Land in London, Ontario.

Richmond, Jennifer : Wake Forest University School of Medicine
- "People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt": Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Riley, Rachel : University of Missouri
- Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO
- Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study

Rine, Sarah : Medical College of Wisconsin

- Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode

Rishworth, Andrea : University of Toronto

- Medical Uncertainty, Structural Inequities and Disease: The Experiences of Long-COVID Among Racialized Immigrants and Racialized Non-Immigrants in Canada
- The Financialization and Digitalization of Opioid Treatment
- Seeking Care Facing Doubt: Long COVID Experiences of Racialized Immigrants in the Region of Peel
- Responsibilizing Health and the Changing States of Care

Rizvi, Sughra Syeda : Department of Geography and Environmental Studies, Toronto Metropolitan University

- Traffic noise impacts on elementary school standardized test scores in Toronto, Canada

Robbins, Natalie : Vanderbilt University

- Integrated Geospatial Framework for Equitable PFAS Contamination Response in Community Water Systems

Roberts, Jennifer : University of Maryland - College Park

- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Robinson, Meghan : Brock University

- Jurisdictions in Response to Public Health Emergencies from the Burlington Skyway Bridge: A Collaboration between the Hamilton-Oshawa Port Authority and Brock University

Röcke, Christina : Universität Zürich - ZH, CH

- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress

Rosenberg, Mark : Queen's University

- Has open access publication benefited health geographers from middle and low-income countries?

Ross, Nancy : Queen's University

- Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access
- Measuring the Impacts of a New Light Rail System on Work Performance and Health Outcomes in the Greater Montréal Region

Ross, Shelby : University of Colorado Boulder

- Investigating the impacts of Extreme Weather Events on the cultural resources of Indigenous Health of the Oglala Sioux Tribe of South Dakota, USA.

Ross-Perez, Antonio : University of Edinburgh

- Woodland interventions for healthier child development.

Rothrock, Brandon : The Ohio State University

- Climate Change & Health Experiences among Queer Communities: Learnings from Research Collaborations in the United States

Roubin, Samuel : Johns Hopkins Bloomberg School of Public Health

- Spatial-Temporal Associations between Alcohol Outlet Access and Neighborhood Gun Violence Risk in Washington, D.C.

Rowe, Francisco : Department of Geography and Planning, School of Environmental Sciences, University of Liverpool, Liverpool, UK

- Construction of a multidimensional, longitudinal, lived-experience-informed geographic index of social environmental determinants in England

Rudyka, Dmytro : Lucerne University of Applied Sciences and Arts, Lucerne, Switzerland

- Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research

Ryan, Nadine : University of Toronto
- Indigenous Death Doulas: Creating Alimentary Pathways for Healthy Transitions

Saaka, Sulemana Ansumah : University of Western Ontario (UWO)
- HIV Anti-Stigma Empowerment Readiness Among Service Providers in Canada: A Post-intervention Assessment of Sustained Impact

Sadler, Richard : Michigan State University
- Sprawling Out: Extending Research on Links between Urban Form and Health to Consider Additional Metropolitan Characteristics
- Charting the Evolution of a County EMS System through Service Privatization: A Probable Case of Hotelling's Law

Saffari, Saeed : Dalhousie University
- Neighbourhood social and environmental conditions for children and youth in Canada's 30 largest cities

Sagehorn, Mallory Sagehorn : University of Colorado Boulder
- "It's Not Top Of Mind": Emerging adults' views of neighborhoods and cognitive aging
- What Makes Places Social? Pathways to Connection in Neighborhood Social Infrastructure
- Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk

Salubi, Eunice : Department of Geography and Planning, University of Saskatchewan
- Climate Change and Waterborne Diseases in Temperate Regions: A Systematic Review

Sanderson, Amy : University of British Columbia Okanagan
- Building consensus for future pandemic readiness through deliberative dialogues on trust in mRNA vaccines
- Understanding and operationalizing equity in global health research: a critically reflective analysis of approaches to equity across the Canadian global health ecosystem

Satpathy, Prachi : University of Toronto Scarborough
- Stakeholders' Perspectives on Canada's Progress Toward Achieving UNAIDS 95-95-95 HIV Targets for Black Communities in Ontario

Savard, Grace : University of Minnesota, University of Colorado Boulder
- Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk

Schrecker, Ted : Newcastle University (emeritus)
- Neoliberal Epidemics: How Politics Makes Us Sick

Schulz, Luisa : HafenCity University, Hamburg
- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Schuster-Wallace, Corinne : Department of Geography and Planning, University of Saskatchewan
- Climate Change and Waterborne Diseases in Temperate Regions: A Systematic Review

Seabrook, Jamie : Western University
- Additive, Compensation, or Spillover? A Spatio-Temporal Analysis of the Contribution of Active School Travel to Children's Weekly Physical Activity
- Evaluating the Impact of Spatial Accessibility to Cannabis Retailers on Youth Cannabis Use in Canada from 2018 to 2023

Segovia de la Revilla, Lucia : Cambridge CARES
- Understanding historic changes in the number and geographic distribution of food outlets selling ultra-processed foods in Singapore, and implications for population diet and obesity

Sekayi, Dia : Morgan State University
- Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health

Shadman, Hossein : University of Missouri
- Ecological drivers of swine influenza H3N2 transmission in the USA: a phylogeographic approach

Shah, Maurya : University of British Columbia, Department of Geography
- Pathways to Trans Care: Travel Patterns, Information Seeking & Geographic Access to Gender-Affirming Hormone Therapy

Shaker, Paul : Civicplan
- The CIHR Healthy Cities Research Initiative: Partnering for Active School Transportation in Hamilton, Ontario, Integrating Learnings from Helsinki, Finland

Shakespeare, Rebecca : Tufts University
- "Can we eat together?" Navigating social food spaces with food-avoidant conditions in the U.S.

Shan, Pengyin : University of Illinois Urbana-Champaign, National Center for Supercomputing Applications
- Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health

Shankardass, Ketan : Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada
- Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research
- Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton
- Gentrification and other changes to neighbourhood context in the City of Toronto, 2006-2016
- Explaining Negative Affect across Los Angeles in the Aftermath of Nipsey Hussle's Death: The Role of Neighborhood Context
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Shannon, Jerry : University of Georgia
- Teaching the mess in healthcare accessibility research

Shareck, Martine : Université de Sherbrooke
- Neighbourhood revitalization, changes in housing, and young adult health and well-being: insights from go-along interviews in Sherbrooke, Canada
- Gentrification and young adults in a mid-size Canadian city: how does it shape young adult mental health?
- Potential Spatial Accessibility to Primary Health Care in The Province of Quebec Over Time: Associations with Gentrification
- Conceptualizing Healthcare Gentrification: Results From a Scoping Review
- How are public participation processes experienced in the context of urban regeneration initiatives? A descriptive interpretive qualitative study.

Shaughnessy, Krystelle : University of Ottawa
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Shelton, Nicola : UCL
- Shepherds and Shopkeepers: Homeworking and health in the Covid-19 Lockdown

Shi, Steven : Columbia University
- Depression in a Rapidly Urbanising African City: Urban Environment, Neighbourhood Stress, and Spatial Risk in Accra, Ghana

Shi, Xun : Department of Geography, Dartmouth College
- "I Had to Go There for My Own Safety": Negotiations of Access and Autonomy among DC Birth Settings
- Integrating Long-Term Residential Histories into Environmental Epidemiology: A Spatiotemporal Approach to ALS and Airborne Lead Exposure

Shields, Lauren : Ontario Tech University

- Life-Course Transitions and the Geographies of Health: Macro- and Micro-Level Predictors of Self-Rated Health from Childhood to Adulthood

Shields, Timothy : Johns Hopkins Bloomberg School of Public Health

- Spatial-Temporal Associations between Alcohol Outlet Access and Neighborhood Gun Violence Risk in Washington, D.C.

Shortt, Niamh : University of Edinburgh

- Alcohol outlet density and wholly attributable hospitalisations in Scotland: an individual level follow up study across two time periods
- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024

Siiba, Alhassan : Queen's University

- 'We did not know stroke, and we also did not know ulcers': A qualitative study of perceived health impacts of food systems globalization on smallholder farmers in northern Ghana
- Coping with non-communicable diseases in a changing climate: A mixed methods study of coping strategies of smallholder farmers living with non-communicable diseases in northern Ghana

Smith, Brendan : Public Health Ontario

- Association Between Public Health Unit Finding and Deaths of Despair in Ontario Before and During COVID-19

Smith, Lindsey : Department of Geography and Planning, University of Toronto

- Climate, Overdose, and Resilience: Combining Open Source Data to Examine Seasonality in Opioid Overdose and Shelter Utilization in Toronto
- Bounded Mobilities: Exploring Adolescents' Mobility Habits and Constraints in High-Rise Urban Environments

Smith, Sericea Stallings : University of North Florida

- Spatial Optimization Approach for Assessing Spatial Vulnerabilities in Healthcare Access

Smith-Anderson, Nichole : Greater Flint Health Coalition

- Charting the Evolution of a County EMS System through Service Privatization: A Probable Case of Hotelling's Law

Sohl, Kristin : University of Missouri

- Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO

Solter, Marin : Centre for Information Management, Business School, Loughborough University, UK

- Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Song, Insang : Seoul National University

- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes

Sorensen, Janice : Fraser Health Authority

- Barriers and Builders to Belonging: Insights from Community Organizations on Supporting Older People Living with HIV in Long-Term Care and Assisted Living in British Columbia's Fraser Health Region

Stenberg, Keely : University of Waterloo

- Are we working together or alone? An assessment of healthy city/community practice in Ontario, Canada
- Examining place-based factors that facilitate immigrant settlement outside of gateway cities

Stepien, Joanna : University of Gdansk, Poland

- Spatial variation of health resilience in Poland in the context of depopulation and external security threats.

Stevens, Charlotte : Queen Mary University of London

- "If I don't do this, you'll lose me another way": the moral economies of UK-Türkiye medical tourism for elective bariatric surgery

Storer, Elizabeth : Queen Mary University of London

- ‘Fighting him’: Following distress in hostile migratory environments
- Under Pressure: Distress, Obligation and Care in Uganda and the UK

Stouffs, Rudi : National University of Singapore

- Understanding historic changes in the number and geographic distribution of food outlets selling ultra-processed foods in Singapore, and implications for population diet and obesity

Strahley, Ashley : Wake Forest University School of Medicine

- Identifying barriers and facilitators to the implementation of zoning policies to equitably reduce neighborhood tobacco retailer availability
- “People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Strigo, Tara : Wake Forest University School of Medicine

- “People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities

Struik, Laura : School of Nursing, University of British Columbia Okanagan

- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages

Strzelewicz, Noah : Université de Toulouse, Laboratoire Interdisciplinaire Solidarités Sociétés Territoires (LISST), CNRS

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Sullivan, Laine : University of Colorado Boulder

- Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk
- Toxic Geographies: Mapping Lead Exposure in Chicago

Sun, Jiashuo : The University of Hong Kong

- Acute Stress Responses and Mental Health Impacts: Rapid Evidence from the Deadly Tai Po Fire in Hong Kong

Sun, Yue : University of Colorado Boulder

- Beyond Home Loss: Exploration of Physical Health Pathways for Residents of Smoke-Damaged versus Destroyed Homes after a WUI Fire

Suzanne, Suzanne : Centre for Information Management, Business School, Loughborough University, UK

- Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research
- Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton
- Explaining Negative Affect across Los Angeles in the Aftermath of Nipsey Hussle’s Death: The Role of Neighborhood Context
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Sykora, Martin : Centre for Information Management, Business School, Loughborough University, UK

- Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research
- Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton
- Explaining Negative Affect across Los Angeles in the Aftermath of Nipsey Hussle’s Death: The Role of Neighborhood Context
- Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada

Taggart, Tamara : Rutgers University

- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes

Talarico, Kimberly : Milwaukee Public Schools
- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin

Tamari, Ruth : McMaster University
- Intergenerational Community in Multi-Unit Housing: A strategy to address ageism

Tammena, Sikko : Research Center for Public, Planetary and Digital Health (P^2D), IU International University of Applied Sciences
- Therapeutic Landscapes Between Meaning and Measurement

Taylor, Stephen : Queen Mary University of London
- Trauma, mapepo, and the limits of “treatment gaps” in Ituri, Democratic Republic of Congo

Terai Lara, Shana : Medical College of Wisconsin
- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin

Thapa, Roshan : Medical college of wisconsin
- Scorching Inequality: Occupational Heat Stress and Kidney Injury Among Nepali Migrant Workers

Thayer, Zaneta : Department of Anthropology, Dartmouth College
- “I Had to Go There for My Own Safety”: Negotiations of Access and Autonomy among DC Birth Settings

Thompson, Susan : The University of New South Wales
- Incorporating nature in walkability indices

Thwaites, Oliver : Swansea University
- Disentangling the ‘coastal effect’: A population-scale joint modelling analysis of melanoma risk and ambient sunshine in Wales
- The association between long-term air pollution exposure and suicide mortality during adolescence: a population-based retrospective longitudinal cohort study

Tinarwo, Joseph : Greater Zimbabwe University
- Food on the move? Promoting food security through post-colonial infrastructure repair

Toha, Thalia : PhD Student
- How would a disabled person drive their own experience, memories, and research in places for group dining?

Tong, Ophelia : University of British Columbia, Department of Geography
- Pathways to Trans Care: Travel Patterns, Information Seeking & Geographic Access to Gender-Affirming Hormone Therapy

Topalian, Noémie : Luxembourg Institute of Socio-Economic Research (LISER)
- Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress

Topalovic, Peter : City of Hamilton
- The CIHR Healthy Cities Research Initiative: Partnering for Active School Transportation in Hamilton, Ontario, Integrating Learnings from Helsinki, Finland

Tubach, Florence : Sorbonne Université, INSERM, Institut Pierre Louis d’Epidémiologie et de Santé Publique, Equipe PEPITES, AP-HP, Hôpital Pitié Salpêtrière, Département de Santé Publique, Unité de Recherche Clinique PSL-CFX, Paris, France
- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Turley, Chelsea : Larner College of Medicine, University of Vermont
- Capturing Dynamic Neighborhood Exposures and Population Health: A New Application of Vermont’s All-Payer Claims Data

Ulrich, Sarah : UNC-Chapel Hill

- Identifying spatial patterns of travel behavior responses to heatwaves using high- resolution cell phone mobility data in North Carolina

Ulrich-Cech, Cyenna : The Ohio State University

- Climate Change & Health Experiences among Queer Communities: Learnings from Research Collaborations in the United States

Ünsal, Ömer : Bursa Uludag University

- A Comprehensive Scoping Review on Smart City and Mental Health Historical Evolution, Developments, and Future Directions
- Geographical Variations in the Prevalence and Determinants of Severe Underweight Children Under Five in Pakistan: A Multiscale Geographically Weighted Regression Analysis

Uphold, Heatherlun : Michigan State University

- Charting the Evolution of a County EMS System through Service Privatization: A Probable Case of Hotelling's Law

van Empelen, Pepijn : Netherlands Organisation for Applied Scientific Research (TNO)

- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Varley, Alice : University of Liverpool

- A Multi-Dimensional Framework of Factors Impacting the UK Mental Healthcare Journey

Vena, Jennifer : Alberta's Tomorrow Project, Cancer Care Alberta

- Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access

Venkateswaran, Narmada : University of North Carolina- Chapel Hill

- Ecology and Evolution of Swine Influenza in the United States
- Ecological drivers of swine influenza H3N2 transmission in the USA: a phylogeographic approach

Vernal, Fiona : University of Connecticut

- The Hidden Costs of Flooding and Combined Sewer Overflows: Evidence from a Systematic Media Analysis (1970-2025)

Vicedo-Cabrera, Ana Maria : University of Bern, Institute of Social and Preventive Medicine and Oeschger Center for Climate Change Research, Bern, Switzerland

- Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France.

Vine, Michelle : Brock University

- The CIHR Healthy Cities Research Initiative: Partnering for Active School Transportation in Hamilton, Ontario, Integrating Learnings from Helsinki, Finland
- Jurisdictions in Response to Public Health Emergencies from the Burlington Skyway Bridge: A Collaboration between the Hamilton-Oshawa Port Authority and Brock University

Viradia, Niki : Medical college of wisconsin

- Scorching Inequality: Occupational Heat Stress and Kidney Injury Among Nepali Migrant Workers

Völker, Sebastian : Research Center for Public, Planetary and Digital Health (P^2D), IU International University of Applied Sciences

- Therapeutic Landscapes Between Meaning and Measurement
- Planning for Equitable Oral Health Futures: Competition-Aware Spatial Accessibility Mapping in Germany

Wagle, Janavi : brookfield high school

- Scorching Inequality: Occupational Heat Stress and Kidney Injury Among Nepali Migrant Workers

Walling, Dayne : University of Minnesota

- Sprawling Out: Extending Research on Links between Urban Form and Health to Consider Additional Metropolitan Characteristics

Walwanga, Isaiah : University of Waterloo
- Frames of neglect: necropolitics and the discursive construction of Ghana's galamsey environment-health Crisis
- Women, water and building back better: a case study of WASH and COVID-19 in East Africa

Wan, Xiu-Feng : University of Missouri
- Ecology and Evolution of Swine Influenza in the United States
- Ecological drivers of swine influenza H3N2 transmission in the USA: a phylogeographic approach

Wang, Cuizhen : University of South Carolina
- The Uneven Malaria Burden of Floods: Spatial Heterogeneity in Flood-Driven Malaria Risk across Tanzania

Wang, Jue : University of Toronto
- Investigating the Relationship Between Psychological Stress and Physical Activity through Individual-Based Geographic Ecological Momentary Assessment
- Spatiotemporal Dynamics of Urban Amenity Accessibility and Its Lagged Effects on Long-Term Mental Well-Being: A Case Study of Mississauga, Canada
- Spatial Reasoning in the Age of GeoAI: Rethinking Mobility and Exposure for GeoHealth Research

Wang, Lan : Tongji University
- Socioeconomic inequalities in online fresh food delivery use and associations with the neighborhood food environment

Wang, Xingyue : HafenCity University, Hamburg
- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Wang, Yi-Chen : Department of Geography, National University of Singapore
- GeoAI Mapping of Global Urban Environmental Health Potential: Inequality and Uncertainty

Wang, Yuxiao : Beijing Normal University
- A Geospatial Study of Environmental Exposures, Healthcare Accessibility, and Maternal Health Utilizing Electronic Medical Records in Wuhan, China

Ward Thompson, Catharine : University of Edinburgh
- Woodland interventions for healthier child development.

Webster, Daniel : Johns Hopkins Bloomberg School of Public Health
- Spatial-Temporal Associations between Alcohol Outlet Access and Neighborhood Gun Violence Risk in Washington, D.C.

Were, Jason : University of Alberta
- Association Between Public Health Unit Finding and Deaths of Despair in Ontario Before and During COVID-19

Werstuik, Saige : School of Nursing, University of British Columbia Okanagan
- Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages

West, Anna : Haverford College
- A Mobile Ontology of Shade and Social Inclusion

Whalen, Kate : McMaster University
- The CIHR Healthy Cities Research Initiative: Partnering for Active School Transportation in Hamilton, Ontario, Integrating Learnings from Helsinki, Finland

Wheeler, Benedict : European Centre for Environment & Human Health, University of Exeter

- Socio-spatial inequalities in UK urban tree canopy cover

White, Cassidy : Wake Forest University School of Medicine
- Identifying barriers and facilitators to the implementation of zoning policies to equitably reduce neighborhood tobacco retailer availability

Whitehead, Jesse : Te Ngira; Institute for Population Research, University of Waikato, Aotearoa New Zealand
- Climate change impacts on inequitable access to healthcare in Aotearoa New Zealand

Widener, Michael : University of Toronto
- Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access
- Contextualized urban food environment research

Wiese, Daniel : American Cancer Society, Temple University
- Associations between Long-Term Residential Exposure to Historical Redlining and High-Poverty and Prostate Cancer Stage at Diagnosis.
- Responsible GeoAI for Cancer Research: Synthesizing GeoAI and CancerAI with a Case Study of Early-Onset Colorectal Cancer

Williams, Allison : McMaster University
- Extracting Website Content from a Sample of Wellness-Based Canadian Spas to Assess their Representation of Therapeutic Landscapes
- Shaping Support: Federal Funding and Policy Divisions for Canada’s Compassionate Care Benefit
- Understanding the place of urban nature in the therapeutic landscapes literature: A scoping review
- Caregiving as a Human Right
- Building carer-inclusive workplaces across Canada: Evaluating the uptake of standardized workplace policies
- Perceptions of Polar Regions as Therapeutic Landscapes: A Qualitative Exploration
- The Invisible Toll: Women's Caregiving and the Hidden Labour of Enduring Climate

Wilson, Kathi : Department of Geography, Geomatics and Environment at UTM
- Medical Uncertainty, Structural Inequities and Disease: The Experiences of Long-COVID Among Racialized Immigrants and Racialized Non-Immigrants in Canada
- Seeking Care Facing Doubt: Long COVID Experiences of Racialized Immigrants in the Region of Peel
- Designing a Framework for Measuring Equitable Access to Health Services

Wilton, Robert : McMaster University
- Disability, immigration and the shifting politics of medical inadmissibility

Winata, Fikriyah : Department of Geography, Texas A&M University, College Station, Texas, USA
- Spatial Accessibility to Hemodialysis Centers and Chronic Kidney Disease Disparities Across Racial/Ethnic Compositions in Houston, Texas
- “My Paycheck Makes Me Happy, But Place Relieves My Stress”: Mental Health, Income, and Therapeutic Landscapes among Migrant Care Workers in Japan

Withers, Suzanne : University of Washington
- The Disruptive Potency and Potential of Bearing Witness to Overdose Fatalities

Wojciechowski, Wally : Michigan State University
- Charting the Evolution of a County EMS System through Service Privatization: A Probable Case of Hotelling’s Law

Wolf, Markus : Department of Psychology, University of Zurich, Zurich, Switzerland
- Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research

Wong, Josephine : Toronto Metropolitan University (TMU)
- HIV Anti-Stigma Empowerment Readiness Among Service Providers in Canada: A Post-intervention Assessment of Sustained Impact

Wong, Maria : University of Alberta
- Association Between Public Health Unit Finding and Deaths of Despair in Ontario Before and During COVID-19

Wong, Sandy : The Ohio State University
- Climate Change & Health Experiences among Queer Communities: Learnings from Research Collaborations in the United States

Wray, Alexander : The University of Tennessee Knoxville
- A collaborative geospatial analysis of access to high quality parks with youth in London, Ontario, Canada
- Bounded Mobilities: Exploring Adolescents' Mobility Habits and Constraints in High-Rise Urban Environments

Wu, Joyce : McMaster University
- Extracting Website Content from a Sample of Wellness-Based Canadian Spas to Assess their Representation of Therapeutic Landscapes

Xu, Dong : Department of Geography, National University of Singapore
- GeoAI Mapping of Global Urban Environmental Health Potential: Inequality and Uncertainty

Xu, Wei : Assistant Professor, Division of Epidemiology and Social Sciences, Institute for Health & Humanity, Medical College of Wisconsin
- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin
- Structural Disinvestment, Neighborhood Heat Exposure and the Mediating Effect of Tree Canopy: A National Study across U.S. Census Tracts

Yamada, Ikuho : Center for Spatial Information Science, The University of Tokyo, Tokyo, Japan, Interfaculty Initiative in Information Studies, The University of Tokyo, Tokyo, Japan
- "My Paycheck Makes Me Happy, But Place Relieves My Stress": Mental Health, Income, and Therapeutic Landscapes among Migrant Care Workers in Japan

Yamoah, Stephanie : University of Denver
- Assessing Agroforestry for Climate Change Mitigation in Semi-arid Ghana from a Human-Environment Health Perspective

Yang, Kai : Medical College of Wisconsin
- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin

Yang, Xueliang : Department of Social and Behavioral Sciences, School of Global Public Health, New York University, New York, NY 10003, USA
- Depression in a Rapidly Urbanising African City: Urban Environment, Neighbourhood Stress, and Spatial Risk in Accra, Ghana
- Quantifying Causal Effect of Extreme Heat on Dog Bite Incidents in New York City: A Spatio-Temporal Analysis of Community Vulnerability

Yeung, Yuki : University of Waterloo
- Understanding Climate-Health Intersections: Embodied Political Ecology of Health and Wellbeing
- Characterizing the health impacts of artisanal and small-scale gold mining (ASGM) across the life course: An umbrella review

Young, T. Raquel : University of Missouri, Public Health
- Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study

Youngren, Catherine : Fraser Health Authority
- Barriers and Builders to Belonging: Insights from Community Organizations on Supporting Older People Living with HIV in Long-Term Care and Assisted Living in British Columbia's Fraser Health Region

Zajacova, Anna : Department of Sociology, Western University
- Misconceptions and Misdiagnosis of Hypertension: Comparing and Contrasting the Determinants of Self-Reported and Measured Hypertension

Zarringhalam, Hamid : Toronto Metropolitan University
- Social Determinants of Health and MMR Vaccinations in School Children in Windsor-Essex: A Spatial Analysis

Zeigler-Johnson, Charnita : Fox Chase Cancer Center
- Associations between Long-Term Residential Exposure to Historical Redlining and High-Poverty and Prostate Cancer Stage at Diagnosis.

Zeng, Yutian : UT Southwestern Medical Center
- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes

Zhang, Casper : The University of Hong Kong
- Acute Stress Responses and Mental Health Impacts: Rapid Evidence from the Deadly Tai Po Fire in Hong Kong

Zhang, Peiqi : Western University
- Additive, Compensation, or Spillover? A Spatio-Temporal Analysis of the Contribution of Active School Travel to Children's Weekly Physical Activity

Zhang, Shanqi : Nanjing University
- HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes

Zhang, Yu : Queens University, McGill University
- Measuring the Impacts of a New Light Rail System on Work Performance and Health Outcomes in the Greater Montréal Region

Zhe, Lin : University of Colorado Boulder
- Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk

Zheng, Chunyu : University of Edinburgh
- Alcohol outlet density and wholly attributable hospitalisations in Scotland: an individual level follow up study across two time periods
- Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024
- Association between neighbourhood greenspace availability and the development of multiple long-term conditions, a follow-up study in urban areas of Scotland

Zheng, Congyuan : University of Colorado Boulder, Institute of Behavioral Science
- GeoTranslator: A Translation-Layer Paradigm for Spatial Evidence Production in Health Geography Research

Zhong, Shiran : Western University
- Additive, Compensation, or Spillover? A Spatio-Temporal Analysis of the Contribution of Active School Travel to Children's Weekly Physical Activity
- Evaluating the Impact of Spatial Accessibility to Cannabis Retailers on Youth Cannabis Use in Canada from 2018 to 2023

Zhou, Han : Netherlands Organisation for Applied Scientific Research (TNO)
- The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity

Zhou, Peiling : Harbin Institute of Technology, Shenzhen
- From communitas to fluidunitas: recontextualizing spiritual therapeutic landscapes in post-secular pilgrimage

Zhou, Yuhong : Research Scientist, Division of Epidemiology and Social Sciences, Institute for Health & Humanity, Medical College of Wisconsin
- Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin
- Structural Disinvestment, Neighborhood Heat Exposure and the Mediating Effect of Tree Canopy: A National Study across U.S. Census Tracts

Zhu, Bin : Southern University of Science and Technology

- Development and validation of a Geospatial eXplainable Artificial Intelligence (GeoXAI) framework for mapping mosquito density in metropolitans
- Extreme Weather Triggers Cascading Disruptions Across Ambulance Response Stages

Ziehl, Kailey : Queen's University

- Interventions to improve health and the determinants of health among sex workers living with HIV in Sub-Saharan Africa: a systematic review

Ziller, Erika : Larner College of Medicine, University of Vermont

- Capturing Dynamic Neighborhood Exposures and Population Health: A New Application of Vermont's All-Payer Claims Data

Afternoon Nutrition Break	**Afternoon Nutrition Break**
Banquet	**Banquet - The Empress of Canada**
Documentary Screening Organizer: Sebastien Fleuret, ESO-University of Angers	**In the Footsteps of Buruli**
Fieldtrips	**Field Trips**
Lunch	**Lunch**
Morning Nutrition Break	**Morning Nutrition Break**
Opening Reception	**Opening Reception**
Panel	**AI and the Future of Teaching Quantitative Health Geography**
Panel	**Closing Plenary Panel - The Geography of Theory of Health Geography**
Panel	**Communicating Research Findings to Non-Academic Audiences**
Panel	**DiScO: Reimagining Real time Public Health Crises Response Through Human Centred AI and Digital Transformation**

DiScO: Reimagining Real Time Public Health Crises Response through Human Centred AI and Digital Transformation. *Tarun Reddy Katapally, University of Western Ontario; Jasmin Bhawra, Toronto Metropolitan University, CHANGE Research Lab; and Harsimran Dogra, Toronto Metropolitan University, CHANGE Research Lab, DEPtH Lab*

DiScO: Reimagining Real Time Public Health Crises Response through Human Centred AI and Digital TransformationPresenters: Dr. Tarun Reddy Katapally, Dr. Jasmin Bhawra, Harsimran Dogra, Katarina BursacWe currently live in an age of escalating polycrisis, where multiple global crises including climate change, geopolitical conflicts, and communicable and non communicable disease risks interact to widen health inequities.

Responding to emerging public health crises demands a shift from siloed health system data toward multi-sectoral, interdisciplinary data ecosystems. Citizen generated data are key to filling knowledge gaps and informing locally responsive public health responses, yet they remain an under-utilized resource for real time crisis management.Funded by the Canada Foundation for Innovation, the Digital Citizen Science Observatory (DiScO) operationalizes human centred AI (HCAI) by utilizing frugal technology to build a secure and ethical data repository where citizen contributed information can be used responsibly to predict and prevent public health crises. DiScO employs a novel progressive web application enabling citizens to monitor and manage existing and emerging health crises such as communicable disease risks, food insecurity, and climate change related impacts. Anonymized, aggregated data are relayed in real time to an interactive dashboard that translates citizen generated data into actionable insights for decision makers, decentralizing rapid decision making across jurisdictions and building community resilience through digital transformation.This interactive panel introduces DiScO as a geo-enabled citizen science platform linking data generated through citizens' everyday experiences with jurisdictional decision making for rapid responses to public health crises. Using the example of Climate Care Toronto, the session will demonstrate how DiScO infrastructure can be applied to understand climate change impacts on health, while centering equity and techquity considerations to ensure HCAI development benefits diverse populations.

Panel **ESRI workshop**

Panel **Exploring Place and Health through Community Health Interventions**

Health geographers have long examined the relationship between neighbourhoods and the health of residents to promote the health of a population, prevent disease, injury, and premature death, and facilitate multi-scalar interventions that improve well-being and quality of life for a broad range of populations. Translating geographical health knowledge into action has required collaborations between local governments, community organizations, regional public health units, and the community health (CH) sector to deliver multidisciplinary municipal-level primary health care and health promotion programs to their community. The objective of this panel is to ‘make visible’ the role and scope of various actors and organizations in the community health sector. Specifically, the panel will discuss community-programming to improve child health, rural policy to support community resilience, closed street initiatives to enhance children’s play; and rural governance systems to advance mental health. This moderated discussion will highlight the work and existence of the community health (CH) sector in Canada and its contributions to health and wellbeing, understand why it has not been prioritized to date, and make the case for teaching and learning about it as a step towards recognizing and resourcing it. The panel will conclude with an introduction to the new edited book by Routledge, Exploring Place and Health through Community Health Interventions.

Panel **Opening Plenary Panel - Health Geography at a Crossroads: Why What We Do Matters More Than Ever**

As we gather in Toronto for the International Medical Geography Symposium, we do so at a moment of profound global uncertainty. The world faces overlapping crises including intensifying climate disruptions, widening health inequities, geopolitical instability, shrinking trust in expertise, and rapid transformations in data, technology, and research funding landscapes. At the same time, the role of research itself, and the researchers who produce it, is increasingly questioned, scrutinized, and, in some contexts, undermined. Against this backdrop, our opening plenary reminds us why medical/health geography remains indispensable. This session will showcase a broad full spectrum of medical/health geography research and perspectives to illuminate how place, power, and environment shape health outcomes, and how geographically informed science can guide responses to the most urgent challenges of our time. It will celebrate health geography, demonstrating how our field generates actionable insights, supports evidence-informed policy, and amplifies the voices and realities of communities often left at the margins. Most importantly, this session will set the tone for the symposium by reaffirming why our research is critical and why it must be defended, supported, and advanced. At a time when expertise is contested and global challenges demand nuanced, place-based understanding, medical/Health geography offers indispensable tools, perspectives, and hope. Join our distinguished panel members us as we open the symposium by collectively asserting the value of our field, recognizing the

trainees, scholars, and researchers who carry it forward, and charting a path for the contributions medical/health geography must continue to make in shaping a healthier, more equitable world.

Panel — Participatory Mapping

Panel — Rooted in Place, Led by Community: The Evolution and Innovation of Indigenous Health Geographies

Since its emergence in the early 2000s, Indigenous health geographies have grown from a small but determined community of scholars into one of the most vibrant and transformative areas of health-place research. What distinguishes this field is not only its intellectual contributions, reframing how we understand health, environment, and relationships, but also its deep ethical commitment to conducting rights-based research in ways that honour the values, priorities, and self-determination of Indigenous communities. Indigenous health geographies centres research that is co-created by and with Indigenous peoples, shifting power away from conventional academic and methodological hierarchies and toward collaborative partnerships that serve the greater good. What this means in practice is a commitment to undertaking research that respects Indigenous self-determination, data-sovereignty, and wherever possible, pursues distinctions-based research over pan-Indigenous approaches. This special plenary session brings together five Indigenous scholars whose work exemplifies the breadth and innovation of Indigenous health geographies today. From environmental health risk assessment and traditional healing spaces within healthcare institutions, to Red River Métis health risk communication, Indigenous mobility justice, and urban Indigenous placemaking, this panel showcases diverse approaches that are unified by a shared commitment to community-driven, relational research. Each panelist will offer a 10–12 minute presentation grounded in a shared orientation: situating themselves and where they come from, naming what they will bring to the panel, and then sharing their work. Presentations will be followed by a facilitated fireside chat, a generative, dialogue-driven discussion that moves across the threads connecting these scholars and their research. Key themes animating the conversation will include the structural systems and barriers that persist in Indigenous health research; the disproportionate burden these place on Indigenous scholars and communities; questions of theory and practice and what it means to do this work in a good way, in the specific places and relationships where it unfolds; and what is useful, hopeful, and meaningful when Indigenous self-determination is the horizon. Taken together, the panelists represent multiple generations and lineages within the wider field of health geography, and the session will explore not only the breadth of what is being done in relation to Indigenous Peoples and communities, but the strength-based commitments and relational ethics that hold it together.

Panel — Unpacking the Blackbox of Peer Reviewed Publication

Paper Session — Advancing Spatial Life Course Epidemiology: Methodological Innovations and Implications for Population Health I

Associations between Long-Term Residential Exposure to Historical Redlining and High-Poverty and Prostate Cancer Stage at Diagnosis.. *Daniel Wiese, American Cancer Society, Temple University; Birat Kafle, Temple University; Scott Keith, Jefferson University; Ann Klassen, Drexel University; Charnita Zeigler-Johnson, Fox Chase Cancer Center; and Kevin Henry, Temple University, Fox Chase Cancer Center*

Neighborhood socioeconomic conditions may influence prostate cancer stage at diagnosis, yet most prior studies have relied on cross-sectional exposure measures assessed only at diagnosis time and place.Using residential histories spanning 20 years prior to diagnosis, we evaluated whether long-term residence in historically redlined neighborhoods or high-poverty neighborhoods (>20% poverty level) was associated with prostate cancer stage at diagnosis. The study population included male patients aged >18 years diagnosed in Southeast Pennsylvania between 2008-2021 (n=36,348), linked to LexisNexis residential histories.Multinomial logistic regression was used to estimate odds ratios (ORs) and 95% confidence intervals (95%CI) for regional and distant stage at diagnosis relative to localized stage, according to duration of residence in historically redlined and high-poverty neighborhoods prior to diagnosis.Longer residence in historically redlined neighborhoods was associated with increasing odds of

distant-stage diagnosis after adjusting for age and race/ethnicity (5-year-residence OR=1.08, 95%CI=1.04-1.12 vs 20-year-residence OR=1.35, 95%CI=1.17-1.55). However, this association was no longer statistically significant after further adjustment for time-weighted poverty. In contrast, prolonged residence in neighborhoods with high-poverty levels was associated with increasing odds of distant-stage diagnosis (5-year-residence OR=1.09, 95%CI=1.05-1.13 vs 20-year-residence OR=1.42, 95%CI=1.23-1.65). For regional-stage disease, ORs were generally elevated but did not vary substantially with duration of residence in high-poverty areas.The association between long-term residence in historically redlined neighborhoods and distant-stage prostate cancer diagnosis is likely moderated by duration of exposure to high poverty. Further investigation is warranted to assess the impact of temporal changes in neighborhood-level poverty and patients' socio-spatial mobility on stage at diagnosis.

Construction of a multidimensional, longitudinal, lived-experience-informed geographic index of social environmental determinants in England. *Susie Deng, Department of Geography and Planning, School of Environmental Sciences, University of Liverpool, Liverpool, UK; and Francisco Rowe, Department of Geography and Planning, School of Environmental Sciences, University of Liverpool, Liverpool, UK*

Background: A life course perspective is essential for understanding the dynamic relationships between social environment and mental health, yet research in this area remains at an early stage.Gap: Although several contemporary, high-quality birth cohorts are available, research adopting a life course perspective is constrained by the limited availability of large-scale longitudinal and temporally consistent geographical data effectively representing the social environment in which people live.Aim: This study aims to develop a multidimensional, longitudinal, lived-experience-informed geographic index of social environmental determinants relevant to mental health at the small area level across England from 2010 to 2025.Methods: Drawing on relevant theoretical frameworks and input from a panel of people with lived experience of severe mental illness, we identified candidate features and domains of social environmental determinants relevant to mental health. We measured and harmonised these features at the small area level. Factor analysis was then used to derive domain-level scores from the individual features, and these domain scores were subsequently combined into a weighted composite index.Results: The final index comprises 12 domains and 73 underlying features. These domains include, for example, social cohesion, social connectedness, and accessibility to facilities with positive or negative influences on mental health.Implications: This index offers to quantitatively measure exposures to a large range of social environment features in people's local space activity areas and provides an innovative measure of exposome. It also provides important infrastructure for life course research and can be linked to administrative data, electronic health records, and cohort datasets.

Capturing Dynamic Neighborhood Exposures and Population Health: A New Application of Vermont's All-Payer Claims Data. *Sarah M. Mah, University of Vermont; Chelsea Turley, Larner College of Medicine, University of Vermont; Sarah Nowak, Larner College of Medicine, University of Vermont; and Erika Ziller, Larner College of Medicine, University of Vermont*

Both the physical features and social fabric of neighborhoods are increasingly recognized as important determinants of chronic disease and mortality. Neighborhood exposures, however, are not static; individuals can dramatically alter their local environments by moving. Capturing these changes is essential for understanding how shifting place-based exposures shape health trajectories and for identifying opportunities to prevent premature mortality. Many administrative health datasets, especially those involving predominantly rural populations, remain underleveraged. We use longitudinal claims data linked to mortality records to track residential moves, changing neighborhood exposures, and associations with chronic disease mortality in Vermont. Our study uses the Vermont Health Care Uniform Reporting and Evaluation System, an all-payer claims database with residential ZIP codes, linked to mortality and cause-of-death information for all Medicare and Medicaid recipients and approximately 60% of privately insured individuals. We assembled a large cohort of adults aged ≥25 years (2016-2025), comprising 775,158 individuals. Preliminary analyses provide evidence of residential change within the cohort during the study period; 1,018,621

unique individual-ZIP code combinations were observed, consistent with residential mobility and changes in neighborhood context over time. Among this sample, 45,703 deaths (~5.9%) were observed between January 2016 and 31 July 2025. Ongoing analyses assess how patterns of residential mobility and changes in neighborhood deprivation are associated with chronic disease-related mortality. Findings will advance our understanding of how changing neighborhood contexts and residential mobility shape population health across Vermont.

Integrating Long-Term Residential Histories into Environmental Epidemiology: A Spatiotemporal Approach to ALS and Airborne Lead Exposure. *Emily Luy Tan, Department of Geography, Dartmouth College, Hanover, NH; Meifang Li, Department of Geography, Dartmouth College, Hanover, NH; and Xun Shi, Department of Geography, Dartmouth College*

Conventional environmental exposure assessments often assume residential stability, failing to capture the cumulative environmental risk that accumulates across a person's residential history for rare, long-latency diseases like amyotrophic lateral sclerosis (ALS). This is particularly problematic given that environmental triggers may act over decades before clinical onset. This study develops a spatiotemporal method that integrates long-term migration histories into exposure estimation, demonstrating their critical importance for studying environmentally-linked diseases with extended latency periods.Using 695 ALS mortality cases (diagnosed 2013-2016) and 3,519 matched controls in Ohio, we linked individual residential histories with US EPA AERMOD airborne lead (Pb) dispersion data (2000-2020), estimating cumulative, median, maximum, and minimum exposures across up to 12 years prior to diagnosis. To minimize the impact of population density in detecting the ALS-Pb association, we implemented a moving-window approach that continuously scans cases and controls along a population density gradient, enabling more precise exposure comparisons across the rural-urban continuum without relying on rigid geographic classifications. Logistic regression was applied within each window subset and accounted for age, sex, and population density as confounders.Findings reveal that Pb exposure produces distinct spatial and temporal association patterns with ALS, with significant positive associations ranging from OR 1.6-4.2 depending on contaminant type, population density, and lag period. Critically, these patterns only emerge when residential mobility is properly integrated into the analysis.This framework offers a methodological contribution to environmental health geography with implications for research design and the study of other long-latency diseases with suspected environmental etiology.

Paper Session

Advancing Spatial Life Course Epidemiology: Methodological Innovations and Implications for Population Health II

Alcohol outlet density and wholly attributable hospitalisations in Scotland: an individual level follow up study across two time periods. *Jamie Pearce, University of Edinburgh; Chunyu Zheng, University of Edinburgh; Tom Clemens, University of Edinburgh; Richard Mitchell, University of Glasgow; Elena Dimova, Glasgow Caledonian University; Carol Emslie, Glasgow Caledonian University; and Niamh Shortt, University of Edinburgh*

Background: Alcohol outlet density (AOD) is linked to alcohol-related harm, yet robust individual-level studies remain scarce. This study leverages national cohort data to examine the relationship between wholly attributable alcohol hospitalisations and neighbourhood-level AOD. Methods: Harnessing the linkage of nationally representative census population records deriving from Scottish Longitudinal Study with administrative health data, we followed a cohort of 208,649 individuals across two time periods (TP1: 2013-20 and TP2: 2017-20) for wholly attributable alcohol hospitalisation. Neighbourhood-level AOD measures created for 2012 and 2016 were applied to TP1 and TP2 analyses. Cox regression estimated hazard ratios (HR), adjusting for individual-level sociodemographic and area-level confounders. Effect modification was assessed. Findings: During 8-year follow-up, 4,406 individuals were hospitalised for conditions wholly attributable to alcohol. AOD demonstrated a dose-response relationship with hospitalisation risk at TP1. In fully adjusted models, HRs were elevated in highest AOD areas for all outlet types (HR: 1.40, 95% CI: 1.15-1.69), on-sales (HR: 1.29, 95% CI: 1.14-1.47), and across the two highest quintiles for off-sales (Q4 HR: 1.17,

95% CI 1.01-1.35; Q5 HR: 1.29, 95% CI 1.11-1.49). TP2 results were consistent with TP1 with some attenuation. Significant interactions were identified for sex, NS-SEC, and urban-rural classification. Interpretation: Individuals in neighbourhoods with highest AOD face substantially increased risk of alcohol-attributable hospitalisation. Stronger associations for males and in urban areas have implications for targeted public health interventions and alcohol licensing policy. The dose-response relationships between AOD and harm are likely generalisable across similar developed economies with comparable alcohol retail environments.

A longitudinal Study of Changing Tobacco Availability and Maternal Health Behaviours in Scotland. *Annika Chambers, The University of Edinburgh*

Introduction: Meeting Scotland's goal for a Smoke-free generation by 2034 requires robust evidence on the drivers of tobacco use, particularly amongst key target groups such as pregnant women. Cross-sectional evidence suggests that tobacco availability is a driver of tobacco-related health harms. However, longitudinal evidence establishing causal relationships between availability and smoking during pregnancy remains limited. This study examines the relationship between changes in tobacco retail availability and maternal health behaviours in Scotland using a quasi-experimental framework and a linked administrative dataset. Methods: This study will use a sample of women from the Scottish Longitudinal Study (SLS) and a linked administrative dataset combining antenatal, census, and tobacco outlet records. Pregnancy-level data will be linked to tobacco retail exposure data to follow changes in exposure and behaviour over time. The initial cross-sectional analysis will examine first pregnancies and yearly associations between availability and behaviours. Longitudinal analysis will use a case-crossover design to control for mother-level characteristics. Changes in exposure due to changes in retail density within the area and recorded residential moves between pregnancies will be analysed separately. Results and Conclusion: Results will be produced ahead of the conference, including both cross-sectional and longitudinal analyses. The outputs will examine associations between tobacco outlet density and maternal smoking. Inequalities in maternal smoking will be explored using area-level and individual-level socioeconomic characteristics. Any evidence of a directional causal relationship between availability and smoking during pregnancy will also be discussed.

Ambient Air Pollution Exposure and Preterm Birth in Wales: A Population-Scale Cohort Study. *Lucy Perry, Swansea University; Amy Mizen, Swansea University; Amy Isham, Swansea University; Kate Ellis-Davies, Swansea University; and Rich Fry, Swansea University*

Background: There is increasing evidence on the association between ambient air pollution exposure during pregnancy and adverse birth outcomes, such as premature birth (PTB). However, evidence from population-scale cohorts in the UK remains limited, as well as understanding of factors which modify this relationship.Methods: A retrospective cohort study of 250,592 births in Wales, Uk from 2008 to 2019 was obtained using anonymised, routinely collected birth records containing maternal, sociodemographic and clinical data within the SAIL databank. Mother-baby pairs were linked to annual mean 1km2 resolution PM2.5 and NO2 exposures to estimate maternal air pollution exposure during pregnancy.Results: The majority of the cohort were singleton births (97.54%), had an average maternal age of 28.7 years (SD ± 5.83) and a PTB rate of 6.81%. Preliminary unadjusted logistic regression models suggest higher PM2.5 (OR= 0.96, 95% CI =0.95-0-97, p=<0.001) and NO2 (OR = 0.99, 95% CI = 0.99-0.99, p =<0.001) are associated with lower odds of PTB. Regression models fully adjusted for maternal age, socioeconomic deprivation, smoking status, pre-existing maternal health conditions, ethnicity and infant sex will be presented in full at the conference.This work will provide evidence to inform global policy and intervention design by quantifying the impact of ambient pollutants on PTB while identifying population subgroups most at risk. This study is part of a mixed-discipline PhD project involving qualitative and quantitative approaches to holistically understand the impacts of air pollution on pregnancy.

Association between neighbourhood greenspace availability and the development of multiple long-term conditions, a follow-up study in urban areas of Scotland. *Chunyu Zheng, University of Edinburgh; Eleojo Abubakar, University of Liverpool; Chris Dibben, University of Edinburgh; Katherine Keenan, University of St Andrews; Bruce Guthrie,*

University of Edinburgh; Alan Marshall, University of Edinburgh; and Jamie Pearce, University of Edinburgh

Whilst there is a plethora of work linking greenspace to single health outcomes through a multitude of pathways, evidence is limited on how the availability of different types of greenspaces, defined by land use and function, relates to multiple long-term conditions (MLTC). Our study examined the association between the availability of types of greenspaces and the development of MLTC measured by i) the co-occurrence of 2+ long-term conditions (2+ LTCs) and ii) the co-occurrence of at least one mental and one physical conditions (mental-physical MLTC). Linking individual-level Scottish Longitudinal Study (SLS) records (a nationally representative database that comprises 5.3% of the Scottish population) with the availability of greenspaces (by types) around the respondents' place of residence in urban areas in 2012 and the corresponding health records (hospitalisation records and cancer registry), focusing on the transition from 0 conditions to the first occurrence of 2+ indexed conditions in 2012-2019, we used Cox models with multilevel confounder adjustment and a 12-month washout. Findings suggested that, compared with no exposure, low availability of private gardens or public parks was associated with 11% and 9% lower hazards of developing '2+ LTCs', respectively, while high availability was associated with 13% and 8% lower hazards. However, no meaningful associations were observed between total greenspaces, natural greenspaces, or sports-related greenspaces and '2+ LTCs', and none were observed for mental-physical MLTC. These findings suggest the more important role of the greenspace function, a dimension of greenspace quality, in the process of MLTC development, rather than the greenspace quantity.

Paper Session

Advancing Spatial Life Course Epidemiology: Methodological Innovations and Implications for Population Health III

Migration across the life course and adaptations to extreme heat. *Amber DeJohn, Florida State University; Mark Horner, Florida State University; and Md. Abdul Fattah, Florida State University*

The severity, duration, and frequency of extreme heat events are rising. Older adults are disproportionally vulnerable to extreme heat, prompting concern for this growing demographic. The present climate crisis has mounted across the life course of current older adults. At this key nexus, relatively little is known about the influence of life course experiences and migration histories. We address this gap by introducing the 'life course migrants' concept, which refers to individuals who moved after their formative years to a new region. We operationalize this demographic in the context of the hot season in Florida using a survey of 350 non-working older adults (55+) who moved to Florida after the age of 18. Using descriptive statistics, we explore how heat stress varies within the life course migrants cohort and across their residential geographies. A structural equation model demonstrates how changing temperatures across the life course, adaptations, and heat stress influence a desire to relocate away from extreme heat. Findings suggest the age at which individuals moved to Florida is associated with perceptions of uncomfortable temperatures, but only marginally associated with heat stress. However, only temperature distance explains adaptive behaviors since arriving in Florida. Relocation intentions are not sensitive to life course migration but instead driven by current coping challenges.

Life-Course Transitions and the Geographies of Health: Macro- and Micro-Level Predictors of Self-Rated Health from Childhood to Adulthood. *Caroline Barakat, Ontario Tech University; Satveer Dhillon, University of Waterloo; Lauren Shields, Ontario Tech University; and Susan Elliott, University of Waterloo*

Introduction: Self-rated health (SRH) is a widely used indicator of overall health status, capturing how individuals experience health within the social, economic, and environmental contexts in which they live. In health geography, SRH provides a lens for examining how place-based exposures, structural conditions, and spatial inequities accumulate over time to shape population health. However, most SRH research remains cross-sectional, limiting our understanding of how shifting geographical, socioeconomic, and environmental contexts influence health trajectories across the life

course.Methods: To address these limitations, a life-course approach was used to examine the role of macro- and micro-level factors in shaping SRH from childhood through early adulthood. Childhood data were collected from the Hamilton Children's Cohort (1978-1986), with adult data obtained from the Reconstructed Hamilton Children's Cohort (2005), allowing us to map temporal transitions. Variables in the datasets were classified into macro- (or societal) and micro- (individual) levels, and derived variables were computed. A series of multiple linear regression models were fitted.Results: Among 395 participants, adult SRH was significantly associated with occupation, smoking status, medication use, and functional capacity, factors that reflect both individual behaviour and structural positioning. Longitudinal transitions, including upward shifts in BMI classification and persistent low-income status across childhood and adulthood, were strong predictors of poor or fair SRH.Conclusion: Overall, this research advances understandings of how societal and individual factors shape SRH over the life course. The results demonstrate the need for upstream policy interventions that address the social, economic, and environmental determinants of health from childhood onward.

Disentangling the 'coastal effect': A population-scale joint modelling analysis of melanoma risk and ambient sunshine in Wales. *Oliver Thwaites, Swansea University; Amy Mizen, Swansea University; Rhiannon Owen, Swansea University; and Rich Fry, Swansea University*

In the UK, melanoma incidence has risen by 140% since the early 1990s and is the fifth most common cancer. While incidence is projected to continue to increase, the majority of melanoma cases are preventable. Previous research indicates higher incidence in coastal areas, yet evidence remains limited by crude exposure metrics, often binary coastal/inland classifications, leading to exposure misclassification. In addition, not all studies adjust for sunshine levels over time.This study addresses these gaps through an individual-level analysis of 1.3 million residents in Wales, UK, using the SAIL Databank. We calculated the network distance from the household to the nearest accessible beach and followed the cohort for 20 years. We employed a joint longitudinal-survival modelling framework to explicitly model the trajectory of ambient sunshine levels and their specific effect on melanoma hazard.Results indicate that after adjustment for cumulative sunshine, sex, age, deprivation, urbanicity, and ethnicity, residents living closer to an accessible beach were at a significantly higher hazard of developing melanoma (HR = 0.99 per km inland). The association remained when incorporating all-cause mortality as a competing risk in the modelling. These findings corroborate a distinct 'coastal effect' on melanoma risk independent of local ambient sunshine, even in a relatively low-sun climate. This research represents a methodological innovation by demonstrating how the integration of high-resolution spatial metrics and complex longitudinal modelling can refine our understanding of the environmental and behavioural drivers of health outcomes.

The association between long-term air pollution exposure and suicide mortality during adolescence: a population-based retrospective longitudinal cohort study. *Ella Christoforou, Swansea University; Laura North, Swansea University; Oliver Thwaites, Swansea University; Ann John, Swansea University; Rich Fry, Swansea University; Martin J.D Clift, Swansea University; and Amy Mizen, Swansea University*

Background: Suicide is a leading cause of mortality among adolescents and young adults in the UK. Emerging evidence suggests that air pollution exposure, particularly particulate matter (PM2.5 and PM_{10}), nitrogen dioxide (NO_2) and nitrogen oxides (NO_x), may influence suicide risk. However, studies in youth remain scarce and methodologically limited. This study investigated the association between long-term ambient air pollution exposure and suicide mortality during adolescence in Wales, UK.Methods: A population-based longitudinal cohort study was conducted using linked health, environmental and administrative data from the Secure Anonymised Information Linkage (SAIL) Databank. Individuals aged 10-25 years residing in Wales between 2011 and 2019 were included until mortality, emigration, age 25, or study end. Annual mean concentrations of NO_2, NO_x, PM2.5, and PM_{10} (1 km resolution) were linked to residential addresses to derive time-weighted exposures. Suicide mortality was identified using ICD-10 codes (PH1109/4115) from the HDR UK Phenotype Library. Cox proportional hazards models estimated hazard ratios (HRs) per 1 $\mu g/m^3$ increase,

adjusting for sex, age, deprivation, urbanicity, and greenness within 300 m.Findings: The cohort included 582,156 adolescents (mean follow-up 5.2 years), and 109 suicide deaths. Higher pollutant concentrations were associated with increased suicide risk. Adjusted HRs per 1 μg/m^3 were 1.05 (95% CI 1.01-1.09) for NO_2, 1.03 (95% CI 1.00-1.05) for NO_x, 1.27 (95% CI 1.12-1.45) for PM_{10}, and 1.47 (95% CI 1.23-1.75) for PM2.5. Associations were strongest for PM10 and PM2.5. Male sex was associated with substantially higher risk. No interaction with greenness was observed.Interpretation: Long-term exposure to air pollution, particularly PM2.5 and PM_{10}, was associated with increased suicide mortality among adolescents. Air pollution may be a modifiable environmental risk factor for youth suicide.

Paper Session

Advancing Spatial Life Course Epidemiology: Methodological Innovations and Implications for Population Health IV

Inequalities in midlife mortality (1991-2019) in England by intersecting structural neighbourhood characteristics: A longitudinal application of eco-intersectional modelling. *Natalie Bennett, The University of Manchester; Andrew Bell, The University of Sheffield; and Paul Norman, The University of Leeds*

Midlife is an understudied period of the life course, despite evidence suggesting that health inequalities are often largest during this period. In England, life expectancy improvements have been stalling in recent years and despite several policies aimed at tackling inequality - especially focused on the most deprived areas - entrenched geographical inequalities remain. In this study we aim to go beyond a focus on area deprivation to examine inequalities by multiple intersecting place characteristics. We employ an ecological version of MAIHDA (eco-intersectional multilevel modelling) to examine neighbourhood-level inequalities in midlife mortality from 1991 to 2019. We use a structural intersectionality lens to foreground key intersecting processes of power likely to underpin geographical inequalities in midlife mortality in England. We examine intersections of four variables: region, area deprivation, whether a place is coastal, and the proportion of the population who are White. Overall, we find a reduction in midlife mortality over time, with stalling improvements in recent years. We find that midlife mortality rates are significantly worse in more deprived and coastal areas not in the South, and significantly better in places with lower proportions of the population who are White. Most notably, we find substantial variation in the midlife mortality trajectories of neighbourhood types in the most deprived 20% of places, compared to relatively consistent trajectories of neighbourhood types in other deprivation quintiles. Future health inequalities policy targeting deprived areas should take note of this substantial variation in trend and should be supported by future research examining potential explanations for this variability.

Residential histories in the All of Us Research Program: Challenges and opportunities for expanding place-based health research. *Margaret Carrel, University of Iowa*

The All of Us Research Program from the US National Institutes of Health represents the largest research database of electronic health records (EHR) linked with genomics, surveys, wearables and physical measurements in the US. In addition to participant address at baseline enrollment in the All of Us program, we are working to build residential histories for the >600,000 participants currently included in All of Us. Addresses are further joined to Census (e.g., household income) and environmental (e.g., air quality) data from the time period of residence and will be made available in the secure Researcher Workbench for use by any researcher with an institutional agreement with All of Us . This presentation will explore the challenges associated with geocoding complex residential histories, efforts made to check residential history accuracy with participants, and difficulties in balancing data quality and preserving privacy for linkage to population and environment exposures. It will also highlight the opportunities for population-level place-based health research that are made possible by directly coupling electronic health records and genomics data with information on residential instability, life course environmental exposures and changing area-level social determinants of health.

Characterizing the health impacts of artisanal and small-scale gold mining (ASGM)

across the life course: An umbrella review. *Alexa Bennett, Department of Geography and Environmental Management, University of Waterloo, Canada; Warren Dodd, University of Waterloo; Yuki Yeung, University of Waterloo; and Susan Elliott, University of Waterloo*

Artisanal and small-scale gold mining (ASGM) is a critical source of livelihood for millions living in poverty who lack alternative economic opportunities. ASGM operates as a largely informal sector where hazardous working conditions and exposure to toxins pose serious threats to the health and wellbeing of miners and surrounding communities. Drawing on ecosocial theory's rejection of single-cause explanations for health outcomes, this umbrella review aimed to characterize the health impacts associated with ASGM across the life course and examine the multi-level pathways through which ASGM affects health. A systematic search of Scopus, Web of Science, and Medline identified 22 English-language review articles meeting inclusion criteria. Following PRISMA-ScR guidelines, health impacts were analyzed across four domains: toxicological, occupational, infectious, and psychosocial. Results indicate that ASGM-related health impacts occur across multiple scales, ranging from neurological disorders associated with mercury contact to serious injury and death from occupational hazards. Mining-related environmental changes, including stagnant water at mining sites that can facilitate infectious disease transmission, together with broader societal impacts such as inter-ethnic disputes over land, represent additional threats affecting ASGM communities. Distinct health risks were also identified across the life span, including fetal and early postnatal exposure to potentially toxic elements, as well as child labour and school dropout. By framing ASGM as a part of a multi-scalar polycrisis of deeply interconnected social, economic, and environmental pressures, this umbrella review documents the complex factors shaping health in ASGM contexts and may be used to inform policy, practice, and future research.

Advancing Life Course Cognability: Investigating Neighborhoods, Cognitive Health Behaviors, and Dementia Risk. *Jessica Finlay, University of Colorado Boulder; Grace Savard, University of Minnesota, University of Colorado Boulder; Hayes Hart-Thompson, University of Colorado Boulder; Mallory Sagehorn Sagehorn, University of Colorado Boulder; Laine Sullivan, University of Colorado Boulder; Lin Zhe, University of Colorado Boulder; and Michael Esposito, University of Minnesota*

While research shows that environments matter for cognitive health, prior studies largely rely on composite neighborhood measures that yield descriptive but less actionable findings. Such approaches obscure which specific neighborhood features matter, when they matter across the life course, and at what spatial scale—limitations partly driven by attempts to quantify complex, dynamic exposures using quantitative methods alone. We lack precise and longitudinal understanding of how upstream contextual conditions shape cognitive health trajectories and contribute to unequal geographical distributions of Alzheimer's Disease and Related Dementias (ADRD). The Neighborhoods and Health at All Ages Study employs stationary and mobile interviews across the Minneapolis-St. Paul (MN) and Denver (CO) metropolitan areas. The study (2023-2026) captures nuanced perspectives from adults aged 18-95 with varied neighborhood exposures; life course experiences; and socioeconomic, racial/ethnic, and gender identities. Reflexive thematic analysis identified unconventional neighborhood sites (e.g., breweries, fast-food) that can support cognitive health behaviors including socialization, exercise, and cognitive stimulation. Clusters of nearby services tend to facilitate engagement in cognitive health behaviors, and participants described benefits from local amenities even without direct engagement. Neighborhood sites become 'disamenities' when they are perceived or directly experienced as unsafe, physically or socially uncomfortable, poor quality, and/or physically and economically inaccessible. The study's rich qualitative findings advance mechanistic understanding of how contexts shape health behaviors and ADRD risk across adulthood. Novel results can advance mixed methods population health approaches, which are needed to inform where to prioritize upstream ADRD prevention efforts through strategic neighborhood interventions and community efforts.

Paper Session

Approaches to Environmental Health Equity

Spatiotemporal Determinants and Unintended Consequences of Inequitable Safe

Drinking-Water Access in Rural Bangladesh. *Samiha Nuzhat, Department of Geography, University of South Carolina, USA; Varun Goel, University of South Carolina; Md Sirajul Islam, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr, b), Dhaka, Bangladesh; and Michael Emch, University of North Carolina- Chapel Hill*

In rural Bangladesh, deep tubewells, as compared to commonly used shallow tubewells, are the cornerstone of arsenic-free and microbiologically safe drinking-water provision. However, focus on safe drinking-water often overlooks other everyday non-consumptive water-use pathways of potential microbial exposure and risk. This intertwined relationship between non-consumptive water use and drinking-water use remains important but understudied. Our study examines whether significant differences exist in non-consumptive surface water use among households using deep tubewells compared to shallow tubewells, and whether those differences are modified by spatial, temporal, and behavioral factors such as tubewell proximity, seasonality, and perceptions around drinking-water. We conducted a longitudinal stratified cohort study in Matlab, Bangladesh, involving 500 households—250 using shallow tubewells and 250 using deep tubewells—across both the rainy and dry seasons. We then used logistic regression with inverse probability of treatment weighting, based on propensity scores, to compare unprotected surface-water use for non-consumptive activities among deep tubewell users compared to shallow tubewell users. Results indicate that spatial proximity, seasonality, and perceptions of convenience play a significant role. When tubewells are located within household premises, deep tubewell users have 1.67 times higher odds of surface water use for handwashing compared to shallow tubewell users. Additionally, decreasing spatial proximity of deep tubewells is associated with 4 times increase in odds of surface water use for utensil cleaning, with odds ratio (OR) increasing to 6.32 in the dry season. These observations suggest potential for unintended negative consequences of inequitable deep tubewell use and underscore the need for context-sensitive interventions.

Surface temperature impacts of schoolyard greening redevelopments in Milwaukee, Wisconsin. *Max Bobholz, Medical College of Wisconsin; Yuhong Zhou, Research Scientist, Division of Epidemiology and Social Sciences, Institute for Health & Humanity, Medical College of Wisconsin; Shana Terai Lara, Medical College of Wisconsin; Justin Hegarty, Reflo; Lisa Neeb, Reflo; Courtney Janikowski, Medical College of Wisconsin; Kimberly Talarico, Milwaukee Public Schools; Kai Yang, Medical College of Wisconsin; Wei Xu, Assistant Professor, Division of Epidemiology and Social Sciences, Institute for Health & Humanity, Medical College of Wisconsin; and Kirsten Beyer, Medical College of Wisconsin*

Background: Land surface temperature (LST) is known to vary across surface material types. In Milwaukee, many students play in schoolyards dominated by asphalt and other higher LST, impervious surfaces. This study aimed to explore the LST differences across the surface material types in schoolyards that underwent environmentally-focused redevelopment.Methods: LST was measured at points along walking paths covering 14 schoolyards in Milwaukee, Wisconsin, before and after redevelopment. Surface material changes were identified in activity zones across each schoolyard. Mixed effects linear regression modeling was used with the school serving as a random effect to predict mean post-greening LST by zone. Further analysis investigated which surface types saw greater cooling and at what time of day the cooling effect was the strongest.Results: There was similar variation within schools compared to across schools. After controlling for potential confounders (air temperature, pre-greening LST, time of day, shade, and data collection cohort), naturalized surfaces were on average 1.3˚ F (0.72˚ C; 95% CI -2.05, -0.56) cooler than non-naturalized surfaces. Grassy areas (β= -1.64; 95% CI -2.46, -0.84) and zones with a woodchips surface (β= -1.99; 95% CI -3.79, -0.21) contributed to this effect. The cooling effect of naturalized surfaces was strongest during the midday (β= -2.94; 95% CI -4.42, -1.51) and afternoon (β= -1.59; 95% CI -2.72, -0.54).Discussion: Green schoolyard redevelopments that took place in Milwaukee introduced cooler LST zones to an area previously dominated by asphalt. There is potential for green schoolyards to reduce the impact of urban heat islands.

Understanding and operationalizing equity in global health research: a critically reflective analysis of approaches to equity across the Canadian global health ecosystem. *Rodrigo Curty Pereira, University of British Columbia Okanagan; Jenna Dixon, University of British Columbia Okanagan; Katrina Plamondon, University of British Columbia*

Okanagan; Susan Elliott, University of Waterloo; Angeli Rawat, University of British Columbia Okanagan; Amy Sanderson, University of British Columbia Okanagan; and OPEN Global Health Research Team, University of British Columbia Okanagan

Investments in global health research (GHR) and institutional supports for the implementation of equity-based projects have grown in Canada. While GHR is described as a field that prioritizes equitable improvements and protection of population health, GHR actors often struggle to connect an equity-promoting rhetoric with implementation and meaningful action. Aiming to bridge this gap and build consensus on standards of excellence for operationalizing health equity, this research examines how actors working across Canada's GHR ecosystem understand and operationalize their commitments to equity. Using purposive sampling to ensure maximum variation, we conducted key-informant interviews with (n=34) Canadian global health researchers. Additionally, participants were asked to complete a perspectives survey to allow for more nuanced representation of sample characteristics. Constant comparative thematic analysis is informed by the Systematic Equity Action-Analysis framework, an evidence-informed framework for examining equity integration in complex systems. Emerging themes indicate that participants think about where they operationalize equity in GHR (e.g., through strategic partnerships in the Global South and North) and with whom (e.g., researchers, community members, community leaders) more than how they do so. Yet they report that such partnerships are most authentic when they integrate equity in process and outcomes, including partners throughout the research process. Common barriers to operationalizing equity include the capacity for fair compensation of partners and participants, capacity for timely and coherent engagement, available funding for flexible global health partnerships, and concerted anti-equity pushbacks. Further analysis will uncover incoherencies between narrative and action and suggest standards for equitable research excellence in GHR.

Integrated Geospatial Framework for Equitable PFAS Contamination Response in Community Water Systems. *Paul Johnson, Vanderbilt University; Natalie Robbins, Vanderbilt University; Ferna Alvarez-Carrascal, Vanderbilt University; Jonathan Gilligan, Vanderbilt University; Hiba Baroud, Vanderbilt University; and Yolanda McDonald, Vanderbilt University*

Predicting the presence and concentrations of per- and polyfluoroalkyl substances (PFAS) in drinking water is an emerging research area, given their adverse health effects, resource requirements for testing and treatment efforts, and data needs to support regulatory decision-making and compliance. We used a community-based participatory geographic information systems approach to develop a Geospatial Assessment of PFAS Contamination in Community Water Systems (CWS) tool. The raw water supply for public wells in Tennessee, USA, were sampled for PFAS analytes (i.e., PFOA, PFOS, PFHxS, PFNA, and HFPO-DA). We conducted a scoping review and used the United States Environmental Protection Agency PFAS Analytic Tools to inform the selection of social, environmental, and anthropogenic geospatial PFAS risk predictors and CWS characteristics. We applied nonparametric Bayesian machine-learning methods to predict PFAS presence and concentration at the CWS level, allowing us to explore non-linear relationships, estimate interactions between risk factors, handle the imbalance between positive and negative detections, quantify uncertainty, and update predictions as new data become available. Concomitantly, we developed the Responding to Community Needs (RCN) index to assess a CWS's capacity and the community it serves to absorb the burden of PFAS treatment while ensuring an affordable drinking water supply by characterizing CWS vulnerabilities across four key dimensions: community and economic development, CWS-level, social, and fundability. The tool's user-friendly, accessible approach not only addresses immediate PFAS contamination concerns but also provides a replicable methodological blueprint for understanding complex environmental contamination risks and the resource capacity of CWSs and the communities they serve.

Paper Session

Approaches to Healthcare Access and Health Policy in Research and Teaching

Policy imagination in health policy education: a SoTL study of critique and possibility.

Janette Leroux, School of Kinesiology & Health Studies, Queen's University

Health policy, including health care policy and health-related public policy, shapes everyday life. The perception of health policy as technical, complex, expert-driven, and distant may limit the capacity of citizens to recognize and engage with the institutions and systems that shape social and health inequalities. This paper uses policy imagination as a conceptual lens for understanding how students new to health policy engage with critical and structural explanations of population health. The paper draws on a qualitative Scholarship of Teaching and Learning (SoTL) study conducted in a large introductory health policy course at a Canadian university, taught from a political economy perspective and grounded in critical and feminist pedagogies. The study analyzes approximately 100 paired written reflections completed at the beginning and end of term to capture shifts in students' own sense-making. Using directed content analysis, this study examines how students describe what health policy is, who shapes it, how change happens, what policy could become, and how they understand their own relationship to it. Early analysis points to a tension between critique and possibility. Students demonstrate a developing language for power, ideology, influence, and a desire for paradigmatic change, while at the same time grapple with uncertainty about their own capacity to not just tinker at the edges. These findings raise questions about how health policy can be taught critically without heightening feelings of futility. This paper contributes to broader discussions about pedagogy, and the teaching of future policy actors.

Teaching the mess in healthcare accessibility research. *Jerry Shannon, University of Georgia*

A common refrain in courses dedicated to GIScience is that we make the research process too easy for students. By providing labs with detailed instructions and tidily cleaned datasets, students seldom encounter the frustration and problem-solving of primary research and data collection. This presentation describes a classroom experience designed to address this issue while training students in methods for analyzing healthcare accessibility. Partnering with stakeholders primarily based in the University of Georgia's new School of Medicine, students in the Community GIS class at UGA collected, cleaned, and analyzed data on primary healthcare sites in the state from commercial and governmental sources. These students collectively identified problems in our data, developed strategies for how best to clean and organize it, and learned how to articulate the potential limitations and inaccuracies of their approach. They did so in an authentic, project-based learning environment where the outcome of their research had implications for actual program design and investment. This presentation outlines this process and shares reflections on it while also providing our initial research results.

Spatial Optimization Approach for Assessing Spatial Vulnerabilities in Healthcare Access. *Hyun Kim, University of Tennessee; Emmanuel Afriyie, University of Tennessee; Beomyoung Cho, University of Tennessee; and Sericea Stallings Smith, University of North Florida*

Few studies have employed spatial optimization frameworks to assess the spatial vulnerability of healthcare access. Existing approaches, including floating catchment area-based methods, network-based accessibility indices, and their variants, are primarily descriptive, focusing on characterizing current patterns of access (or accessibility) between healthcare facilities and demand locations. While these methods provide valuable insights, they are limited in their ability to support prescriptive, scenario-based planning for identifying the areas of spatial vulnerability and revealing the priorities to mitigate the disparities of healthcare access, particularly in rural settings. This research introduces a spatial optimization modeling framework to capture best- and worst-case configurations of geographic coverage under capacity and spatial constraints. The prescribed model, named Reverse Anti-Covering Location Problem is used to evaluate spatial vulnerability in dental care access across Tennessee, USA as a case study. The proposed approach generates accessibility outcomes under a range of facility planning scenarios, enabling the identification of persistently uncovered demand locations, the delineation of spatially contiguous vulnerability areas, and the prioritization of areas requiring targeted intervention. By reframing coverage from a

reverse perspective, the model reveals the embedded gaps in service provision that are not readily detectable using conventional accessibility measures.

A Geospatial Study of Environmental Exposures, Healthcare Accessibility, and Maternal Health Utilizing Electronic Medical Records in Wuhan, China. *Yang Cheng, Beijing Normal University; and Yuxiao Wang, Beijing Normal University*

This study investigates the complex relationships between environmental exposures, healthcare accessibility, and maternal health outcomes, leveraging electronic medical records from Wuhan, China. The first component, analyzing 311,972 pregnancies from 2014-2016 in Wuhan, identified a significant U-shaped association between ambient temperature and preterm birth risk, with critical thresholds below 14°C and above 20°C. This vulnerability was heightened in high-risk pregnancies and further compounded by exposure to $PM_{2.5}$ and ozone. Spatial analysis pinpointed urban heat islands as key risk zones. Machine learning modeling, using XGBoost, effectively captured these nonlinear relationships, demonstrating the value of integrated predictive and spatial analytics in environmental epidemiology.The second component, examining maternity care-seeking behavior among 24,105 women in 2016 in Wuhan, revealed a prominent “bypass-seeking” trend toward tertiary hospitals. This pattern was driven by socioeconomic factors, including higher income and education levels, and was influenced by a proximity threshold of 8-10 kilometers. Agent-based simulation modeling projected that ongoing urbanization would exacerbate these healthcare access disparities without targeted intervention. Collectively, the findings underscore the dual burden of climate-sensitive health risks and systemic healthcare inequities facing urban populations. This research advocates for evidence-based, data-driven policy in urban planning and healthcare resource allocation, contributing methodological advances in health geography and informing strategies for sustainable and equitable urban development.

Paper Session

Built Environment and Urban Form

Impacts of the built environment, seasonality, and transport on commuting mode choice and health in university students. *Nicole Hoh, University of Toronto Department of Geography and Planning*

A majority of Canadian university students are not meeting Canada’s physical activity (PA), sedentary time (ST), and sleep guidelines, which can lead to increased risks of non-communicable diseases. Moreover, many university students are experiencing a transition between adolescence and early adulthood, a phase of life involving changes in travel and work patterns, which may contribute to sustained health-promoting behaviours through adulthood. The promotion of active travel may be an effective strategy for increasing PA, though inequitable access to safe and supportive infrastructure and its seasonal maintenance can limit uptake. Students (n=80) in Toronto, Canada, participated in a 48-hour data collection period during Winter 2026. Commuting routes, travel modes, health and sociodemographic characteristics were assessed using GPS data and questionnaires, and real-time health metrics for PA, ST, and sleep through wrist-worn accelerometers. Qualities and built environment features of commuting routes were explored via OpenStreetMap data and students’ qualitative perceptions. Preliminary findings show that weather conditions are a major contributor to active transport decision-making, with poor maintenance of infrastructure cited as a primary barrier to active transport. Motivators for active transport included convenience, exercise, speed, short distances, and nice weather. Another wave of data collection will occur in Fall 2026, which will allow for changes in the use of space for active travel and PA to be assessed under alternative seasonality. The combination of spatial, longitudinal, and qualitative data advances understanding of where and why students engage in active modes for their distinct needs, and how travel behaviour contributes to overall health.

A Qualitative Study Exploring People Who Use Drugs’ Understandings of Safety at the Intersection of Built Environments and the Toxic Drug Poisoning Crisis. *Meya Jurkus, School of Public Health Sciences, Faculty of Health, University of Waterloo, Waterloo, ON, Canada; Benjamin Nii Badu Lartey, Department of Geography, Simon Fraser University, Burnaby, BC, Canada; Valorie Crooks, Simon Fraser University; and Geoff Bardwell, School of*

Public Health Sciences, Faculty of Health, University of Waterloo, Waterloo, ON, Canada

Background: The built environment often informs where people choose to use drugs and consequently impacts drug-related risks, such as overdose mortality. However, research on the relationship between overdose mortality and the built environment is limited. Perceptions of safety also impact how people who use drugs (PWUD) interact with built environments. In Canada, there is limited research outside of larger urban centres on drug use, overdose, and the built environment, despite differences existing across geographic settings. We sought to examine how PWUD perceive and navigate safety in the context of drug-related risks and the built environment. Methods: This study is embedded within a larger mixed-methods study. We conducted 27 semi-structured interviews with people with lived/living experience of drug use (PWLLE). Participants were recruited purposively through peer networks and harm reduction organizations across four communities in British Columbia, Canada (Surrey, Nelson, Prince George, Nanaimo). Spatial modellingguided community selection. The interview guide was informed by our scoping review on fatal overdose and the built environment, and was collaboratively developed with PWLLE. The data was coded inductively and thematically analyzed to identify patterns and develop themes. Results: We identified four ways that safety was conceptualized: 1) interpersonal (e.g., relationships with friends, service providers), (2) built environment (e.g., design of spaces, physical surroundings), (3) community and peer (e.g., peer outreach, knowledge sharing), and (4) communicative (e.g., word-of-mouth, smartphone applications). Conclusion: These themes emphasize the complex nature of safety, tensions within built environments, and challenge the 'safe' and 'unsafe' dichotomy of drug use and the environment (e.g., designated 'safe spaces' felt unsafe). Future research should continue to explore the multifaceted ways that safety is understood and navigated across settings, as this is crucial for the development of future place-based harm reduction interventions that aim to support PWUD and reduce drug-related harms.

From Risk to Care: Exploring the Role of the Built Environment in Shaping Overdose Survivability Among People Who Use Drugs in British Columbia: A Qualitative Case Study. *Benjamin Nii Badu Lartey, Department of Geography, Simon Fraser University, Burnaby, BC, Canada; Meya Jurkus, School of Public Health Sciences, Faculty of Health, University of Waterloo, Waterloo, ON, Canada; Valorie Crooks, Simon Fraser University; and Geoff Bardwell, School of Public Health Sciences, Faculty of Health, University of Waterloo, Waterloo, ON, Canada*

From Risk to Care: Exploring the Role of the Built Environment in Shaping Overdose Survivability Among People Who Use Drugs in British Columbia: A Qualitative Case StudyBenjamin Lartey Nii Badu1, Meya Jurkus2, Valorie A. Crooks1, Geoff Bardwell21Department of Geography, Simon Fraser University, Burnaby, BC, Canada2 School of Public Health Sciences, Faculty of Health, University of Waterloo, Waterloo, ON, CanadaAbstractBackground: The built environment plays a crucial role in shaping health outcomes, including overdose risk and mortality among people who use drugs (PWUD). While much research has focused on overdose mortality, less is known about how our everyday physical, social, and political spaces affect overdose survivability. This study explores how the built environment operates as protective settings for PWUD, influencing the circumstances in which overdoses are witnessed, responded to, and survived across the Canadian province of British Columbia.Methods: A qualitative interpretivist case study approach was used to examine lived experiences and professional perspectives on the built environment. Semi-structured interviews were conducted with 47 participants, including 27 PWLLE and 20 key informants from harm reduction, healthcare, and policy sectors. Participants were purposively sampled across major metropolitan, regional, and smaller service-center communities, including Vancouver, Surrey, Prince George, Nanaimo, Powell River, and Nelson. Interviews were recorded, transcribed, and thematically analyzed.Results: Four interrelated themes emerged, including visibility and relational safety, spatially embedded care networks, purposeful harm reduction infrastructural design, and awareness creation. Public and semi-public visibility frequently enabled faster overdose response, although its benefits varied by social context and perceived safety. Spatially embedded peer-led networks redefined marginalized spaces as care sites, while purposeful harm reduction infrastructural design and awareness efforts supported timely intervention and collective safetyConclusion: Overdose survivability stems from dynamic interactions

among space, relationships, and governance rather than individual action alone. This emphasizes the need for place-based interventions that integrate social connection, community agency, and supportive policy frameworks within the design and governance of built environments.

Sprawling Out: Extending Research on Links between Urban Form and Health to Consider Additional Metropolitan Characteristics. *Victoria Fisher, Michigan State University; Richard Sadler, Michigan State University; Nadia Abuelezam, Michigan State University; Dayne Walling, University of Minnesota; and Don Lafreniere, Michigan Technological University*

Governance structures that create urban form and influence economic opportunity may influence people in different ways. We previously identified substantial differences in manifestations of fragmentation, sprawl, segregation, poverty, and economic inequality across mid-sized urban areas in eastern US. Here we set out to examine how these mechanisms are related to health outcomes that may be related to urban form. Using 2019 PLACES data, our outcomes represent the model-estimated census tract prevalence of limited physical activity, poor mental health, and chronic heart disease. Our exposure was the economic prosperity score from our earlier work. We ran three regional multivariate spatial models to understand how health outcomes in census tracts in the city center differ from health outcomes in tracts outside that center city. The final dataset included 13,866 census tracts within 129 counties associated with the statistical core of mid-sized cities in the eastern US. Outcome variables were standardized. Models indicate that tracts in the center city have consistently worse health outcomes compared to outer tracts, adjusting for the number of outpatient clinics in a tract and spatial autocorrelation. Only in the Northeast were economic prosperity scores inversely related to outcome prevalence in outer-city tracts. Sensitivity analysis suggests this relationship is modified by poverty in urban core tracts. This work extends earlier research on sprawl to consider how other manifestations of urban disinvestment may influence health. Future work will continue to examine additional health outcomes in the context of political fragmentation and investigate potential policy solutions to urban economic prosperity inequalities.

Paper Session

By Youth, With Youth, or For Youth? Creative Participatory Methods in Health Geography

GeoArt for Policy conversation and holistic wellbeing. *Lisa Murphy, Point Park University; and Shamayeta Bhattacharya, Point Park University*

This study introduces GeoArt, a methodological approach that integrates participatory geospatial inquiry with arts-based practices to examine how people experience health, place, and wellbeing. Methodologically, this study merged geospatial methods such as photovoice and story-circles for discussing the photographs with arts-based approaches, including Feldman's art criticism model, graphic dissertation, and a public art exhibition, supported multimodal interpretation, collaborative meaning-making, and community-facing dissemination. By situating GeoArt within health geography, the approach centers embodied relationships to place and recognizes that landscapes shape health not only through environmental exposures but also through emotional, symbolic, and aesthetic dimensions. Using a photovoice-based study from the Anthracite Coal Region of Northeastern Pennsylvania as empirical evidence, this study demonstrates how participants generated geolocated images and spatial narratives that revealed how murals, everyday environments, and neighborhood textures influence holistic wellbeing. Participants' reflections showed that murals, particularly those using bright colors, natural motifs, or representations of community identity, support mental health/holistic well-being by beautifying otherwise harsh landscapes and creating moments of calm, recognition, and belonging in public space. This cross-disciplinary integration extends the toolkit of health geography by enabling researchers to capture affective and symbolic geographies that traditional geospatial health methods alone cannot access. Simultaneously, it highlights challenges like the time taken for collaborative interpretation and ethical constraints around photographing people and sensitive spaces.The study translated research into practice through an immersive public exhibition that served as a dialogic space for policymakers, artists, and residents. By

bridging geographic research with arts-based inquiry and knowledge-translation strategy, the GeoArt approach demonstrates how interdisciplinary, community-engaged methods can meaningfully inform policy and strengthen community well-being.

Critical Reflections on a Creative Youth-Led Framework to Co-Produce Vaping Prevention Messages. *Bhargav Kandlakuti, Department of Geography & Environment, Western University; Stephanie Coen, Department of Geography & Environment, Western University, School of Geography, University of Nottingham; Kendra Ferguson, Department of Geography & Environment, Western University; Tanya Iwas, Department of Geography & Environment, Western University; Saige Werstuik, School of Nursing, University of British Columbia Okanagan; Laila Girum, Department of Geography & Environment, Western University; Adrian Delgado, School of Nursing, University of British Columbia Okanagan; Adrianna Chong, School of Nursing, University of British Columbia Okanagan; Gina Martin, Athabasca University; and Laura Struik, School of Nursing, University of British Columbia Okanagan*

Health geographers are increasingly seeking approaches that meaningfully engage youth in participatory research about young people's health. Our interdisciplinary E-Prevention And Vaping (EPAV) project used creative co-design methods to partner with youth in developing vaping prevention messages grounded in the social and cultural contexts of their everyday lives. This paper examines a youth-led co-creation framework used to produce short film-style prevention messages and positions youth as knowledge holders and facilitators within the research process. Drawing on the perspective of a youth co-researcher, the collaborative process and key insights gained from facilitating an initial creative design workshop, a follow-up workshop, and the overall workshop development process will be outlined. We will focus on how workshop structures were intentionally designed to redistribute power and support youth as equal partners, moving beyond tokenistic participation. Strategies including youth-led facilitation, the creation of judgment-free spaces, live scribing, team-based design activities, and digital collaboration tools such as Miro fostered sustained and meaningful engagement. Furthermore, I critically reflect on effective practices and challenges related to embedding youth, ourselves, as researchers in the present project. The historical challenge of removing imbalances in power between experienced adult researchers and inexperienced youth researchers was overcome by involving youth researchers throughout the workshop development process alongside a design thinker and positioning youth to facilitate workshop activities themselves. I conclude by identifying methodological lessons for health geographers that advance creative, youth-centred participatory practices and offer practical guidance for future research.

A Relational Approach to Food Security: Participatory Research With Youth in Western Kenya. *Susan Elliott, University of Waterloo; and Joan Kaburia, University of Waterloo*

Globally, one in three children face food insecurity and a form of malnutrition. Food and nutrition are key for the development of children and their full participation in society, including involvement in the food system. With recent evidence of declining youth participation in agrifood systems, engaging research with young people on food increasingly calls for relational and creative participatory methods. We undertook a case study in Western Kenya to examine how youth employ agency to (re)produce their food environments and promote food security using photovoice methods with 18 youth aged 10 to 17 years. Informed consent and assent were obtained from the participants. Youth were given prompts to photograph and write about their food-related experiences at home and school, followed by interviews to discuss their images. Data were subsequently analysed using thematic analysis on NVivo15.We explored (i) the possibilities and critical reflections on the use of creative research methods to investigate young people's spatial experiences related to food (in)security and (ii) the popular versus transformative narrative on the decline of youth involvement in the agrifood system. By adopting creative methods, we were able to capture youth's actions and activities that shape food security and their unique experiences of food in place and across space. Results indicate that youth actively engage in food-related activities and food decision-making at home but have limited influence at school. Further, age and economic status shaped experiences and embodied impacts of food security. These

findings serve as a foundation for change in policy and practice and further serve to empower the youth who participated in the research.

Paper Session

Child and Adolescent Health

Gentrification and young adults in a mid-size Canadian city: how does it shape young adult mental health?. *Justine Pineault, Université de Sherbrooke; Christine Loignon, Sherbrooke University; and Martine Shareck, Université de Sherbrooke*

Background. Young adulthood is a critical period for health, social integration, and housing stability, yet Canadian young adults face worsening mental health, loss of belonging and housing inaffordability. Gentrification is a key transformation of social, built, and housing environments that may exacerbate these challenges. This study aimed to (1) estimate the association between perceived neighbourhood gentrification and young adults' mental health and (2) identify subgroups for whom gentrification effects on mental health were greater than others. Methods. We used cross-sectional data from 967 young adults aged 16-35 living in Sherbrooke, Québec, who participated in the 2023-2024 wave of the CENTRe-ville Équitable et en Santé study. Generalized estimating equations (GEE) were used to estimate associations between perceived gentrification (PACER scales) and different mental health indicators (MCS-12 and PWI). Latent class analysis allowed to identify different social groups among the sample that might experience gentrification uniquely because of their sociodemographic characteristics. Results. Dimensions of gentrification were differentially associated with mental health. Perceiving a lot of changes in the social environment and in housing affordability as well as having more negative feelings about changes were associated with worse mental health. Effect modification analyses revealed social groups of young adults for whom gentrification was associated with either better or worse mental health outcomes. Conclusion. Identifying which dimensions of gentrification matter the most for young adults' mental health in general, and for specific social groups, can inform public health and urban planning strategies aimed at fostering more equitable and supportive living environments for young adults.

Woodland interventions for healthier child development.. *Antonio Ross-Perez, University of Edinburgh; Tom Clemens, University of Edinburgh; Scott Ogletree, University of Edinburgh; Catharine Ward Thompson, University of Edinburgh; Jamie Pearce, University of Edinburgh; and Richard Mitchell, University of Glasgow*

The health and wellbeing benefits of greenspace are well known. Evidence has shown a link between exposure to green space and a reduced risk across a variety of health outcomes, particularly mental health, cardiovascular outcomes and respiratory outcomes such as asthma. While some studies have examined these outcomes among children, there is little evidence examining child development measures. There are plausible pathways including reduced stress levels, mental fatigue, and opportunities for physical activity, social interaction and play, all of which may be important during the critical periods of child development.Our research focuses on a program of community woodland improvement interventions in Scotland that were implemented during the period 2005 to 2016. We use administrative records from the Scotland-wide Child Health Surveillance System-Pre School (CHSP-PR) programme linked to individual census records from the Scottish Longitudinal Study to examine whether these woodland interventions are associated with improvements in child development outcomes (including gross motor skills, hearing, vision, and speech, language and communication). Using historical NHS-registration post codes for each child in our cohort we are able to determine residential proximity and the length of time exposed to a funded woodland, up to the date of their child development assessment. This presentation will discuss findings from an initial cross-sectional analysis.

Claiming Epistemic Ground: Immigrant Youth-Led Spatial Inquiry Framework at the Intersection of Education and Health Geographies in Boston. *Hayes Hart-Thompson, University of Colorado Boulder*

Education is a well-established social determinant of health, yet dominant research approaches continue to measure its effects through narrow indicators such as

attainment or years of schooling. This paper argues that youth-led participatory spatial methods are not only ethically important but analytically necessary for understanding how educational opportunity is experienced, navigated, and produced. Drawing on a pilot study of the PLACE (Partnership for Learning, Agency, and Community Equity) Research Collective in Boston, Massachusetts, this research examines how immigrant and first-generation high school students served as co-researchers using mobile interviews, participatory mapping, and peer facilitation to investigate education, neighborhood conditions, and wellbeing. Rather than treating participation as a means to extract data, the analysis positions participatory design itself as a site of empirical insight. Findings demonstrate two interrelated methodological outcomes: (1) the cultivation of epistemic confidence among youth navigating educational marginalization, and (2) the circulation of research capacity through peer facilitation, embedding methodological expertise within community networks. The paper advances a transferable framework for youth-led spatial inquiry grounded in relational pedagogy, epistemic skill-building, counter-cartographic practice, and method circulation. While the study does not claim direct causal effects on health outcomes, it identifies epistemic agency - the capacity to interpret, represent, and act upon one's spatial conditions - as a critical upstream factor shaping how young people engage with educational and health systems across the life course.

Geographical Variations in the Prevalence and Determinants of Severe Underweight Children Under Five in Pakistan: A Multiscale Geographically Weighted Regression Analysis. *Munazza Fatima, The Islamia University Bahawalpur; and Ömer Ünsal, Bursa Uludag University*

Severe underweight prevalence remains a key indicator of child malnutrition and a major contributor to illness and death among children under five in low- and middle-income countries. In Pakistan, an estimated 28.9-29.4% of children under five are underweight, highlighting an ongoing challenge of chronic malnutrition. This study examined spatial clustering and regional variation in the determinants of severe underweight at the district level in Pakistan using MICS data, applying Global Moran's I for spatial autocorrelation and Local Anselin Moran's I (LISA) to detect clusters and outliers. The Multiscale Geographically Weighted Regression (MGWR) model was employed to analyze how relationships between severely underweight children and their determinants vary geographically across districts. Results reveal clusters of underweight prevalence, with hotspots mainly in the southern half of Pakistan. The MGWR model revealed significant spatial variation in the determinants of undernutrition, with a strong positive association between severe underweight prevalence and the Multidimensional Poverty Index (MPI) across Pakistan, while elevation exhibited a significant negative relationship nationwide. In the southern half of the country, open defecation and breastfeeding are positively and significantly associated, while access to handwashing facilities and the presence of acute respiratory infections (ARI) are negatively associated. These findings reveal notable disparities in child undernutrition and underscore the need for targeted, location-specific interventions to address poverty, sanitation, and environmental conditions. The study recommends that future research incorporate data and advanced spatial modeling techniques to better understand causal pathways and support effective nutrition policies in Pakistan.

Paper Session

Child-Centered Urban Design

"It's Not Top Of Mind": Emerging adults' views of neighborhoods and cognitive aging. *Grace Bowman, University of Colorado Boulder; Mallory Sagehorn Sagehorn, University of Colorado Boulder; Hayes Hart-Thompson, University of Colorado Boulder; and Jessica Finlay, University of Colorado Boulder*

Emerging adulthood is a formative life course stage during which socio-spatial contexts shape health-related attitudes and behaviors—patterns that may accumulate across the life course, influencing mid- and later-life cognitive health and dementia risk. This presentation investigates how emerging adults conceptualize brain health and cognitive aging within the context of their neighborhood environments, information sources, and social relationships. The Places That Shape Us Study is conducting approximately 45

qualitative stationary and mobile go-along interviews with emerging adults across the Denver (CO, USA) metropolitan area. Participants are emerging adults ages 18-31 and reflect racial/ethnic and gender diversity within the Denver metropolitan area. Reflexive thematic analysis identified that, while cognitive health was rarely “top of mind” for emerging adults, it was considered, especially in the context of aging and family history of dementia. Spatial contexts, such as community engagement, neighborhood multigenerationality, and access to nearby health-promoting spaces, supported or constrained emerging adults’ conceptions of future health. Participants readily linked neighborhood-level amenities, exposures, and walkability to physical and mental health but less frequently to cognitive health, suggesting a gap between everyday spatial experiences and long-term brain health awareness. This work situates brain health awareness within local, everyday environments and provides novel insight into when and how emerging adults connect everyday spatial contexts to long-term cognitive health trajectories.

Who Shapes Children’s Mobility ? Parent-Child Discrepancies and Urban Environment interactions in Montreal.. *Edoro Serge Léon PADONOU, Ecole de santé publique de l' Université de Montréal, Centre de recherche en santé publique (CReSP), Université de Montréal; Sonia Daly, Université de Montréal; and Katherine L. Frohlich, Université de Montréal*

Children’s independent mobility (IM) is a key determinant of health and well-being, also enabling engagement in active transportation and outdoor free play. IM provides insight into how children interact with urban environments and access everyday resources. It offers a relevant lens for analyzing how urban transformations shape children's opportunities for autonomy and exploration. Yet, its measurement frequently relies on parent reported data, assuming these perceptions faithfully reflect children’s autonomy. This assumption, rarely questioned, raises important concerns. Based on pre-intervention data from a quasi-experimental research project in Montreal, Quebec entitled Levelling the Playing Fields, this research compares children’s and parents’ IM scores measured using Hillman’s IM index (1990). The paired analyses (Wilcoxon test) conducted on 496 parent-child dyads reveal a statistically significant discrepancy between the two perspectives ($p < 0.001$). The IM perceived by children diverges from what parents believe they allow, in the direction of overestimation. Categories of discordance are defined (agreement between parents and children, child underestimation, child overestimation) to better characterize these patterns. The associations examined show that these discrepancies vary significantly with the child and parent’s age and the parent’s main activity. In contrast, perceptions of neighborhood social cohesion and road safety do not differ significantly between discordance groups. This study suggests that understanding children’s spatial practices requires moving beyond proxy measures and integrating their direct experiences. Such a methodological shift is essential for designing more equitable cities that support autonomy, play, and the well-being of younger generations.

Building Better: Neighbourhoods to benefit children with disability. *Hannah Badland, Social Equity Research Centre, RMIT University; Elroy Dearn, Social Equity Research Centre, RMIT University; Tasma Eddy, Social Equity Research Centre, RMIT University; Trish Dearn, Yellow Door Kids; and Georgia Olymbios, Yellow Door Kids*

Building Better: Neighbourhoods to benefit children with disabilityChild disability wellbeing studies typically focus on the health and wellbeing of the family, rather than the specific needs of children with disability. This means we know very little about what types of neighbourhood infrastructure children with disability use and preferences from a child’s perspective. Drawing from lived experience, this study advances our understanding by identifying and investigating neighbourhood-level social determinants of health and drivers of inequity to understand what is both specific and meaningful for children with disability.In collaboration with a community disability services partner, we conducted two Lego workshops with 12 neurodiverse children, aged 6-12 years of age living in Melbourne, Australia. Children built a Lego minifigure and interacted with a large-scale Lego neighbourhood assembled prior to the workshops. Children were asked to also build features that may be missing, but they would like to have in their neighbourhood. The research team spoke with children individually while they were playing, followed by a group discussion facilitated by clinicians. Questions asked

included: · What do you like / not like in your neighbourhood? · Where do you like to go in your neighbourhood? · Is there anything else you would like to see in your neighbourhood? Children's neighbourhood experiences were influenced by having parks, schools, shops, and public transport nearby, allowing them to walk independently and socialise. The quality of the neighbourhood also mattered, with children preferring clean, graffiti-free streets, low traffic, and alternatives to car travel, such as walking, cycling, or public transport. Home acted as a central hub for older children, serving as the starting point for social activities, such as online gaming and meeting places to go out with others. Accessible, well-equipped parks were also important, as they were among the few settings older children were allowed to visit on their own or with friends. Finally, older children's ability to access neighbourhood spaces independently depended on proximity (shorter distances), technology (phones), negotiated boundaries with family, being accompanied with friends or family, and familiarity with local streets.By bringing a lived experience approach and conducting research with, rather than on children with disability, this project deliberately aligns to the Convention on the Rights of the Child by allowing children to have the right to be heard and express themselves. By employing inclusive and participatory creative methods, we were able to better capture how children with disability experience neighbourhoods and identify what matters to them most.

Imagining Ideal School Streets Through Minecraft: A Child-Centred Participatory Mapping Approach. *Manon Allain, École de santé publique de l'Université de Montréal, École de technologie supérieure, Centre de recherche en santé publique; Sonia Daly, Université de Montréal; Katherine L. Frohlich, Université de Montréal; and Evelyne de Leeuw, École de santé publique de l'Université de Montréal, Centre de recherche en santé publique*

Background: The rising car-dependency and the shrinking of public play spaces have progressively constrained children's sense of belonging in cities. School Streets are a well-established child-friendly intervention in Europe and are gaining traction in North America. Yet children's voices remain largely absent from their design, raising questions about whose visions of urban wellbeing are being centered. This study, embedded in the Levelling the Playing Fields intervention-research programme in Montréal, addresses this gap through an innovative methodological lens. Objective: This research explored playful participatory mapping as a methodological approach to understanding how children perceive and experience School Street spaces. Methods: Four in-class Minecraft Education workshops were conducted in Spring 2025 with 17 pupils who had experienced a School Street over the previous three years. Children designed and discussed their ideal School Street. A descriptive and comparative analysis was conducted using child-specific indicators from Chatterjee's (2005) child-friendly spaces framework. Results: Playful participatory mapping proved valuable for capturing the richness and diversity of children's relationships with the School Street. It revealed a gap between their current and desired experiences, highlighting their vision of the street as a vibrant public space for play rather than a transit corridor. Three spatial profiles emerged: (1) Refuge: a sheltered space for intimacy, nature, and quiet play; (2) Community: a shared environment fostering group play and collective life; and (3) Experimentation: a terrain for risk-taking, exploration, and creative play. Conclusion: This study demonstrates the value of playful participatory mapping for capturing children's spatial representations of lived and imagined geographies. Integrating children's perspectives into School Street design can better align urban interventions with their lived experiences.

Paper Session

Chronic Health in the Global South

Depression in a Rapidly Urbanising African City: Urban Environment, Neighbourhood Stress, and Spatial Risk in Accra, Ghana. *Prince Michael Amegbor, New York University; Reginald Quansah, University of Ghana; Xueliang Yang, Department of Social and Behavioral Sciences, School of Global Public Health, New York University, New York, NY 10003, USA; Steven Shi, Columbia University; Kofi Agyabeng, New York University; and Emmanuel Peprah, New York University*

Background: Rapid urbanisation in sub-Saharan Africa is transforming social and environmental conditions in ways that may heighten mental health risk. However,

empirical evidence on how objectively measured urban environmental features and perceived neighbourhood stressors jointly shape depression—particularly using spatially explicit approaches—remains limited.Methods: We analysed cross-sectional data from adults aged ≥18 years residing in the Greater Accra Metropolitan Area (GAMA), Ghana. Depression was assessed as a binary outcome (mild/severe vs. none). Urban environmental exposures included built form, population density, greenness (Enhanced Vegetation Index), thermal conditions, and air pollution, while perceived neighbourhood stressors captured concerns related to poverty, crime, and safety. Bayesian hierarchical logistic regression models with a spatial random field were used to examine associations, progressing from single-exposure models to domain-specific and fully adjusted specifications.Results: Overall, 45.1% of respondents exhibited mild or severe depressive symptoms. Higher neighbourhood greenness was consistently associated with lower odds of depression across all models, including the fully adjusted model. In contrast, perceived neighbourhood robbery and poverty were robustly associated with increased odds of depression. Spatial models revealed persistent clusters of elevated residual depression risk in dense, mixed-use neighbourhoods (e.g., Newtown-Mamobi, Abeka, Lapaz), and lower risk in greener, more planned areas (e.g., Labone, Adenta, Achimota), highlighting the importance of place-based processes beyond measured exposures.Conclusions: Depression risk in Accra reflects the combined influence of urban environmental conditions, neighbourhood stressors, and spatial context. Urban mental health strategies in rapidly urbanising African cities should prioritise green infrastructure while addressing neighbourhood poverty and crime to reduce spatial inequalities in mental health.

Misconceptions and Misdiagnosis of Hypertension: Comparing and Contrasting the Determinants of Self-Reported and Measured Hypertension. *Mariah Peters, Department of Geography & Environment, Western University; Kate Barkhouse, Schulich School of Medicine & Dentistry, Western University; Kamaldeen Mohammed, Department of Geography & Environment, Western University; Anna Zajacova, Department of Sociology, Western University; and Isaac Luginaah, Western University*

Hypertension prevalence is rapidly increasing amongst young adults, particularly in low- and middle-income countries. This is an area of pressing concern as hypertension is the leading risk factor underlying premature deaths. In fragile and conflict affected states such as the Democratic Republic of the Congo (DRC), diagnosis, misconceptions, and awareness of hypertension can be challenging without access to routine healthcare.This study utilized the 2023-24 DRC Demographic and Health Survey to examine the concordance between self-reported and measured hypertension in a national sample. The data was analyzed using nested binary logistic regression models. Our findings show that females have higher odds of hypertension based on self-reported data (AOR = 2.07, $p < 0.001$), but lower odds when hypertension is based on measured data (AOR = 0.68, $p < 0.001$). Other determinants, such as residential wealth index, educational attainment, and marital status, reached statistical significance in the self-reported model, but not in measured models.These findings suggest potential misconceptions related to hypertension whereby self-reported data is not consistent with measured hypertension, thereby demonstrating an awareness gap. The discrepancies in the findings indicate that caution is warranted when utilizing self-reported hypertension data, as it could result in misidentification of high-risk groups and hypertension management. In fragile and conflict-affected states, where many individuals experience persistent daily stressors, reliance on self-reported health data should be interpreted with caution.

Coping with non-communicable diseases in a changing climate: A mixed methods study of coping strategies of smallholder farmers living with non-communicable diseases in northern Ghana. *Alhassan Siiba, Queen's University; Joseph Kangmennaang, Queen's University; Leonard Baatiema, University of Ghana; and Isaac Luginaah, Western University*

Research suggests that disproportionate exposure of smallholder farmers to climate change events is negatively affecting their crop productivity, food security, and health; and smallholder farmers living with non-communicable diseases (NCDs) in a changing climate face additional challenges with coping and managing their conditions. Yet, existing studies have predominantly explored coping with experiences of climate change among participants who are not confronted with the concurrent burden of climate

change and NCDs. This study explores the strategies smallholder farmers living with NCDs employ to cope with their experiences of climate change events, and how experiences of climate change events impact the management of NCDs. Primary data for the study were collected from smallholder farmers in northern Ghana through cross-sectional survey and in-depth interviews. We analyze the survey through binomial regression analysis and the interviews through inductive coding and thematic analysis. From the survey, we find that severely food insecure participants (OR = 0.39, 95% CI [0.25-0.62]) are less likely to cope through self-support strategies, relative to those who are food secure. Results from the interviews also suggest that participants living with NCDs in a changing climate cope with their circumstances through: (1) engaging in domestic agricultural activities; (2) engaging in other occupations; (3) spirituality/worship/prayer; (4) support from family and friends; (5) adhering to healthcare professionals' advice; and (6) engaging in physical activities/exercise. We conclude that interventions to help smallholder farmers cope with their NCDs should explore how existing coping strategies can be made effective by addressing the barriers to effective coping.

Paper Session

Climate and Environmental Change

Climate Care Toronto: Digital Citizen Science for Equitable Climate Action, Health, and Urban Futures. *Harsimran Dogra, Toronto Metropolitan University, CHANGE Research Lab, DEPtH Lab; and Jasmin Bhawra, Toronto Metropolitan University, CHANGE Research Lab*

Equitable participation in climate adaptation remains a persistent challenge in urban centres, where marginalized populations are disproportionately exposed to extreme heat, flooding, and environmental stressors while remaining underrepresented in policymaking. In Toronto, these climate-related health risks are increasingly concentrated among low-income and racialized communities, underscoring the need for more just, place-based, and participatory approaches to climate action. Climate Care Toronto responds to this challenge by mobilizing digital citizen science as an innovative climate-health geography method to support equitable community-led adaptation.In partnership with the Toronto Climate Action Network, Climate Care Toronto applies a community-based participatory approach that connects residents, local organizations, and researchers through Citizen Scientist Advisory Councils in Rexdale and Scarborough. These councils co-design inclusive data collection, rapid-response, and knowledge-sharing strategies focused on lived experiences of urban climate change and health impacts.. Surveys and participatory systems mapping are being used to identify community priorities, local vulnerabilities, and opportunities for intervention. Citizen-owned digital devices, particularly smartphones, function as both research tools and engagement platforms, enabling real-time data capture, reciprocal communication, and more accessible participation in climate-health decision-making.Preliminary findings suggest that digital citizen science can help overcome conventional barriers to participation by expanding access, enhancing transparency, and strengthening community data sovereignty. Beyond documenting local climate-related health risks, the project examines how digital engagement intersects with health equity, and digital inclusion in community adaptation. In doing so, Climate Care Toronto contributes methodological insight into how technology-enabled participation can support just climate transitions and responsive urban health governance.

Environmental Change and Spatial Patterns of Vegetation Disturbance Related to Artisanal Refining in the Niger Delta. *Faithwin Gbadamosi, University at Buffalo*

Chronic oil pollution in major extraction regions creates persistent environmental exposures with implications for population health. In the Niger Delta, Nigeria, decades of oil extraction and the proliferation of artisanal refining activities have produced widespread landscape degradation. This has disproportionately affected communities whose livelihoods and food systems depend directly on land and water resources. Despite considerable documentation of the impacts of artisanal refining, there is limited knowledge on how disturbance is distributed across affected landscapes and how these patterns evolve. This study investigates the spatial distribution and temporal dynamics of vegetation disturbance in the Niger Delta using satellite-derived vegetation indices and kernel density estimation. Landsat satellite imagery (2015-2024) was used to derive

the Normalized Difference Vegetation Index (NDVI) to assess vegetation change in oil-impacted areas. Artisanal refining sites and reported oil spill events were mapped. Proximity analysis was also conducted to evaluate spatial relationships between hotspots and nearby agricultural and fishing communities, capturing key environmental and food-system exposure pathways. NDVI declined by up to 25-30% in high-refining-density areas relative to non-impacted zones. Contamination hotspots were spatially concentrated near subsistence-based communities, with elevated exposure potential through local food systems and environmental pathways. These findings show how chronic oil pollution generates spatially concentrated environmental exposures with implications for population health. This study offers a practical foundation for identifying vulnerable populations and informing public health and environmental governance interventions in extraction-dependent regions.

Climate Change and Waterborne Diseases in Temperate Regions: A Systematic Review. *Eunice Salubi, Department of Geography and Planning, University of Saskatchewan; Zemichael Gizaw, Department of Geography and Planning, University of Saskatchewan; Corinne Schuster-Wallace, Department of Geography and Planning, University of Saskatchewan; and Alain Pietroniro, Schulich School of Engineering, University of Calgary*

Risk of waterborne diseases (WBDs) persists in temperate regions. The extent of influence of climate-related factors on the risk of specific WBDs in a changing climate and the projections of future climate scenarios on WBDs in temperate regions are unclear. A systematic review was conducted to identify specific waterborne pathogens and diseases prevalent in temperate region literature and transmission cycle associations with a changing climate. Projections of WBD risk based on future climate scenarios and models used to assess future disease risk were identified. Seventy-five peer-reviewed full-text articles for temperate regions published in the English language were included in this review after a search of Scopus and Web of Science databases from 2010 to 2023. Using thematic analysis, climate-related drivers impacting WBD risk were identified. Risk of WBDs was influenced mostly by weather (rainfall: 22% and heavy rainfall: 19%) across the majority of temperate regions and hydrological (streamflow: 50%) factors in Europe. Future climate scenarios suggest that WBD risk is likely to increase in temperate regions. Given the need to understand changes and potential feedback across fate, transport and exposure pathways, more studies should combine data-driven and process-based models to better assess future risks using model simulations.

Impacts of Climate Change in Rural Pune, India: Qualitative Findings from the Climate Care India initiative. *Katarina Bursac, Toronto Metropolitan University; Jasmin Bhawra, Toronto Metropolitan University, CHANGE Research Lab; Chidvilas More, Hirabai Cowasji Medical Research Institute; Rubina Mandlik, Hirabai Cowasji Medical Research Institute; Anuradha Khadilkar, Hirabai Cowasji Medical Research Institute; and Tarun Reddy Katapally, University of Western Ontario*

Rural communities in the Global South are disproportionately burdened by climate change impacts, yet their lived experiences remain underrepresented in climate adaptation and policy planning. As part of Phase 1 of the Climate Care India (CCI) initiative, this study examined climate change impacts on health and wellbeing in rural districts of Pune, India - a region experiencing increasing heatwaves, extreme weather events, and groundwater depletion. Within qualitative focus groups, four semi-structured discussions were conducted among 36 adult residents of the Ranjangaon village cluster in Maharashtra, Pune. Discussions were held separately for male (n = 16) and female (n = 20) participants to ensure comfort of participation and align with gendered cultural norms. Five themes emerged from thematic analysis of focus group discussions: 1) perceptions of climate change, 2) impacts of climate change, 3) behavioural responses to climate change, 4) perceived responsibility and solutions, and 5) sociocultural influences. Participants described cascading and interconnected effects of unpredictable weather on agricultural livelihoods, food and water security, and physical and mental health. Participants identified critical gaps in government support and elevated community-led financial strategies as essential adaptive mechanisms.These qualitative findings make a compelling case for engaging rural communities in informing locally responsive and equitable climate change solutions. Additionally, the findings will be applied to tailor a digital citizen science platform to

enable real-time engagement and intervention in future phases of CCI. Addressing the lack of community-level data in rural India is crucial for improving climate resilience, enhancing agricultural productivity, and safeguarding public health in vulnerable regions.

Paper Session

COVID-19 I

Medical Uncertainty, Structural Inequities and Disease: The Experiences of Long-COVID Among Racialized Immigrants and Racialized Non-Immigrants in Canada.
Andrea Rishworth, University of Toronto; Madeleine Mant, University of Toronto Mississauga; Kathi Wilson, Department of Geography, Geomatics and Environment at UTM; and Zafar Iqbal, Peer Research Assistant

Long COVID impacts millions of people worldwide, creating uncertain and varied symptoms that affect a range of bodily systems, with implications for individual and societal health and wellbeing. Yet, since there is no universal standardized way to diagnose long COVID, it has become a highly contested illness, with consequences for the recognition, resources, and responses directed towards the illness. While contested illnesses are known to foster discrimination via medical uncertainty, little is known about the synergistic effects of uncertainty, long COVID, and inequities. Research highlights that racialized individuals, immigrants, part-time workers, and low-income groups are disproportionately impacted by long COVID; however, knowledge gaps exist surrounding the ways long COVID uncertainties can compound, reproduce, and re-work existing fault lines of inequalities and patterns of disadvantage. This article examines the ways long COVID uncertainty shapes access, use, and control of health, economic, and political resources in Peel Region and how they converge to shape uneven lives. Findings from focus groups (n=6) with racialized immigrants and racialized non-immigrants managing long COVID reveal uncertainties surrounding long COVID reinscribe inequities by limiting access to critical health, socio-economic, and political resources needed for daily survival. The findings also reveal how long COVID uncertainties create new forms of by social suffering by delegitimizing, neglecting, and responsibilizing issues of long COVID, with implications for knowledge production, societal awareness, and policy creation. We close with a discussion of the impacts for policy and practice.

Geographies of COVID-19: Hindsights and Insights for Health Geography.
Sarah Nelson, University of Nebraska at Omaha; Solomon Ampofo, University of Nebraska at Omaha; and Joseph Aboagye, University of Nebraska at Omaha

The COVID-19 pandemic was declared over in March of 2023, a little more than three years after it began. For health geographers, the COVID-19 pandemic represents a moment that we rose to, during which more geographers were writing about health, illness, and the socio-spatial conditions of our well-being, than ever. Geographers wrote poetry and meditated on isolation; analyzed paths by which the virus traversed the world's cities and regions; and parsed various governmental responses to the novel health threat. What lessons can health and medical geography take from this pivotal moment, when the world's attention was focused on health, disease, and geography? This paper analyzes three years of scholarly writing by geographers about the COVID-19 pandemic, to answer this question. Data reveal the breadth of geographic scholarship in this area, publishing from almost all regions of the world, and demonstrating a masterful range of methods. Most importantly, the data point to where we are poised to go. At this moment of global uncertainty, public health threats, and instability in access to the basics of daily life for so many, health geography is well positioned to demonstrate how quickly we can adapt, to understand and manage unprecedented difficulties faced across the globe. This analysis provides a look back at the most significant disease of the century in order to look forward at opportunities for health and medical geography to grow in both scope and number of practitioners, and offering proposed areas of new directions in the field.

Measuring Differential Exposure, Susceptibility, & Adaptability as Dimensions of Vulnerability for U.S. Counties Across the Pandemic.
Qinyun Lin, University of Gothenburg

Conceptualizing vulnerability as a complex, multi-dimensional phenomena is crucial for understanding differential Pandemic outcomes across communities. To address research gaps that tend to focus on susceptibility alone, we operationalize dimensions of vulnerability as differential exposure, susceptibility, and adaptability for U.S. counties across three stages of the Pandemic. From these conceptually identified factors, we estimated data-driven indices using a principal component analysis to identify persistent dimensions of the Pandemic. We then tested these indices across three stages of the Pandemic in a classical and spatial regression analysis to identify how vulnerability dimensions impact cases and mortality, accounting for the spatial spillover. We found that susceptibility to adverse outcomes as a product of intersectional social and structural determinants of health was a key factor in measuring associations with both cases and mortality, increasing in importance over time. We also found that built environment factors associated with exposure may have been important in earlier stages of the Pandemic, but diverged over time. Some areas with more exposure proved protective over time, whereas others characterized by more segregated spaces experienced higher mortality rates. While adaptability proved difficult to measure cross-sectionally, we uncovered that it emerged over time as an inherently temporally driven phenomenon. Adaptability was independent from the underlying susceptibility of the populations impacted, as communities that had greater structural vulnerability and environments conducive to exposure may continue to be subject to compounding harms. Future research should further distill vulnerability dimensions to better support disaster mitigation, planning, and response in anticipation of future health and climatic emergencies.

Women, water and building back better: a case study of WASH and COVID-19 in East Africa. *Bernard Abudho, COHESU; Diana Karanja, COHESU; Ednah Ototo, University of Waterloo; Isaiah Walwanga, University of Waterloo; Joseph Kangmennaang, Queen's University; Elijah Bisung, The Queen's University; Sarah Dickin, Uppsala University; Warren Dodd, University of Waterloo; and Susan Elliott, University of Waterloo*

The COVID-19 pandemic placed access to water, sanitation, and hygiene (WASH) at the center of disease prevention. However, access to the levels of water supply that support good hand hygiene and institutional cleaning as well as access to soap were already deficient in low and middle income countries especially in rural areas and urban slums, prior to the advent of the global pandemic that was COVD-19. This research investigated the role of WASH in the control and management of the spread of COVID-19 in East Africa using a parallel mixed-methods case study design in Kenya and Uganda. Additionally, we explored the indirect impacts of public health intervention measures and how they may have served to exacerbate already inadequate access to WASH, further impacting the health and wellbeing of local populations. Results indicate that across the study sites, the determinants of WASH and water insecurity were context dependent and the various COVID-19 public health responses were significantly associated with these outcomes. For instance, in Uganda women who reported the fear of stigmatization due to COVID-19 status were more likely to indicate WASH insecurity. Also, those who were satisfied with government responses to COVID-19 and trusted government information related to COVID-19 were less likely to report WASH insecurity. However, in Kenya, being worried about COVID-19, fear of stigmatization by disclosing COVID-19 status, COVID-19 infection and an increase in the number of other persons infected with COVID-19 in the household were significantly associated with WASH insecurity. Findings from this research have potential to inform WASH-access related guidelines, policy and practice specific to WASH security in these communities in the context of future (global) emergencies including those related to climate, environment and geopolitics.

Paper Session

COVID-19 II

Down the drain: A feminist framing analysis of public washrooms in Canadian news media during the first year of the COVID-19 pandemic. *Janette Leroux, School of Kinesiology & Health Studies, Queen's University; and Emily McCullough, School of Kinesiology & Health Science, Faculty of Health, York University*

Public washrooms are essential to health, mobility, and social inclusion, yet remain

chronically underfunded and undervalued. During the COVID-19 pandemic, widespread closures across Canada made this overlooked infrastructure newly visible as a matter of public concern. This study explores how public washrooms were framed in Canadian news media during the first year of the pandemic, and what these framings reveal about collective understandings of public washroom access and provision. Using a qualitative feminist framing analysis of 170 newspaper articles published between March 2020 and March 2021, we identified dominant frames and counter-frames across three interrelated domains: people, infrastructure, and governance. People and infrastructure were the most visible and contested, while governance remained thinly represented and largely unexamined. Coverage centred on the intended users of public toilets and what they signified, but rarely on who holds power over them. Contradictions emerged across domains: biological need was acknowledged but filtered through conditional deservingness; washrooms were portrayed as both health-promoting and health-threatening, yet stripped of equity; and governance appeared both powerful and powerless, its decision-making framed as rational and apolitical, yet inconsistently applied. Across domains, unattainable ideals of the self-contained toilet user, the self-maintaining facility, and the self-regulating system overlapped, reflecting the exclusionary history of on-street sanitation and the moral order of the neoliberal city. Media coverage amplified individualistic hygiene discourse, reinforced public divisions, left governance uninterrogated, and made scarcity and exclusion appear reasonable and normal. Even in this moment of rupture, the meaning of public washrooms remained resistant to transformation and marginal to urban health governance.

Essential, Precarious, and Newsworthy: An Analysis of News Coverage on Canadian Grocery Workers during the COVID-19 Pandemic. *Alexandra Overvelde, Queen's University*

Grocery stores have long been sources of precarious employment in Canada, and the COVID-19 pandemic shined a light on the role of workplace conditions on the precarity of these workers. Over the course of the pandemic, grocery workplaces underwent drastic transformations affecting how they functioned and how their workers were perceived. These circumstances attracted considerable news media coverage on this employment sector in Canada. The objective of this study was to examine news coverage on grocery sector workers in Canada, how it changed from pre-pandemic to the present, and whether the type of coverage varied based on the framing of workers. News articles were gathered using Canada Newsstream; after screening, the included articles (n=162) were quantitatively coded to capture the substance and tone of the articles. Qualitative information about events and legislative changes were also collected to construct a timeline. The coverage revealed that these work environments were being reshaped by rapidly fluctuating legislation. The news coverage framed grocery workers as victims initially, and then as heroes as the pandemic wore on. Stories featured the challenges faced by grocery workers in terms of their mental, physical, and social determinants of health, highlighting the hardships faced by workers in this industry. The study signals an urgent need for continued work to advocate for transformations that will reduce precarity, support equitable treatment, and improve workplace conditions for grocery employees to protect their health and well-being.

Comparative evaluation of COVID-19 hospital admission models with and without population health information. *Hilary Fath (Sandborn), University of North Carolina at Chapel Hill*

In response to the COVID-19 pandemic, researchers across multiple disciplines developed models for simulating and forecasting pandemic dynamics. The Simulator of Infectious Disease Dynamics in North Carolina (SIDD-NC) was one such model built out of the University of North Carolina at Chapel Hill (UNC-CH). The SIDD-NC model is an individual-level agent-based model (ABM) that uses a systems-based approach to stochastically simulate person-to-person COVID-19 transmission. It uses a synthetic population developed by RTI International, called SynthPop, replicative of the demographic and household distribution of the actual population of NC in 2019. To better support health systems modeling, Sandborn and Delamater (2026) augmented RTI International's 2019 SynthPop dataset to include chronic condition diagnoses and therefore, condition-specific hospitalization risk. This article aims to show the improved utility of the SIDD-NC model when including that chronic condition-specific

hospitalization risk. Specifically, this study compares hospital admission estimates from the SIDD-NC base model series and the updated model series with both ground-truth data from the North Carolina Department of Health and Human Services (NCDHHS), and with each other. The base model series estimates COVID-19 hospital admissions based on age alone, while the updated model series incorporates chronic condition-specific risk. The goals of this study are to first, further evaluate both SIDD-NC model series against ground-truth data to ensure aggregate hospital admissions remain similar across model series and second, to demonstrate the increased utility of the updated model series for health preparedness efforts.

Shepherds and Shopkeepers: Homeworking and health in the Covid-19 Lockdown.
Andreas Mastrosavvas, UCL; Oliver Duke-Williams, UCL; Nicola Shelton, UCL; and Azvin Mariathasan, UCL

The 2021 Census in England & Wales was carried out in a national lockdown with recommendation to work at home. This data is unique for exploring homeworking feasibility and reality.The project will explore the health of those working at home and out of home by occupation, industry and location. This project will examine working from home and health during the COVID-19 pandemic using 2021 England and Wales Census household microdata.The UK government identified a group of people as recommended to shield (drastically minimise contact with others including no in-person working) during periods of lockdown, many of whom were over state pension age and likely to be retired. Little is known about the health characteristics of those of working age by their occupation, industry employment location.Certain workers in occupations and industries were more likely to have to be carried out their roles in person. This paper uses variables on employment status, occupation, industry, location, general health status and limiting long term illness to explore geographical and occupational and industry differences in health of those not in work, working from home, those with home as a depot/base (e.g. shepherds) and those working in person (e.g. shopkeepers).The research questions being addressed are which occupations and industries employ people with poor general health and /or limiting long term illness and to what extent those with poor general health and /or limiting long term illness were more likely to be working from home or not be in paid work.

Paper Session

Critical Perspectives in Health Geography

Beyond the Clinical: Developing an Ontology for Community-Level Social Determinants of Health.
Catherine Discenza, University of Illinois Urbana-Champaign; Camrin Garrett, University of Illinois Urbana-Champaign; Mandela Gadri, University of Illinois Urbana-Champaign; Yilin Lyu, University of Illinois Urbana-Champaign; Rachel Loftus, University of Illinois Urbana-Champaign; Pengyin Shan, University of Illinois Urbana-Champaign, National Center for Supercomputing Applications; and Marynia Kolak, University of Illinois Urbana-Champaign

While geographic approaches have long integrated community context to understandings of the social determinants of health (SDOH), mainstream approaches continue to be biased towards individualized, clinical settings. Further, how SDOH are named, defined, and categorized lacks standardization across SDOH literature. An ontology seeks to standardize these aspects of SDOH dimensions towards a more robust body of research that bridges disciplinary perspectives. A review of current SDOH ontologies reveals a body of work most targeted to the individual level, often for clinical use. Community-level measures of SDOH appear sporadically, rather than being standard features of an ontology. Popular medical ontologies like SNOMED CT are not designed for an explicitly community-level approach to SDOH. A community-level approach to SDOH lends itself to spatial and structural analyses of advantage and disparity, linking traditions of geography, urban planning, and the social sciences.In response, we are developing an SDOH ontology that aims to identify the dimensions of SDOH at the community-level, how these dimensions are referred to and measured in SDOH research, and what aspects of SDOH research are underdeveloped. We develop a protocol to capture the dimensions and measures of SDOH through keyword-driven reviews of PubMed databases. We further standardize names and definitions, and identify the relations encapsulated within these dimensions of SDOH, and will refine our

findings with focus groups and targeted community meetings. A successfully developed ontology will elucidate a framework for understanding and measuring dimensions of community-level SDOH, while retaining the nuance and complexity of SDOH research.

Unpacking constructions of time in wellbeing imaginaries: Competing narratives of the future among diverse newcomers and small cities in Canada. *Jennifer Dean, University of Waterloo*

Among small cities and shrinking communities, community wellbeing often rests on the ability to attract and retain new residents, particularly international migrants. Countries across the globe have introduced regionalization policies that spatially redistribute immigrants away from the traditional gateway cities and into smaller communities to mitigate the economic and social impacts of population decline. Such policies are inherently rooted in visions of future wellness for urban places and the populations who (may) reside within them. Indeed, the role of time, temporality and futurity have received growing attention by urban scholars; however, how these concepts underpin place-based immigration policies and urban futures (of health and wellbeing) has yet to be interrogated. This mixed-methods study draws on data gathered from municipal staff and settlement workers in small cities, and diverse newcomers to illuminate how constructions of time and temporality shape their imagined futures. The findings illustrate how communities' preoccupations with the past shape current city plans for a future transformation from a stagnant community into a vibrant and healthy one. Immigrants use 'timescapes' to realize their own socio-spatial belonging and wellbeing in Canada. The results emphasize how flexible constructions of time- slowing, pausing, speeding, imagining- were implemented by communities seeking future wellness and among newcomers seeking their own imagined future post-migration. The paper concludes with a discussion of how to reconcile competing but complementary imaginaries of a healthier future in small cities for the communities themselves and the newcomer residents they seek to retain over time.

Is Holistic Medicine Liberating for Women? A Place-Based Approach to the Gender Question in Taiwan and Northeast England. *Chung-Yen Cheng, Department of Geography, Durham University*

This paper argues that a place-based approach provides a more nuanced view of women's self-transformation brought about by holistic medicine. Holistic medicine refers to non-evidence-based interventions that fall outside of the biomedical model. Some scholars argue that the unorthodox nature of holistic medicine provides norm-breaking potential for practitioners, particularly challenging gender norms (Sointu, 2011). This is important for envisioning a feminist future and the 'Equity and Justice Transitions' conference theme, considering women are overrepresented in holistic medicine (Keshet & Simchai, 2014). However, critics say the self-transformation aspect of holistic medicine aligns with the neoliberal individualistic ideal, which limits the liberatory potential of holistic medicine and upholds patriarchal gender norms (Brenton & Elliot, 2014).I argue that reality differs from such dualistic views. Alternative interpretations remain unexplored because 'place' - a core concept in geographies of wellbeing - is overlooked. In my place-based analysis, in which participants interact with one another, instead of having researchers interact with participants in one-on-one interviews, contradictions occur - individualistic behaviors are facilitated by community activities, and women holding traditional views on gender unknowingly decenter patriarchy during practice. My findings are based on fieldwork in yoga and Tai Chi classes in Taiwan and Northeast England. Using Irigaray's work (2002) on yogic breath and sexuate difference, I further explore why such contradictions exist. A possible explanation is that holistic medicine helps women break away from the 'sameness' under patriarchy and uncover their subjectivity, but such newly found 'difference' may be misunderstood as the product of oppressive structures.

Care as Place-Making: Ambivalent atmospheres towards 'feeling at home' in Supported Housing. *Andrew Power, University of Southampton*

Recent work in the geographies of care has foregrounded the spatialities of support, yet care is still often treated as something that happens in place rather than something that actively makes place. This paper develops the provocation that care is a form of place-

making, drawing on the Feeling at Home study of adults with intellectual disabilities living in shared supported housing in England.While geographers have theorised care as relational, home as lived and continually made, and health as shaped by therapeutic environments, less attention has been paid to how care practices actively produce the social, material, and affective conditions of place. Building on these strands, the paper conceptualises care as a relational and atmospheric place-making practice.Findings show that 'feeling at home' is an ongoing, negotiated achievement emerging through interactions between residents, staff, families, and material environments. Within ongoing transitions in health and social care systems—particularly evolving expectations of independence amid a deepening crisis in adult social care—care work actively configures environments through everyday practices such as staff presence, routines, and spatial boundaries, shaping residents' capacities to dwell, belong, and cultivate identity.Wellbeing, therefore, is not simply an outcome of care but is co-produced through the quality of place-making practices it entails. The paper calls for greater attention to the micro-politics and atmospheres through which care makes and remakes place, contributing to efforts to rethink how 'feeling at home' is a critical, yet often overlooked, determinant of health and wellbeing in supported living contexts.

Paper Session

Digital Health Geography: Innovations at the Intersection of Place, Technology, and Public Health

A Comprehensive Scoping Review on Smart City and Mental Health Historical Evolution, Developments, and Future Directions. *Ömer Ünsal, Bursa Uludag University; Oliver Gruebner, University of Lucerne; and Munazza Fatima, The Islamia University Bahawalpur*

This study presents a comprehensive scoping review examining the intersection between smart cities and mental health to identify research trends, conceptual gaps, and future directions. Despite rapid advancements in both domains, integrative studies linking smart city frameworks with mental health outcomes remain limited. Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR), a systematic search was conducted across ScienceDirect, PubMed, Europe PMC, Web of Science, and Scopus using "smart cit*," "mental health," "mental disorder*," and "psychological resilience" keywords in all fields. Peer-reviewed interdisciplinary studies published between 1990 and 2025 were included. A total of 1,158 duplicate and 971 unique records were identified and screened through a two-stage process (title/abstract and full-text review). After excluding retracted and inaccessible studies, 98 articles were retained for final analysis. The findings indicate a fragmented research landscape, with limited integration of technical, spatial, and social dimensions. Existing studies remain polarized, focusing either on technological innovations (e.g., artificial intelligence and smart monitoring tools) or on socio-environmental determinants (e.g., demographic factors and greenspace exposure). The review further highlights both opportunities and challenges associated with smart city development. Benefits include improved early diagnosis, personalized interventions, enhanced healthcare access, real-time data integration, and strengthened urban resilience during crises such as COVID-19. However, adverse effects such as surveillance-related anxiety, technology-induced stress, and technostress are also evident. Overall, these findings provide a foundation for identifying research gaps and advancing interdisciplinary approaches to promote mental health in smart urban environments.

Digging the digital - A Conceptual Framework for Integrating Digital Data Donations and Geospatial Methods in Neuromuscular Disease Research. *Oliver Gruebner, University of Lucerne; Dmytro Rudyka, Lucerne University of Applied Sciences and Arts, Lucerne, Switzerland; Suzanne Suzanne, Centre for Information Management, Business School, Loughborough University, UK; Martin Sykora, Centre for Information Management, Business School, Loughborough University, UK; Thomas Friemel, Department of Communication and Media Research, University of Zurich, Zurich, Switzerland; Ketan Shankardass, Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada; and Markus Wolf, Department of Psychology, University of Zurich, Zurich, Switzerland*

Digital data donations (DD) and geospatial methods offer complementary insights into

the lived experiences of individuals with neuromuscular diseases (NMD). While digital DD has great potential to reveal digital communication patterns and psychosocial burdens, geospatial data further uncovers regional disparities in health. Though both approaches have been tested in multiple contexts, their systematic integration in NMD research remains unexplored.This study proposes a conceptual pipeline combining a secure Data Donation Module (DDM)—already used with structured surveys—to collect user-generated digital content (e.g., social media, Google search terms), with participatory GIS tools for geotagging health-relevant locations. For NMD populations, digital traces could expose unmet support needs, while spatial data may highlight inequities in resource distribution. By merging these datasets, we aim to create a multilayered framework that connects self-reported, behavioural, and contextual data, deepening our understanding of how environments shape health outcomes.The presentation will discuss methodological and ethical challenges, including data privacy, participant engagement, and technical integration. We will also explore the framework's limitations, potential for research, teaching, and policy, emphasizing its adaptability to other vulnerable groups. This conceptual model bridges digital epidemiology and health geography, providing a foundation for studying spatial disparities and resilience in chronic illness.

Identifying community neighbourhood digital places on Instagram and Facebook, a case study from city of Hamilton. *Martin Sykora, Centre for Information Management, Business School, Loughborough University, UK; Suzanne Suzanne, Centre for Information Management, Business School, Loughborough University, UK; Marin Solter, Centre for Information Management, Business School, Loughborough University, UK; Ketan Shankardass, Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada; Anna Do, Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada; Christopher Hewitt, University of Western Ontario, Canada; and Oliver Gruebner, University of Lucerne*

Social media platforms have become important infrastructures through which urban communities represent themselves, organize around shared concerns, and construct digital expressions of neighbourhood identity. Yet how these digital places reflect the lived geographies of cities, and how neighbourhoods differ in their online representation remain under-examined. This study develops a mixed-methods approach for identifying and characterising community neighbourhood digital places in Hamilton, Ontario, using public Instagram accounts, Facebook pages, and Facebook community groups.Drawing on 149,075 posts from 130 digital places, identified through rapid digital ethnography, we map how neighbourhoods are articulated online through place-affiliated groups, community organisations, and resident-generated content. Each digital place was categorised according to four dimensions: (1) platform type; (2) thematic or organisational identity (e.g., community organisation, non-profit, food blog, cultural or heritage organisation); (3) sociodemographic identity markers (e.g., youth, Indigenous community, LGBTQ+ community); and (4) geographical affinity linking accounts to neighbourhoods or wards.Of the 130 accounts, 65 (50%) displayed explicit neighbourhood-level affinities, spanning 27 neighbourhoods, while others operated at city-wide or issue-specific scales. Facebook groups tended to be more hyperlocal and place-based, whereas Instagram accounts more often served city-wide cultural, lifestyle, or organisational identities. This classification highlights a diverse and uneven digital ecology, revealing how communities present neighbourhood identity online. Combining qualitative content analysis with computational techniques, we examine patterns in neighbourhood representation, including stress/hope-related language as indicators of vulnerability and resilience. Our study demonstrates the value of integrating ethnographic and scalable digital methods to contextualise online civic discourse and offline wellbeing/social infrastructure.

Gentrification and other changes to neighbourhood context in the City of Toronto, 2006-2016. *Ketan Shankardass, Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada*

Background: Gentrification is a process where increased neighbourhood investment leads to increased housing costs, resulting in social exclusion and displacement of lower-income residents. These and other impacts on the health and wellbeing of residents can reflect an array of changes to the context of gentrified neighbourhoods. A gentrification

atlas was created for the City of Toronto covering the period 2006-2016.Methods: Gentrification was measured at the census tract (CT) level using average household income data from the 2006, 2011 and 2016 censuses. Gentrified CTs had an average household income below the 40th percentile in 2006 and above the 60th percentile in 2016. Other CTs were classified as either: low income, middle income or high income. Neighbourhood-level data to characterize changes in shelter costs and cost assistance, unemployment, walkability, crime, and post-secondary training were obtained from the census, City of Toronto, Toronto Police Services and Toronto Community Health Profiles. Variation in neighbourhood characteristics across gentrifying and non-gentrifying neighbourhoods was measured based on area-weighted average of neighbourhood characteristics within a 1km buffer around each census tract.Results: A total of 523 CTs across 140 neighbourhoods in the City of Toronto were analyzed, including 12 gentrified CTs, 197 low income CTs, 117 middle income CTs, and 197 high income CTs. Changes to the neighbourhood context of gentrified CTs included expected and unexpected trends.Discussion: Understanding how social determinants and social outcomes changed in gentrified neighbourhoods in the City of Toronto can inform further research to understand impacts on health and wellbeing.

Explaining Negative Affect across Los Angeles in the Aftermath of Nipsey Hussle's Death: The Role of Neighborhood Context. *Chibueze Nkemka, Wilfrid Laurier University; Ketan Shankardass, Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada; Martin Sykora, Centre for Information Management, Business School, Loughborough University, UK; and Suzanne Suzanne, Centre for Information Management, Business School, Loughborough University, UK*

Background: Prior research on parasocial relationships has primarily examined explicit grief expressions through hashtags or memorial posts; however, limited work has addressed the broader, implicit emotional shifts in community-level social media discourse. This study extends contextual behavioral research by examining how parasocial grief dynamically emerges through ambient emotional expression following the death of a public figure.Methods: This study explores the changes and spread of negative emotional expression on Twitter following the violent death of Los Angeles-based musician Ermias Asghedom (Nipsey Hussle) on March 31, 2019. A dataset of 43,566 geocoded English-language tweets that were geolocated within Los Angeles city boundaries and posted between March 1 and April 29, 2019, was examined. Stresscapes and EMOTIVE, ontology-based software, were used to track the variation in stress and negative emotions across ten time-based intervals during the study period.Results: Sadness and stress increased in the immediate aftermath of Nipsey Hussle's death. The study identified higher concentrations of stressful tweet expressions in the Downtown Los Angeles, Hyde Park, Baldwin Hills-Crenshaw, and Watts neighborhoods. These neighborhoods also had a higher proportion of Black residents than other LA neighborhoods. Tweets were more frequently posted in these select neighborhoods referencing Nipsey Hussle around the time of his death.Discussion: This study demonstrates how social media can serve as a tool for identifying and understanding neighborhood-level emotional responses to traumatic events and highlights the importance of demographic context in shaping grief expression.

Neighbourhood Resilience Planning via Participatory Mapping with Renters in Hamilton, Ontario, Canada. *Anna Do, Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada; Christopher Hewitt, University of Western Ontario, Canada; Marin Solter, Centre for Information Management, Business School, Loughborough University, UK; Suzanne Suzanne, Centre for Information Management, Business School, Loughborough University, UK; Martin Sykora, Centre for Information Management, Business School, Loughborough University, UK; Oliver Gruebner, University of Lucerne; Krystelle Shaughnessy, University of Ottawa; Rob Feick, University of Waterloo; and Ketan Shankardass, Department of Health Sciences, Wilfrid Laurier University, Waterloo, Ontario, Canada*

This sequential mixed-methods study demonstrates the co-production of knowledge between academic researchers and local communities. Guided by a resilience planning framework, the study engaged 48 renters from the Beasley neighbourhood of Hamilton, Ontario, Canada to identity stressful and supportive locations using a participatory mapping tool called "Place Report." A total of 74 Place Reports were submitted, with most indicating supportive places in or near Beasley. Thematic analysis revealed three

overarching domains, and 13 themes related to the use and function of these locations. Places pertaining to food, housing, and physical activity emerged as the most frequently discussed topics. The findings, which also included suggested interventions and local issues, were presented at a resilience planning meeting attended by participatory mapping participants and other community members. This meeting facilitated contextualization of the mapping data and generated further discussion on relevant local issues and potential interventions. Although limitations were noted regarding sample representativeness and the validity of some Place Report ratings, the study contributed meaningful, community-driven insights for neighbourhood resilience planning within Beasley. Work is on-going with community members and partners in Beasley to translate findings for renters and other neighbourhood residents. Additional resilience planning is being conducted to prepare policy briefs for decision-makers and community leaders about how to help address stressors and promote well-being for Beasley residents.

Paper Session

Emerging Directions in Therapeutic Landscapes

Extracting Website Content from a Sample of Wellness-Based Canadian Spas to Assess their Representation of Therapeutic Landscapes. *Joyce Wu, McMaster University; and Allison Williams, McMaster University*

Urbanization and employment fatigue are driving a growing demand for wellness tourism, particularly for spa experiences promoting health restoration. Despite the recent proliferation of this industry, there is a lack of research into how effectively spas communicate elements of a therapeutic landscape. This framework was created by health geographer Wilbert Gesler, explaining that a therapeutic landscape traverses the natural, symbolic, social, and built environments. Using a manifest content analysis, this thesis assesses how a sample of 20 Canadian spas use their online presence to communicate the four environments of therapeutic landscapes. These environments worked as the foundation of the codebook, together with their respective inclusion and exclusion criteria. After, a deductive thematic analysis was employed on 100 publicly available reviews. The reviews reflected consumer experiences and were contrasted with the website's business claims to determine which spa site appears to have most effectively and accurately advertised its services. This can be beneficial for marketers making future decisions regarding website design and content inclusion. It is similarly helpful for the average lay consumer seeking wellness-based retreats. The frequency of salient text and imagery appearing on websites, compared to the proportion of consumer mentions suggest areas for improvement. As a result, spa sites that overpromised on customer experiences received the greatest proportion of negative reviews. In contrast, spas that were more mindful of their claims and emphasized nature-based amenities received positive reviews. This study intends to advance health geography and wellness tourism via the quantification of the digital representation of healing spaces.

From communitas to fluidunitas: recontextualizing spiritual therapeutic landscapes in post-secular pilgrimage. *Peiling Zhou, Harbin Institute of Technology, Shenzhen*

Since Gesler’s inception of the therapeutic landscapes framework, scholarship has evolved to address the post-secular recontextualization of spiritual healing. This paper advances an emergent conceptual direction by theorizing how healing is sustained not only through shared therapeutic settings, but through negotiated forms of togetherness under conditions of social, religious, and media difference. Drawing on an eight-month ethnography at the Prince Temple in Southwest China, the study introduces fluidunitas as a vital conceptual construction. Moving beyond traditional communitas—which often assumes shared social backgrounds or beliefs—fluidunitas describes a more flexible, affective mode of togetherness that allows for co-healing among diverse groups with fragmented narratives and divergent spiritualities.Conceptually, the research reimagines spatiality as a dynamic pivot between offline material pilgrimage and online digital interactions. In the post-secular landscape, the physical site acts as a bridge where social media posts, virtual performances, and embodied presence collide. This spatial intersection facilitates a polysemic experience, where a single landscape can host multiple, non-conflicting therapeutic meanings simultaneously. Furthermore, the paper

highlights the role of temporality in shaping affect and experience. By analyzing the interplay between the instantaneity of digital engagement and the rhythmic duration of physical pilgrimage, the study illustrates how temporal scales modulate the intensity of healing. This temporal interweaving creates a multifaceted experience where the memory of a digital interaction and the immediacy of a physical ritual reinforce one another. This paper offers a novel framework for understanding how healing is produced within the hybrid, digitized, and pluralistic landscapes of a changing world.

Understanding the place of urban nature in the therapeutic landscapes literature: A scoping review. *Joonsoo Lyeo, McMaster University; Allison Williams, McMaster University; and Pauline Marsh, University of Tasmania*

Global trends in urbanization, environmental degradation, and digital media consumption have ushered in major changes to the character of human-nature contact. In recent decades, it has been recognized that a growing share of human-nature contact has occurred in urban nature: portions of the non-human world in otherwise urban environments. An emerging body of literature has sought to highlight the potential for urban nature to act as a therapeutic landscape. To better understand the state of this literature, a scoping review was conducted to explore how the therapeutic landscapes framework has been applied to urban nature, specifically with regard to the relational dynamics shaping human-nature connection in an urbanizing world. A search of Scopus, Social Sciences Abstracts, and Web of Science was conducted to identify peer-reviewed, English-language literature which applied the therapeutic landscapes framework to an urban nature setting since 2016. The 52 citations identified through this search were analyzed using descriptive statistics and qualitative thematic analysis. This review found that the urban nature settings were often situated on a spectrum from ‘wild’ to ‘cultivated’; that the therapeutic potential of urban nature was frequently attributed to its ability to provide a space for escape, embodied experiences, and socialization; and that users might face physical, social, or economic barriers to experiencing the therapeutic attributes of urban nature. Policy-makers and urban planners must ensure that urban nature is made available in a way that meets the needs of different human-nature relationalities and remains accessible to all population groups.

Perceptions of Polar Regions as Therapeutic Landscapes: A Qualitative Exploration. *Allison Williams, McMaster University; and Joonsoo Lyeo, McMaster University*

In recent years, polar regions have received increased attention as tourist destinations. Much of this newfound popularity has been attributed to the perceived precarity, novelty, and otherworldliness of Arctic and Antarctic landscapes. Although polar tourism has become the subject of a growing body of literature, little is known about how polar landscapes may influence the wellbeing of those who visit them. Through a thematic analysis of interviews conducted with arctic tourism researchers attending a conference in the Luleå region of Sweden, we sought to answer the question: How can polar regions be understood as therapeutic landscapes? Through this analysis, polar regions were understood to be novel places, the site of unique sensescapes, and sources of healing. As novel landscapes, polar regions were often conceptualized as being on the periphery of the human world, providing visitors with a sense of escape and adventure. These feelings were amplified by the unique sensescapes of polar regions, in which visitors were exposed to sound, scent, and temperature sensations that were unlike anything they would expect to experience in their day-to-day lives. These feelings ultimately culminated in healing properties in the form of a sense of awe and wonder, moments of disconnection and reflection, and feelings of spiritual fulfilment. Altogether, these findings may be understood in the context of the wider literature on last-chance tourism, therapeutic landscapes as places of refuge, and nature connection.

Paper Session

Environmental (In)justice: Exploring the health impacts of environmental inequities and potential strategies of resistance

Differences in access to nature on campus between HBCU and HSIs versus PWIs and associations with student mental health. *Catherine Brown, Michigan State University; Kesha Baptiste-Roberts, Morgan State University; Jennifer Roberts, University of Maryland -*

College Park; Aaron Reuben, University of Virginia; Ali Ishaque, University of Maryland - Eastern Shore; Dia Sekayi, Morgan State University; Kirsten Beyer, Medical College of Wisconsin; Matthew Browning, Clemson University; Minyong Lee, North Carolina Agricultural and Technical State University; Myrriah Gómez, University of New Mexico; Olivia McAnirlin, Clemson University; Trent Larson, North Carolina Agricultural and Technical State University; Zihan Lin, Cleveland State University; and Amber Pearson, Michigan State University

In a recent national U.S. survey, nearly 75% of university students reported moderate or severe psychological distress. Poor mental health amongst university students has been attributed to stressors including separation from family, social isolation, and increased responsibilities. Meanwhile, university campuses offer unique opportunities to support student mental health through intentional design, including access to natural spaces which have known mental health benefits. However, campus environments have been shaped by broader structural and historic factors, including inequities in land and resources. In the USA, historically Black colleges and universities (HBCUs) and Hispanic-serving institutions (HSIs) may differ from predominantly White institutions (PWIs) because of uneven application of the Morrill Act. Using data from nine universities in the NatureIDEAS study, we tested for differences in availability of campus nature to see if inequity persist. Additionally, we assessed the association between time spent in nature on campus and students' mental health. Measures of nature were compared at three scales. Average time spent in campus nature was estimated using the NatureDose app and psychological distress was assessed via Kessler-6. Results indicate that campus nature is significantly higher near campus housing at PWIs compared to HBCUs and HSIs. More time spent in nature on campus was associated with lower psychological distress. Our findings highlight persistent differences in nature opportunities across institutions, reflecting the broader factors which have shaped campus environments. To further equity across campuses, efforts should focus on supporting enhancement to natural spaces, as campus nature can be a valuable resource for students' mental health.

Factors influencing the relationship between an objective walkability index and device-derived physical activity in low-income neighborhoods in Detroit. *Nicole Odell, Michigan State University; Karin Pfeiffer, Michigan State University; and Amber Pearson, Michigan State University*

Evidence from diverse populations shows that residents of more walkable neighborhoods generally are more physically active and have lower body mass index (BMI) than those in less walkable neighborhoods. Objective indices measuring walkability are becoming more prevalent with improvements in geospatial and imagery data availability. However, perceptions like safety can also influence physical activity, especially in disadvantaged neighborhoods, and might override the influence of an objectively walkable environment. This study aimed to 1) determine if an objective walkability index (BEH-NWI) predicts physical activity and BMI in a low-income urban context and 2) explore how perceived factors (e.g., safety) affect the index's relationship with physical activity and BMI. From a sample of 610 participants in 11 low-income Detroit neighborhoods, we calculated the BEH-NWI, obtained objective neighborhood measures (e.g., crime rates), and collected survey data on perceived safety, perceived aesthetics, and demographics (e.g., age). Physical activity (total and outdoor) was measured through waist-worn GPS and accelerometers over a one-week period. We used structural equation modeling to analyze the direct relationships between walkability and physical activity and BMI, with potential mediation by perceived safety and aesthetics. Our results show that walkability was not associated with any outcomes but was associated with perceived safety (β=0.15, p=.002). Outcome variables were driven more by individual-level demographic factors than neighborhood context. These findings indicate that walkability metrics, even those including perceived variables, may not apply in low-income contexts. Public health practitioners and local governments should consider socioeconomic factors when designing equitable, health-focused built environment interventions.

Structural Disinvestment, Neighborhood Heat Exposure and the Mediating Effect of Tree Canopy: A National Study across U.S. Census Tracts. *Konok Akter, PhD Student and Graduate Research Assistant, Division of Epidemiology and Social Sciences, Institute for Health & Humanity, Medical College of Wisconsin; Wei Xu, Assistant Professor, Division of Epidemiology and Social Sciences, Institute for Health & Humanity, Medical College of*

Wisconsin; Yuhong Zhou, Research Scientist, Division of Epidemiology and Social Sciences, Institute for Health & Humanity, Medical College of Wisconsin; and Kirsten Beyer, Medical College of Wisconsin

Background: Heat exposure is a critical determinant of health shaped by climate, urban planning, policy, and economic investment. Structural disinvestment through processes such as redlining has influenced ecological conditions. However, existing research focuses primarily on historical disinvestment and its relationship with contemporary heat exposure. The influence of contemporary mortgage disinvestment on heat exposure has not yet been assessed. This study examines the relationship between a contemporary mortgage disinvestment index (MDI) and summer air temperature across U.S. census tracts, and whether tree canopy mediates this relationship.Methods: We calculated mean summer (June-September) air temperature using PRISM 2021-2025 data and percent tree canopy using NLCD 2020 data for 71,662 census tracts in the contiguous U.S. The MDI is constructed from Home Mortgage Disclosure Act data as the odds ratio of denial of a mortgage application in a local area relative to the surrounding region, capturing present-day lending inequalities. Bivariate associations, multivariate regression models and structural equation modeling quantified pathways linking MDI to summer mean temperature. Tract-level confounders included population density, socioeconomic status, and latitude.Results: In unadjusted models, higher MDI was associated with warmer temperature (β=0.130, p<0.001), while tree canopy showed a cooling effect (β= -0.031, p<0.001). In adjusted models, MDI remained a significant predictor (β=0.110, p<0.001), and tree canopy retained its protective association (β=-0.015, p<0.001). Mediation analysis indicated that tree canopy explained 9% of the total effect of MDI on temperature (indirect effect=0.011, 95% CI:0.007-0.015), with 91% attributable to the direct pathway.Conclusion: Contemporary heat exposure is tied to neighborhood investment and ecological infrastructure. Tree canopy differences emerge as a key mechanism linking structural disinvestment to elevated temperature. Findings support equity-centered approaches in health geography and underscores the need for place-based climate adaptation strategies integrating ecological restoration with investment reforms.

Socio-spatial inequalities in UK urban tree canopy cover. *Benedict Wheeler, European Centre for Environment & Human Health, University of Exeter; Alice Drysdale, Centre for Ecology and Conservation, University of Exeter; Shari Mang, Centre for Ecology and Conservation, University of Exeter; Mark Ferguson, European Centre for Environment & Human Health, University of Exeter; Adam Cormack, The Woodland Trust; Sally Bavin, The Woodland Trust; Beth Collier, Wild in the City; and Regan Early, Centre for Ecology and Conservation, University of Exeter*

Trees are critical urban green infrastructure, delivering multiple benefits for human health and well-being. Urban woodlands and trees in streets, parks and gardens mitigate hazards including high temperatures and flooding, and can promote psychological well-being. Existing evidence, mostly from north America, indicates substantial socio-spatial inequalities in tree distributions within and between urban areas. However, environmental inequalities are context-specific, and there is currently no comprehensive neighbourhood-scale assessment of urban tree equity for the UK.We integrated data from UK censuses (2021/22), national Indices of Deprivation, and tree canopy data derived from Google Environmental Insights Explorer. Geographical units were 34,298 small areas (Lower-layer Super Output Areas and equivalents) within urban settlements. Generalised linear mixed models indicated significant inequalities in the distribution of urban trees, although associations varied by socio-demographic indicator (age, ethnicity, housing tenure, health, employment-based socio-economic position and deprivation). For example, based on the Welsh Index of Multiple Deprivation, the most socio-economically deprived urban neighbourhoods in Wales have tree canopy cover around 17%, and the least deprived around 25%. Spatial analysis of residuals from full models indicated notable geographies of neighbourhoods with higher/lower tree canopy cover than expected, given socio-demographic composition, indicating that place-specific processes are influential in shaping urban tree equity.Tree programmes are common urban greening interventions, aiming to deliver climate mitigation, biodiversity and social benefit. They can have unintended adverse consequences, including potentially exacerbating environmental injustices. This UK-

wide analysis indicates urban forestry strategies and interventions should consider local context, and act to mitigate (and avoid reinforcing) existing inequalities.

Scorching Inequality: Occupational Heat Stress and Kidney Injury Among Nepali Migrant Workers. *Roshan Thapa, Medical college of wisconsin; Janavi Wagle, brookfield high school; Niki Viradia, Medical college of wisconsin; and Pinky jha, Medical college of wisconsin*

Introduction: As climate change accelerates, occupational heat stress has become a critical yet underrecognized cause of chronic kidney disease of non-traditional origin (CKDnt). Global temperatures have already risen by approximately 1.48°C above pre-industrial levels, with projections of 2-4°C by 2100, posing escalating risks to outdoor workers worldwide. While epidemics in Central America, Sri Lanka, and India have drawn global attention, Nepali migrant workers employed in high-heat environments across the Gulf and Southeast Asian countries remain overlooked. These outbreaks share striking clinical and epidemiological similarities: young, otherwise healthy manual laborers develop CKD without traditional risk factors such as diabetes or hypertension. This review situates Nepali migrants within the global CKDnt landscape to highlight intersecting inequities in climate, labor, and health. Each year, over 1.5 million Nepali migrants—driven by a "remittance trap" where labor migration accounts for nearly 25% of Nepal's GDP—work under extreme conditions where temperatures frequently reach 45-50°C. This structural dependency leaves workers profoundly vulnerable to severe, life-altering health risks.Methods: A narrative synthesis was conducted using a multi-track search of peer-reviewed and grey literature through 2025. The review utilized terms including heat stress, CKDnt, and migrant workers to identify consistent risk factors, prevalence estimates, and the efficacy of current preventive measures.Findings: Data indicates that 92.1% of affected migrant workers present with renal failure of "unknown etiology," strongly pointing toward environmental and occupational triggers rather than lifestyle causes. The clinical burden is strikingly premature: the median age for dialysis initiation among these workers is just 37 years, compared to 54 years in the general population. Environmental analysis reveals that for every 1°C increase in Wet Bulb Globe Temperature (WBGT), the risk of acute kidney injury (AKI) increases by 18%. Consistent risk factors include extreme work environments (40°C+), chronic dehydration, productivity-based pay that discourages rest, and the frequent use of NSAIDs to mask heat-related pain.Discussion & Policy Gaps: Current occupational protections are fundamentally inadequate, relying on "clock-based" midday breaks that ignore humidity peaks and metabolic work rates. Additionally, a significant clinical blind spot exists: the migration health framework currently lacks mandatory baseline eGFR or proteinuria screenings, preventing the early detection of renal decline before it reaches end-stage failure.Conclusion & Implications: CKDnt among Nepali migrant workers exemplifies the convergence of climate change, occupational heat exposure, and labor inequity. The economic and social toll of early ESRD extends beyond individual health—undermining family stability, reducing remittance flow, and straining Nepal's already resource-limited health system. Integrating kidney health screening into migration health assessments, establishing enforceable heat-safety standards, and recognizing CKDnt within global occupational disease registries are urgent priorities. Addressing this emerging epidemic is not only a clinical and public health imperative, but it is a matter of labor justice and human rights in a warming world.

Paper Session

Environmental Change and Infectious Disease

Using agent-based simulation to reconstruct historical disease landscapes,: the example of malaria in Cyprus. *Victor Beauvalet, Université de Rouen-Normandie; Emmanuel Eliot, Université de Rouen-Normandie; Iris Charalambidou, University of Nicosia; and Sébastien Rey-Coyrehourcq, Université de Rouen-Normandie*

In the early 20th century, malaria was a severe public health burden across the world and especially in the Mediterranean. On the island of Cyprus, it accounted for up to 80% of adult mortality, making the island a major testing ground for British colonial malaria control during the period 1878-1960. Although eradication was declared locally in the early 1950s and officially recognized by the WHO in 1967, this transition occurred alongside rapid demographic growth, economic development and substantial

transformations in land use.This presentation investigates how colonial health policies interacted with environmental and socio-economic change to reshape malaria risk across the island. Reconstructing these dynamics requires integrating heterogeneous archival sources - medical statistics, population censuses, and historical land use maps - whose temporal and spatial discontinuities complicate conventional epidemiological analysis.To address these challenges, we develop an agent-based simulation framework that models interactions among climate variability, policy interventions, mosquito ecology, and human mobility at both local and island-wide scales. This approach enables us to explore how different combinations of factors produced the observed decline in malaria and to identify which interventions were most influential in driving eradication. By comparing simulated outcomes with historical records, we assess the plausibility of alternative eradication pathways and reconstruct the evolving geography of malaria risk. The study demonstrates the value of agent based modeling for reconstructing historical disease landscapes and for understanding how public health interventions intersect with broader environmental transformations.

Positive and Negative Health Effects of Urban Biodiversity: Assessment in urban green spaces in Cologne and Bonn, Germany. *Timo Falkenberg, University Bonn, UKB, Institute for Hygiene and Public Heath, GeoHealth Centre*

Urban green spaces provide multiple health benefits, encompassing both direct and indirect effects on physical and mental health. However, these factors are not uniform, and the type and quality of green spaces shape their impacts. Furthermore, user attributes, perceptions, and behaviours mediate the influence of green space exposure on health and well-being. Beyond the evident health benefits, potential risks are often overlooked. Urban green spaces provide habitats for disease vectors, particularly ticks, which pose an increasing risk in Germany.A cross-sectional survey was conducted with a random sample of 2,157 geo-referenced households and monthly tick collections in eleven green spaces over a period of two years. Using cluster analysis, we identified five green space user groups that differed significant across the mental health scales (WHO-5, PSS-10, PHQ-9). Mediation analysis indicated significant indirect effects, highlighting important factors that mediate associations between green space exposure and mental health. Vector monitoring revealed marked variation in tick abundance and pathogen prevalence along an urban green space gradient. The findings of the study demonstrated that natural green spaces exhibited higher tick densities compared to well-manicured parks, while pathogen prevalence was higher in green spaces with lower biodiversity.The findings of this study demonstrate that the nature of urban green spaces, their features, and quality influence health benefits and risks, highlighting trade-offs and synergies with practical implications for the planning, management, and design of urban green spaces.

Multisectoral Approach to Managing Disease Outbreaks in Post-Conflict Settings: The Ebola situation in Liberia. *Florence Anfaara, Western University; Erica Lawson, Western University; and Isaac Luginaah, Western University*

Infectious diseases cause about 41 million deaths annually and are expected to stay at that level through 2030. There have been calls for a tripartite, multisectoral approach involving local communities, national governments, and international partners to control infectious disease outbreaks. While this collaborative strategy is ideally implemented in settings with a well-established and functional healthcare system, its use in post-conflict resource-limited contexts has not been thoroughly examined, such as the 2014 Ebola epidemic in Liberia, which resulted in 10678 cases and 4810 deaths. Given this limitation in the literature, this study sought to investigate how a multisectoral disease prevention approach was applied to contain Ebola in Liberia, guided by two main goals: 1) to assess how the tripartite approach was executed in Liberia, and 2) to identify the key areas of collaboration that contributed to effectively managing and containing the spread of Ebola in Liberia. Analysis of five focus groups (n=27) and seven in-depth interviews (n=7) indicates that although a tripartite and multisectoral response framework provides rapid disease response and promotes shared responsibility during health emergencies, implementing it in resource-constrained settings can be difficult, especially in Liberia, a country recovering from prolonged conflicts. Notably, unequal power relations between stakeholders, privileging a Western-centric model of health response, and an undeveloped health care system

hindered an effective tripartite and multisectoral response to contain Ebola in Liberia. To effectively position Liberia and similar contexts to address future infectious disease outbreaks, there is a need for tripartite, multisectoral responses adapted to local contexts, with a key emphasis on local knowledge, including customs and traditions, while ensuring equal power dynamics among stakeholders at all levels.

The Uneven Malaria Burden of Floods: Spatial Heterogeneity in Flood-Driven Malaria Risk across Tanzania. *Varun Goel, University of South Carolina; Sarah Osima, Tanzania Meteorological Authority; Hadijja Nakawooya, University of South Carolina; Cuizhen Wang, University of South Carolina; and Yeromin Mlacha, Ifakara Health Institute, Tanzania*

Tanzania is a high-burden, malaria-endemic country spanning diverse climatic and hydrological zones. Recent years have featured increased high-profile flooding events due to tropical cyclones, prolonged rainfall, and sudden-onset floods across the country. However, the flooding-malaria relationship is context-dependent and complex, varying over space, time, and malaria transmission intensity. Floods may initially suppress transmission by flushing larval habitat, but may also elevate risk by re-establishing breeding sites and disrupting healthcare access, protective housing, and malaria control. We construct a monthly subdistrict panel for Tanzania from 2010-2024 that links bias-corrected routine malaria incidence from national health information systems with multi-source flood exposure measures. Flood timing, extent, and persistence are derived from ministry records, national disaster reports, global flood databases, and remote sensing products to generate high-resolution inundation metrics. To estimate impacts, we apply spatial difference-in-differences models with subdistrict and calendar-time fixed effects, combined with distributed-lag specifications that trace malaria responses over the six months following flood events. We assess heterogeneity by baseline transmission intensity, cyclone exposure, urbanicity, intervention coverage, and healthcare access, and we examine spillover effects in neighboring subdistricts. Preliminary results suggest marked spatial heterogeneity where floods are associated with increased short-term malaria risk in low-to-moderate transmission settings or in areas with slow-draining inundation, but effects are attenuated where transmission is persistently high. These findings highlight the need to incorporate context-specific flooding metrics and spatial heterogeneity in flood impacts as ministries of health and national malaria control programs increasingly seek to integrate extreme weather effects into malaria early warning systems.

Paper Session

Equity and Access Challenges for Transgender and Gender Diverse Communities

A critical analysis of barriers and facilitators in accessing healthcare among transgender and gender diverse people in urban India. *Shamayeta Bhattacharya, Point Park University; and Debarchana Ghosh, University of Connecticut*

This paper explores the key factors (barriers and facilitators) impacting healthcare access of transgender and gender diverse (TGD) individuals. To address this goal, we analyzed qualitative data from two focus groups conducted in Kolkata, India. The study draws on the 'Penchansky and Thomas (P&T) access model' and 'Universal and Critical Access Theory' frameworks, combined with insights from TGD participants. The qualitative analysis identified seven key factors affecting healthcare access: availability, affordability, acceptance, accommodation, accessibility, awareness, and accompaniment. While the first five align with the P&T model, awareness and accompaniment are unique to the TGD experience. The critical access framework highlighted that TGD individuals living in areas with histories of discrimination, stronger heteronormative norms, lower-income neighborhoods, and families involved in sex work face heightened challenges. This study also broadens the concept of 'accessibility' by considering its links to class, gender, discrimination, and spatial inequality, as framed by critical accessibility theory, rather than merely focusing on geographic access. The findings suggest that healthcare interventions for TGD individuals should be multidimensional and tailored to their specific needs.

Geographies of Housing Insecurity: Equity Transitions for Gender Diverse Households in Canada. *Antony Chum, York University; Peiya Cao, York University; Gwen Ehi, York*

University; Yihong Bai, University of Manitoba; and Kristine Ienciu, York University

Housing insecurity is a key site where socio-spatial transitions unfold, with important consequences for the wellbeing of transgender and gender diverse (TGD) populations. This study offers the first population-representative analysis of housing inequities across cisgender, transgender, and non-binary-led households in Canada, treating housing as a determinant of health shaped by place.Using the 2021 Canadian Long-Form Census, the analysis focuses on household maintainers aged 15 and over (N=14,760,990, weighted). Gender identity is derived from linked sex-at-birth and gender questions to distinguish cisgender men and women, transgender men and women, and non-binary individuals assigned male or female at birth. Logistic regression models estimate adjusted odds ratios for core housing need—defined as unaffordable, inadequate, or unsuitable housing—and for each component, controlling for sociodemographic and regional covariates.Cisgender men-led households have the lowest probability of core housing need (8.0%), compared with cisgender women (12.8%), transgender men (16.5%), non-binary AMAB (19.4%), and transgender women and non-binary AFAB (21.2%). Fully adjusted models indicate elevated odds for transgender women (OR=1.32, 95% CI 1.15-1.51), non-binary AMAB (OR=1.30, 95% CI 1.12-1.51), and non-binary AFAB (OR=1.55, 95% CI 1.41-1.72), relative to cisgender men. Disparities are most pronounced among youth, renters, and multi-person households, underscoring how gendered inequities in housing are structured through intersecting social and spatial positions.Findings highlight the need for gender-inclusive housing policy, anti-discrimination enforcement, and targeted affordable and supportive housing to advance wellbeing for TGD communities.

Neighbourhood Deprivation Across Gender Identities in Canada: Unequal Place-Based Transitions for Transgender and Gender Diverse Adults. *Peiya Cao, York University; Yihong Bai, University of Manitoba; and Antony Chum, York University*

Neighbourhood deprivation reflects unequal access to housing, resources, and supportive environments that shape physical and mental health, yet little is known about how it is distributed across gender identities. Despite documented socioeconomic disadvantages among transgender and gender diverse (TGD) populations, national evidence on their exposure to neighbourhood deprivation has been lacking. This study provides the first population-level assessment of neighbourhood deprivation across gender identities in Canada using data from the 2021 long-form Census of adults aged 18 years and older in the ten provinces, linked to the Canadian Index of Multiple Deprivation (CIMD), which captures residential instability, economic dependency, ethno-cultural composition, situational vulnerability, and a composite index at the dissemination-area level. Fully adjusted logistic regression models estimated associations between gender identity and residence in highly deprived neighbourhoods (quintiles 4-5). Relative to cisgender men, TGD adults had higher odds of composite deprivation (ORs 1.12-1.82) and residential instability (ORs 1.17-2.70), with non-binary adults showing the highest vulnerability on both outcomes alongside their uniquely lower odds of living in economically dependent areas (ORs 0.69-0.80). These disparities were more pronounced among younger TGD adults, those in rural areas, employed individuals, and those with at least one activity limitation, highlighting the need for equity-focused, place-based policies that combine housing affordability and anti-discrimination protections with investments in local social capital, including community-anchored TGD services, peer navigation, and partnerships with immigrant-serving organizations in neighbourhoods where TGD people reside.

Pathways to Trans Care: Travel Patterns, Information Seeking & Geographic Access to Gender-Affirming Hormone Therapy. *Avery Everhart, University of British Columbia, Department of Geography; Ophelia Tong, University of British Columbia, Department of Geography; Maurya Shah, University of British Columbia, Department of Geography; and Katica Naude, University of British Columbia, Department of Geography*

Transgender people face significant barriers to accessing healthcare, including difficulties in finding competent and affirming providers and inconsistent access to reliable health information. Existing research in this area has either relied on qualitative data, or population modeling to understand pathways to accessing trans-specific care. This prior work has identified the influence of in-clinic experiences on trans people's

care seeking behaviour and produced quantified metrics on the spatial availability of trans care. However, data on utilization that can bridge the gap between rich, qualitative insights on why trans people choose providers and population level models of where care is available do not exist in the extant literature.To that end, this study investigates where and how trans people accessed gender-affirming care through an online survey of trans adults in the US. The survey data include information on where respondents access gender-affirming hormone therapy (GAHT), as well as how respondents source information about their providers and GAHT broadly. Our analysis derives travel time and distance using road network data to determine whether respondents utilized either the nearest or next-nearest healthcare facility where GAHT was available. We then use the health information seeking behaviour data to discern whether sourcing health info online vs. offline influences the revealed travel patterns in accessing GAHT. Finally, we compare travel distance to GAHT providers with travel distance to primary care providers in order to determine whether trans people are more likely to travel further for GAHT than primary care and what factors might influence this phenomenon.

Paper Session

Extreme Weather Impacts on Public Health and Emergency Response Systems

Investigating the impacts of Extreme Weather Events on the cultural resources of Indigenous Health of the Oglala Sioux Tribe of South Dakota, USA.. *Shelby Ross, University of Colorado Boulder*

The relationship between Indigenous Health and the ecological impacts of climate change is best understood through the perspective of Traditional Ecological Knowledge (TEK), a land-based knowledge rooted in Indigenous Peoples' culture and traditions. Indigenous Health defines "healthy" as a balance among physical, mental, and cultural well-being. Although Tribal Nations in the U.S. have documented how extreme weather events (EWEs) driven by climate change impact their Tribal TEK, there is limited published research on how EWEs may impact Tribal cultural resources and activities, specifically in the Northern Great Plains of the U.S. This study used interviews with Oglala Sioux Tribe (OST), a federally recognized American Indian Tribe in the Northern Great Plains Tribal Elders (N=14) and a survey of OST Tribal members (N=67) to understand how EWEs influenced by climate change have affected their cultural resources and activities. Both Elders and Tribal members reported observed increases in drought, extreme winds, heat waves, extreme cold, and hail, with diverging views on changes in snowfall and snowpack. Most survey respondents reported no difficulties accessing culturally significant plants, while Elder interviews indicated challenges. OST survey respondents also stated that drought, extreme cold events, heat waves, and high winds affected their participation in cultural activities that promote OST TEK and support Indigenous Health. Elders report extreme heat, cold, and heavy precipitation as EWEs that hinder cultural activities. Identifying climate impacts on cultural resources and activities can help the Tribe implement adaptation strategies to preserve OST TEK and Indigenous health.

Quantifying Causal Effect of Extreme Heat on Dog Bite Incidents in New York City: A Spatio-Temporal Analysis of Community Vulnerability. *Xueliang Yang, Department of Social and Behavioral Sciences, School of Global Public Health, New York University, New York, NY 10003, USA; Qi Lin, Department of Civil and Urban Engineering, Tandon School of Engineering, New York University, Brooklyn, NY 11201, USA; and Prince Michael Amegbor, New York University*

Background: As extreme heat events become more frequent, their impact on human-animal interactions and urban public health requires rigorous investigation. While temperature is known to influence behavior, the specific causal relationship between extreme heat and dog bite incidents remains under-explored, particularly regarding how community-level vulnerabilities moderate this risk. Objective: This study aims to quantify the causal effect of extreme heat on daily dog bite incidents at the Zip Code Tabulation Area (ZCTA) level in New York City. We hypothesize that the heat-bite relationship is significantly amplified by baseline community-level vulnerabilities, including built environment characteristics (e.g., lower green space) and socio-economic deprivation.Methods: Utilizing a ZCTA-day unit of analysis, this research integrates

DOHMH dog bite and licensing data, DAYMET meteorological data, and community vulnerability indices (e.g., PLUTO, Neighborhood Atlas). To rigorously address spatio-temporal confounding, we employ a two-stage Distributed Lag Non-linear Model (DLNM). Stage 1 utilizes a Generalized Poisson Model with ZCTA-level fixed effects to estimate the average causal effect of heat, controlling for seasonality, weather, and baseline dog population. Stage 2 incorporates interaction terms to formally test for effect modification by community vulnerability factors. Expected Results & Significance: By applying advanced causal inference methods, this study will elucidate the non-linear and lagged effects of temperature on dog bite risk. The findings will highlight spatial health disparities, informing targeted interventions and resource allocation in vulnerable urban neighborhoods during extreme weather events.

Extreme Weather and Relapse Risk in Patients with Multiple Sclerosis in France..
Giovanna Fancello, Sorbonne Université, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, Equipe Nemesis, Paris, France; Edouard Januel, Sorbonne Université, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, Equipe PEPITES, Hôpital Fondation A. de Rothschild, Neurology Department and Clinical Research Unit, Paris, France; Julia Hildago, Université de Toulouse, Laboratoire Interdisciplinaire Solidarités Sociétés Territoires (LISST), CNRS, Toulouse, France; Ana Maria Vicedo-Cabrera, University of Bern, Institute of Social and Preventive Medicine and Oeschger Center for Climate Change Research, Bern, Switzerland; Pierre Masselot, London School of Hygiene and Tropical Medicine, Public Health and Policy, London, United Kingdom; Valery Masson, Université de Toulouse, CNRM, Météo-France, CNRS, Toulouse, France; Camille Morlighem, Sorbonne Université, INSERM, Institut Pierre Louis d'Épidémiologie et de Santé Publique, Nemesis research team; Caroline Papeix, Hôpital Fondation A. de Rothschild, Neurology Department and Clinical Research Unit, Paris, France; Noah Strzelewicz, Université de Toulouse, Laboratoire Interdisciplinaire Solidarités Sociétés Territoires (LISST), CNRS; Florence Tubach, Sorbonne Université, INSERM, Institut Pierre Louis d'Epidémiologie et de Santé Publique, Equipe PEPITES, AP-HP, Hôpital Pitié Salpêtrière, Département de Santé Publique, Unité de Recherche Clinique PSL-CFX, Paris, France; and Basile Chaix, Sorbonne Université, INSERM, Institut Pierre Louis d'Épidémiologie et de Santé Publique, Nemesis research team

Multiple sclerosis (MS) is a chronic autoimmune disease that affects around 130000 people in France. It is characterised by recurrent relapses corresponding to a newly formed inflammatory lesion in the central nervous system. Lesion development begins several weeks to months before clinical manifestation. While extreme temperatures are suspected activate relapses, epidemiological evidence is limited.We analysed data from 1189 relapsing MS patients in the French CONFISEP cohort (2018-2021), including daily mean temperature at geolocated residences, daily relapse occurrences, and patient clinical characteristic. An individual-level case-time series design was applied. The impact of extreme temperature on the risk of MS-relapses was quantified by conditional logistic regression combined with distributed lag non-linear models. We first assessed the overall temperature-relapse association, then explored the effect across 17 heatwaves and 15 cold spells definitions.Temperatures ≥30°C where associated with increased relapse risk at lags between 19-24 days, with maximum OR 1.23 (95%CI: 1.05, 1.43). The risk rose with increasing heatwave intensity and duration, with odds ratio at lags 17-26 days ranging from 1.06 (95%CI: 1.01, 1.13) during mild heatwaves to 1.39 (95%CI: 1.01, 1.94) during the most severe events. No associations were observed for extreme cold spells.Consistent with the gradual development of lesions over several weeks, exposure to extreme heat significantly increases the risk of MS-relapse, with the maximal effect observed approximately three weeks after the event. These findings highlight the need for targeted preventive measures, patient guidance and public health policies to protect vulnerable populations in the context of climate change.

Extreme Weather Triggers Cascading Disruptions Across Ambulance Response Stages.
Bin Zhu, Southern University of Science and Technology; and Xin Huang, Southern University of Science and Technology

Importance As climate change intensifies, urban EMS resilience is a critical global health concern. However, the stage-specific and cascading disruption mechanisms triggered by different types of extreme weather remain poorly understood, limiting the effectiveness of preparedness and adaptation strategies.Objectives To quantify the stage-specific and cascading impacts of extreme heat, cold, precipitation, and typhoon events on

ambulance response time (ART) and their fluctuations (ART-Fluc), and to identify delayed and compound disruption mechanisms.Design Exposure-response relationships between extreme weather events and ART.Setting A retrospective observational analysis.Participants 1.5 million ambulance dispatch records in Shenzhen, China, from 2011 to 2013.Main Outcome and Measure Stage-specific ART and ART-Fluc across four operational stages: schedule, outwards, on-scene, and return.Results Extreme heat was associated with delayed system degradation (strongest effect at 3 hours post-exposure). Extreme cold caused immediate delays. Extreme precipitation increased ART volatility during nighttime (return-stage ART-Fluc increased by 11%). Typhoons significantly increased system-wide ART-Fluc without substantially altering mean ART. Compound precipitation-typhoon events exhibited synergistic effects, amplifying fluctuations across stages (e.g., outwards stage RR: 1.28 [95% CI: 1.08-1.51]; return stage RR: 1.16 [95% CI: 1.15-1.17]).Conclusion and Relevance This study delineates how EMS systems fail under distinct climatic stresses through temporal, stage-specific, and compound disruption pathways. The findings provide an empirical basis for developing targeted, stage-specific resilience strategies to strengthen EMS performance in the face of escalating climate extremes worldwide

Paper Session

Food Systems and Spaces

A Mixed Qualitative Approach to Understand Top-Down and Bottom-Up Food Systems Planning. *Venus Cheung, Toronto Metropolitan University; and Samantha Biglieri, Toronto Metropolitan University*

Global food insecurity affects nearly 40% of adult immigrants (Dou et al., 2022). In Canada, 26% of recent immigrant families experience food insecurity compared to 17% of Canadian-born families (Uppal, 2023). Yet food system planning and climate resilience strategies often rely on top-down frameworks that overlook immigrant lived experiences and the socio-spatial conditions shaping food access. This study examines how neighbourhood environments, social infrastructures, and policy frameworks shape immigrant food security in two Toronto neighbourhoods—Dorset Park and Moss Park.The research adopts a mixed qualitative design combining participatory food asset mapping with immigrants, semi-structured interviews with planners, researchers, and community-based organizations, and a multi-level policy review across federal, provincial, and municipal scales. Drawing on critical mapping approaches, the study integrates these datasets to examine how formal food policy and community-led food initiatives interact across governance levels.Findings reveal gaps between institutional food system strategies and community-based responses to food insecurity, particularly regarding recognition of local knowledge, municipal accountability to the province, and individualized responsibility to achieve food security. The study situates these findings within an integrative resilience framework (Camponeschi, 2022) to explore how urban planning can better support immigrant wellbeing by converging initiatives from different sectors, such as agriculture, economic development, urban planning, and climate resilience. It proposes three principles for advancing equitable food systems planning: a bioecological reading of vulnerability centering community knowledge, adopting trauma-informed planning approaches addressing interconnected drivers of food insecurity, and institutionalizing healing justice practices that support collective stewardship of land and community food resources.

"Can we eat together?" Navigating social food spaces with food-avoidant conditions in the U.S.. *Rebecca Shakespeare, Tufts University*

Eating together is a common way people build social connection, but food-centered social settings are not always accessible for people who must avoid certain foods to prevent reactions, due to food allergies, hypersensitivities, celiac disease, and other food avoidant conditions. Research shows that managing these food avoidant conditions can be stressful and isolating, yet shared food spaces can also provide important social and emotional benefits. This presentation examines when and how social spaces - even with food - can function as part of a therapeutic landscape for people with adverse reactions to specific foods. Drawing from an online questionnaire of 47 adults in the United States who avoid certain foods to prevent harm, I use a social model of disability to examine structural and relational features of social spaces that enable social participation for

food avoidant people. This presentation summarizes early findings characterizing structural and relational contexts that support social participation in food settings and identifies directions for future research.

Socioeconomic inequalities in online fresh food delivery use and associations with the neighborhood food environment. *Bochu Liu, Tongji University; Chuhao Liu, The University of Tokyo; Thomas Burgoine, University of Cambridge; Guangping Chen, Central China Normal University; and Lan Wang, Tongji University*

Online delivery services may reduce physical barriers to acquiring fresh foods, yet evidence on their socioeconomic patterning and links with neighborhood food environments remains limited. We examined socioeconomic inequalities in online fresh food ordering and their associations with the physical food environment in Shanghai, China.We conducted a cross-sectional analysis linking citywide transaction records of online green grocery, supermarket, and fruit delivery orders with neighborhood sociodemographic characteristics across fine-grained grids (n = 11,581). Socioeconomic inequalities were assessed using concentration curves based on population composition (shares of female, older, young, low-income, and car-free residents). Associations between order counts, sociodemographic characteristics, and the physical food environment were estimated using Bayesian spatial zero-inflated Poisson models that account for spatial autocorrelation, excess zeros, and overdispersion. Online fresh food orders were disproportionately concentrated in economically advantaged neighborhoods. Grid-level order counts were lower in areas with higher shares of older, young, and low-income residents, but higher in neighborhoods with more car-free households. Greater densities of nearby supermarkets and grocery stores were associated with fewer online orders. However, better physical access to these retailers also reduced the likelihood of zero orders.These findings suggest that while online fresh food delivery reflects existing socioeconomic inequalities, it may partially compensate for mobility constraints and limited local food retail access, offering a potential pathway to improve fresh food access in underserved urban communities.

Mapping the retail food environment at high resolution across Europe. *Mohan Raju Jayashankaramma Shankar raj, University Medical Centre, Amsterdam; Kamille Almer Bernsdorf, Steno Diabetes Center Copenhagen, Denmark; Thomas Burgoine, University of Cambridge; and Dr. Jeroen Lakerveld, University Medical Centre, Amsterdam*

Aim: Neighbourhood densities of healthy and unhealthy food outlets may influence dietary behaviours and nutrition related health outcomes. However, such research is often constrained by spatial variability and availability of large scale data in a standardized format, and limited availability of food retail data at high resolution. To address the gap, this study aims to map and validate all food related points of interest (POIs) by leveraging Google Maps POIs through a systematic, keyword-based retrieval approach across the entire European region at the highest resolution.Methods: We harmonized ~3.26 million data points retrieved from Google Maps such as place type, latitude and longitude into five main categories (cafés/bakeries, restaurants, fast-food & snack outlets, supermarkets/grocery retail, bars/pubs) and 25 subcategories. We validated POIs against registries in five regions (Netherlands, United Kingdom, Denmark, Madrid, Brno) using positional matching, completeness, and spatial agreement (Nearest Neighbour Index, Moran's I, kernel density estimation). POIs were aggregated at 500m × 500m hexagonal grids, cities, and national scale, computing population standardised outlet density per 1,000 residents and with z-score normalization for cross-country comparison.Results: Google POI positional accuracy was high across all regions, with 91% of Google POIs matching registry entries within 30m buffer. Data completeness varied by region. KDE comparisons showed moderate to strong spatial alignment, with city-specific over/under-representation linked to acquisition timing differences. Europe wide maps revealed substantial urban-rural contrasts and east-west spatial variation in outlet density.Conclusion: Harmonized Google-based POI mapping provides a scalable basis for consistent, cross-national food-environment monitoring and spatial epidemiological research across Europe.

Paper Session

Food Systems in (Post)colonial Landscapes

‘We did not know stroke, and we also did not know ulcers’: A qualitative study of perceived health impacts of food systems globalization on smallholder farmers in northern Ghana. *Alhassan Siiba, Queen's University; Leonard Baatiema, University of Ghana; and Joseph Kangmennaang, Queen's University*

Background: Globalization is transforming food systems and nutrition worldwide, especially in low- and middle-income countries. While food systems globalization may increase availability and diversity of food, the phenomenon is also improving access to and consumption of unhealthy foods, transforming dietary practices, influencing local food production and consumption and adversely affecting human health. Although existing studies have assessed various facets of globalization, they have rarely explored how globalization interacts with smallholder farmers in northern Ghana and impact their dietary practices, nutrition and health. This gap concerns the survival of smallholder farmers, especially within the context of global targets to promote sustainable agriculture, good health, and well-being for all.Methods: Through thirteen key informant interviews and seven focus group discussions, involving fifty-eight smallholder farmers, we address two overlapping questions: (1) How do smallholder farmers in the northern Region of Ghana perceive the phenomenon of food systems globalization? And (2) what major health concerns do smallholder farmers associate with their exposure to food systems globalization?Results: Based on inductive thematic analysis, using NVivo (v14), our results suggest that food systems globalization impacts the health of smallholder farmers by: (1) changing their dietary practices; and (2) exposing them to the risks of non-communicable diseases.Conclusion: Our study highlights growing health concerns arising from the globalization of food systems in northern Ghana. We discuss the implications of the key findings for policy and practice and provide some recommendations to mitigate the adverse impacts of the phenomenon in Ghana.

Exploring the intersections of climate change, Indigenous food systems, and gendered adaptation in sub-Saharan Africa: A systematic review. *Julius Jebuni, School of Kinesiology and Health Studies, Queen’s University, Canada; and Joseph Kangmennaang, Queen's University*

Climate change is increasingly reshaping food systems in sub-Saharan Africa (SSA), with significant implications for nutrition, livelihoods, and social equity. The region’s dependence on rainfed agriculture and limited adaptive capacity heighten vulnerability to rising temperatures, erratic rainfall, and extreme weather events. Within this context, indigenous food systems, comprising traditional crops, wild foods, and locally embedded nutritional knowledge, represent critical yet underutilized sources of resilience. However, the gendered dimensions of these systems, particularly women’s roles and constraints, remain insufficiently integrated into climate adaptation research and policy. This systematic review synthesizes evidence on the intersections of climate change, indigenous food systems, and gendered adaptation in SSA. A comprehensive search was conducted across eight electronic databases (Web of Science, PubMed, Scopus, Global Health Library, ScienceDirect, MEDLINE, ProQuest, and Google Scholar) for studies published between 2000 and 2025. Following PRISMA guidelines and predefined inclusion criteria, 12,486 studies were identified, and 24 studies were included in the final analysis. The review identifies three key pathways through which climate change shapes outcomes: disruption of indigenous food production and biodiversity; transformation of local food systems toward more commercialized and less diverse diets; and persistent gendered inequalities in access to land, resources, and decision-making. While indigenous foods demonstrate considerable resilience under climate stress, their use is declining due to policy neglect and socio-economic change. Women remain central to these systems yet face increasing labor burdens and limited recognition in adaptation strategies. Strengthening indigenous food systems alongside gender-transformative approaches is essential for equitable and sustainable climate adaptation.

Food on the move? Promoting food security through post-colonial infrastructure repair. *Tim Brown, Queen Mary University of London; and Joseph Tinarwo, Greater Zimbabwe University*

The connection between infrastructure and food security is widely recognised to be a vitally important one and arguably the significance of this connection is amplified in countries where the infrastructure required to secure access to adequate, affordable and healthy food is in a state of disrepair and perhaps even ruin. Zimbabwe, once hailed as being the 'breadbasket' of southern Africa and for being home to the 'infrastructural assemblages' capable of supporting this, is one such place. As Zimbabwe's recent identification as a 'hunger hotspot' attests, many of the country's most vulnerable people, including those living in rural, urban and peri-urban areas, regularly experience food and nutrition insecurity. The reasons for this lie in the economic, political and environmental crises that have shaped the country over the past two decades; however, they are also rooted in the nation's crumbling infrastructure and the on- and off-gridded nature of people's engagement with it. Bearing this in mind, the questions that this paper seeks to address is whose food and nutrition security is prioritised in the process of national infrastructure renewal and how far those who live on the margins of formal, gridded infrastructures are able to benefit from it.

Reclaiming Urban Indigenous Food Sovereignty: Navigating Relational Methodologies in Community-Academic Partnerships. *Colton Hart, Southwest Ontario Aboriginal Health Access Centre; and Rebecca Rausch, Department of Geography & Environment, Western University*

Paper Session

GeoAI for health equity: advances, pitfalls, and global challenges

GeoAI Mapping of Global Urban Environmental Health Potential: Inequality and Uncertainty. *Yi-Chen Wang, Department of Geography, National University of Singapore; and Dong Xu, Department of Geography, National University of Singapore*

Global health inequalities stem not only from unequal healthcare resources and socioeconomic conditions, but also from spatial heterogeneity in how urban environments support health. Quantifying urban environmental health potential globally remains challenging. Existing research has focused on associations between environmental characteristics and health outcomes in data-rich cities, thereby limiting cross-regional comparability. Scant attention has paid to "health potential" as a way of understanding how urban environments enable health. This necessitates consistent methods for comparative analyses across space and time. The study thus examines spatial inequalities in global urban environmental health potential. Using multimodal data and GeoAI, we develop an assessment framework across three dimensions: psychological, ecological, and behavioral. We integrate 1.05 billion street-view images, satellite data, and GeoAI models to produce a globally continuous dataset at 50 m resolution. Preliminary results reveal marked variations. The health potential of the Global North cities is 1.6 times higher than that of the Global South cities, with large gaps in the psychological and behavioral dimensions at 2.2 and 3.9 times, respectively. Substantial intra-urban heterogeneity is also evident. In Global North cities, health potential is 1.3 times higher in urban cores than in the expanded areas. Conversely, in Global South cities, expanded areas show slightly higher health potential than urban cores, although the difference is not statistically significant. The study demonstrates the capacity of GeoAI to examine global urban health inequalities. Discussion will include how uneven street-view coverage and limited cross-regional model transferability affect uncertainty in GeoAI-based identification of health potential.

Development and validation of a Geospatial eXplainable Artificial Intelligence (GeoXAI) framework for mapping mosquito density in metropolitans. *Bin Zhu, Southern University of Science and Technology*

Accurately predicting mosquito density in metropolitans is challenging due to the nonlinear, spatially nonstationary relationships between explanatory variables and in situ monitoring data. These challenges are further exacerbated by the limited interpretability of traditional statistical and artificial intelligence models. To overcome existing limitations, we integrated the Shapley additive explanation (SHAP) method and

geographically neural network weighted regression kriging (GNNWRK) model to develop the GNNWRK-SHAP framework for predicting mosquito density in Shenzhen and Central Guangzhou (C-Guangzhou), China. GNNWR is an enhanced spatial model derived from GWR, which combines ordinary least squares and spatial weighted neural network to capture spatial non-stationarity and complex nonlinearity. Our results demonstrated that the GNNWRK-SHAP framework achieved the lowest mean absolute error (1.72 in Shenzhen, 3.22 in C-Guangzhou), root mean square error (2.05 & 3.76), and mean absolute percentage error (42.48 % & 62.95 %) compared to alternative models. By integrating the SHAP, the framework quantified variable contributions, identifying precipitation and temperature as dominant explanatory variables shaping mosquito distributions. Moreover, spatial SHAP values highlighted the spatially varying impacts of these, offering site-specific decision support for mosquito density control. Given that mosquito-borne diseases disproportionately affect socioeconomically disadvantaged populations with limited access to prevention and healthcare resources, our framework provides a critical tool for identifying areas with high mosquito density and elucidating the spatially heterogeneous drivers of exposure risk. This capability enables targeted resource allocation and precision interventions, thereby contributing to the reduction of environmental health inequities.

Responsible GeoAI for Cancer Research: Synthesizing GeoAI and CancerAI with a Case Study of Early-Onset Colorectal Cancer. *Tesla DuBois, Temple University, Department of Geography, Sidney Kimmel Comprehensive Cancer Center, Jefferson Health; Daniel Wiese, American Cancer Society, Temple University; Elizabeth Blackman, American Association for Cancer Research; Christopher McNair, Sidney Kimmel Comprehensive Cancer Center, Jefferson Health; Shannon Lynch, Fox Chase Cancer Center; and Kevin Henry, Temple University, Fox Chase Cancer Center*

BackgroundThe convergence of artificial intelligence (AI) applications in cancer research and geospatial science remains underexplored. Both fields face similar methodological and ethical challenges, including issues related to model interpretability, bias, and data privacy. Synthesizing insights from these literatures can help guide the responsible deployment of GeoAI in cancer research.MethodsThis study integrates a review of GeoAI and CancerAI literature with a case study applying machine learning to colorectal cancer outcomes. Conceptual, methodological, and empirical works were analyzed to identify shared themes and best practices across both domains. These principles were then applied in an analysis of 55,232 colorectal cancer cases from the Pennsylvania Cancer Registry linked to 57 area-level exposome variables. Spatial scan statistics identified clusters of early-onset colorectal cancer (EO-CRC), and machine learning models were developed to predict cluster membership using area-level exposome features.ResultsA synthesis of GeoAI (n≈18) and CancerAI (n≈9) studies identified five principles for responsible spatial AI in cancer research: explainable models, bias and uncertainty assessment, open science practices, data privacy protection, and spatially explicit modeling. Machine learning models achieved 93% accuracy in predicting EO-CRC cluster membership. Built and natural environmental variables improved model performance, including watershed impairment, housing age, and neighborhood racial/ethnic and income deprivation. The case study demonstrates how spatial cross-validation, interpretable metrics, and geographic context can support responsible GeoAI applications in cancer research.ConclusionImplementing these practices is essential for rigorous and socially responsible GeoAI research, particularly when investigating geographic cancer disparities.

Identifying spatial patterns of travel behavior responses to heatwaves using high-resolution cell phone mobility data in North Carolina. *Sarah Ulrich, UNC-Chapel Hill; and Paul Delamater, University of North Carolina at Chapel Hill*

Humans are exposed to their surrounding environment through sub-daily habitual mobility behaviors, including regular travel to work, school, retail locations, and recreational activities. During heatwaves, adaptations to habitual mobility behaviors can protect against heat-related health risks. Protective mobility adaptations that reduce the risk of heat-related illness and death include staying home, shifting activities to cooler periods of the day, or decreasing the amount of time spent outdoors. An emerging body of research leverages cell phone-based origin-destination (OD) travel data to capture deviations from routine mobility patterns during heatwaves at the

census block group (CBG) level. These OD data enable the identification of community-level mobility patterns and disruptions, facilitating the examination of generalized mobility behavior adaptations during heatwave periods. Although the effects of extreme heat exposure on short-term mobility and adverse health outcomes are well established, existing research has not identified which specific properties of extreme heat elicit, or fail to elicit, collective mobility responses, nor has it systematically linked observed mobility adaptations to health effects at the community level. A substantial gap remains in examining collective mobility responses across multiple heatwave definitions and identifying spatial variation in the mobility effects of heatwave properties across regional and community contexts. A key objective is to estimate the relationship between adaptive deviations from routine mobility patterns during heatwaves, regional acclimatization to specific properties of extreme heat, and resulting health outcomes at the census block group level in North Carolina.

Paper Session

Geographic Inequalities in Healthcare Access

Spatial Accessibility to Hemodialysis Centers and Chronic Kidney Disease Disparities Across Racial/Ethnic Compositions in Houston, Texas. *Longhao Guo, Department of Geography, Texas A&M University, College Station, Texas, USA; and Fikriyah Winata, Department of Geography, Texas A&M University, College Station, Texas, USA*

Chronic Kidney Disease (CKD) has become a serious public health issue, especially in urban areas where disparities in healthcare accessibility and the burden of chronic diseases are apparent. This study investigates the interrelationships among CKD prevalence, access to hemodialysis services, and socioeconomic and environmental conditions across the city of Houston, Texas.We adopted the Enhanced Two-Step Floating Catchment Area (E2SFCA) method to measure the Spatial Accessibility Index (SAI) of hemodialysis centers. Further, we employed multivariate regression models to assess the associations among CKD prevalence, healthcare accessibility, sociodemographic characteristics, and health-related risk factors. A spatial regression model was used to analyze all census tracts across Houston. For racial/ethnic stratified models with majority Non-Hispanic (NH) White, NH Black, Hispanic, and racially diverse census tracts (tracts that do not fall into any of the racial/ethnic categories), we used ordinary least squares (OLS).The results show that higher accessibility to dialysis services was positively associated with higher CKD prevalence. CKD prevalence also demonstrated strong associations with diabetes, hypertension, and the elderly population. The stratified analyses reveal significant disparities; the association between healthcare accessibility and CKD prevalence is statistically significant among Non-Hispanic Black and Non-Hispanic White populations. However, for the Hispanic group, this association is not evident, and CKD prevalence is influenced more by other health risk factors, such as diabetes and hypertension, than by spatial accessibility to healthcare services.Overall, this study highlights the multiple factors influencing CKD in Houston's urban environment and emphasizes the need for targeted approaches in formulating future health planning strategies.

Potential Spatial Accessibility to Primary Health Care in The Province of Quebec Over Time: Associations with Gentrification. *Nathan Lunel, Sherbrooke University; Philippe Apparicio, Sherbrooke University; Christine Loignon, Sherbrooke University; Isabelle Dufour, Sherbrooke University; Sophie Dupéré, Laval University; and Martine Shareck, Université de Sherbrooke*

Context: Primary health care (PHC) is the cornerstone of equitable and effective healthcare systems. However, ensuring consistent spatial accessibility to these vital services remains challenging, particularly in socio-economically diverse metropolitan areas. Over the past two decades, the Québec (Canada) healthcare system has gone through multiple structural reforms, including the centralization of services and the creation of Family Medicine Groups. These organizational shifts could have altered the spatial distribution of PHC services, potentially exacerbating existing disparities in access.Objectives: This study aims to: (1) investigates the longitudinal trajectories of spatial accessibility to PHC across Quebec's major metropolitan areas; (2) to explore whether these trajectories vary according to neighbourhood material deprivation and gentrification.Methods: For (1), we employ a Modified Two-Step Floating Catchment

Area (M2SFCA) model to quantify spatial accessibility at the dissemination area level for the Montreal, Quebec, and Sherbrooke metropolitan areas, accounting for distance decay and the geographic distribution of population demand and clinical supply. For (2), we build regression models to analyse the association of these accessibility trajectories with Pampalon's Material Deprivation Index and Ding's gentrification index.Results: Preliminary results show a decrease in potential spatial accessibility to PHC, and that its association with deprivation and gentrification varies across the three metropolitan areas.Conclusion: By linking the spatial and social dimensions of PHC accessibility, this research highlights the critical intersection between urban transformation and health equity. The findings provide actionable insights for policymakers to align future healthcare planning with the socio-demographic realities of urban populations.

"I Had to Go There for My Own Safety": Negotiations of Access and Autonomy among DC Birth Settings. *Avery Borgmann, NYU Grossman School of Medicine; Xun Shi, Department of Geography, Dartmouth College; Zaneta Thayer, Department of Anthropology, Dartmouth College; and Abigail Neely, Department of Geography, Dartmouth College*

Childbirth experiences are shaped by sociocultural factors, including spatial context. This study considers the relationships between access to, selection of, and experiences with labor and delivery care among Black birthing people in Washington, DC, USA. Informed by Reproductive Justice and reproductive geographies frameworks, we employed a mixed-methods design integrating quantitative analysis of potential spatial access with qualitative analysis of community members' lived experiences. On the quantitative side, our 2-step floating catchment area (2SFCA) analysis revealed an east-west gradient of potential spatial access to labor and delivery wards, with low access concentrated in predominantly Black and low-income areas of Wards 5, 7, and 8. On the qualitative side, which consisted of interviews and surveys, birthing people residing in these neighborhoods confirmed experiencing structural barriers to perinatal care. They consistently described the necessity of seeking safe birthplaces, defined as those where emergencies were managed swiftly and racism was absent, even when accessing these settings required confronting additional geographic and socioeconomic barriers. Our results reaffirm the value of mixed methods research in reproductive geographies. While effective in identifying disparities in spatial access, purely quantitative geospatial analyses underestimate the magnitude, complexity, and intersections of these disparities, which manifest in participants' lived experiences. Efforts to rectify DC's troubled history with maternal health, including hospital construction in underserved areas, must commit to dismantling obstetric racism, improving and equalizing maternity care, and earning the trust of Black birthing people by ensuring their physical and emotional safety.

Planning for Equitable Oral Health Futures: Competition-Aware Spatial Accessibility Mapping in Germany. *Sebastian Völker, Research Center for Public, Planetary and Digital Health (P^2D), IU International University of Applied Sciences*

Equitable dental care access remains constrained by geography, yet conventional provider-to-population ratios fail to capture spatial complexity. This study quantifies ZIP-code-level dental care accessibility across Germany's 8,171 postal zones using a Modified Huff Three-Step Floating Catchment Area (MH3SFCA) method, integrating 2022 Census demand data, 38,023 dental facilities, and network travel times.Results revealed systemic geographic maldistribution: accessibility exhibited strong positive spatial autocorrelation (Moran's I = 0.97, $p < 0.001$), with 22.6% of the population concentrated in high-access urban clusters (Berlin, Hamburg, Rhine-Ruhr) and persistent cold spots in rural peripheries. The Gini coefficient of 0.55 was substantially higher than for physician distribution (0.19), positioning dental care among Germany's most unequally distributed health resources. Extreme regional heterogeneity was prominent: Mecklenburg-Western Pomerania exhibited 74.9% of its population in the lowest accessibility quartile (mean index = 0.7), while Berlin achieved near-universal high access (mean = 15.3).This MH3SFCA framework provides German planning bodies with a dynamic tool for routine accessibility monitoring and scenario analysis, supporting targeted, place-based workforce interventions. By identifying micro-regional inequities and examining structural barriers to equitable provision, this geographically informed approach advances understanding of how transitions in healthcare systems influence population wellbeing and societal equity outcomes.

Paper Session

Geographies of HIV

Stakeholders' Perspectives on Canada's Progress Toward Achieving UNAIDS 95-95-95 HIV Targets for Black Communities in Ontario. *Roger Antabe, University of Toronto Scarborough, Dalla Lana School of Public Health; and Prachi Satpathy, University of Toronto Scarborough*

Background. African, Caribbean, and Black (ACB) communities in Canada experience a high burden of HIV. Surveillance data show that Black Canadians represent nearly 25% of new HIV diagnoses, particularly in Ontario. While Canada has reported overall progress toward the UNAIDS 95-95-95 targets, these indicators may obscure persistent racial inequities in HIV testing and treatment access. To date, no studies have systematically examined Canada's progress toward the UNAIDS 95-95-95 targets specifically for Black communities from the perspective of stakeholders engaged in HIV care, policy, and community leadership.Objective. The objective of this study is to examine stakeholder perspectives on Canada's progress toward achieving the UNAIDS 95-95-95 targets for Black communities in Ontario. The study aims to identify perceived gaps and successes across the HIV care cascade, explore structural and systemic barriers contributing to inequities, document community strengths and facilitators of care, and generate equity-focused, stakeholder-driven recommendations to strengthen HIV policy and service delivery for ACB populations.Methods. This study employs a qualitative descriptive design using purposive sampling. We will recruit 60 stakeholders with professional or experience in HIV research, policy, service delivery, advocacy, or community leadership related to Black communities. Data will be collected through semi-structured, in-depth, and virtual interviews. Interviews will explore perspectives on structural racism, policy and funding environments, data gaps, stigma, healthcare access, and facilitators of equitable HIV care, revealing how these conditions influence progression across the HIV care cascade and ultimately determine the achievement of the UNAIDS 95-95-95 targets. Audio-recorded interviews will be transcribed verbatim and analyzed using reflexive thematic analysis, applying an equity-informed analytic lens.Results. This study is expected to generate a comprehensive qualitative mapping of structural, policy, and institutional factors influencing Canada's progress toward the UNAIDS 95-95-95 targets for Black communities. Anticipated findings include the identification of systemic barriers across the HIV care cascade, the documentation of community-driven strengths and effective practices, and the development of actionable recommendations to improve diagnosis, treatment initiation, retention in care, and viral suppression.

Determinants of Awareness and Use of HIV Self-Test Kits Among Men in Three African Countries: A Cross-Sectional Study. *Irenius Konkor, School of Public Health Sciences, University of Waterloo; and Warren Dodd, University of Waterloo*

Men are an identified group for low uptake of HIV screening services in Africa because of factors including limited visits to health facilities, stigma, confidentiality concerns and socio-economic reasons. HIV self-test (HIVST) kits are identified and adopted across countries as a solution to many of these challenges. Research is needed to understand the determinants of awareness and actual use of HIVST kits among men in Africa. We examined the correlates of HIVST kits awareness and use among men in Kenya, Lesotho and Nigeria. We used data from the recent Demographic and Health Survey in each country. We fitted multilevel mixed-effects models to examine the correlates of HIVST awareness and use in each country. The results showed substantial disparities in awareness and use of HIVST kits across the three countries. In Kenya, for example, over 60% of the men were aware of HIVST kits, but only 9% had used them. Overall awareness in Lesotho was approximately 55%, and about a third (33.5%) had used HIVST kits. Nigeria recorded the lowest awareness rate (~22%), and only 3% reported using HIVST kits. In the adjusted results, we found factors such as exposure to mass communication platforms, higher educational attainment, stigma and sexual behaviour associated with awareness and/or use of HIVST kits. A well-crafted and targeted educational campaign programmes deliverable through diverse platforms, including mass communication platforms, could be effective in creating awareness and increasing the use of HIVST kits in the study countries and similar settings.

HIV Anti-Stigma Empowerment Readiness Among Service Providers in Canada: A Post-intervention Assessment of Sustained Impact. *Sulemana Ansumah Saaka, University of Western Ontario (UWO); Roger Antabe, University of Toronto Scarborough, Dalla Lana School of Public Health; Josephine Wong, Toronto Metropolitan University (TMU); and Isaac Luginaah, Western University*

In Canada, HIV stigma remains a persistent barrier to equitable access to health and social-services, particularly for racialized immigrants—such as African, Caribbean, and Black communities (ACB)—who remain structurally exposed to new HIV infections amidst insufficient policy attention to their distinct health needs and challenges. To bridge the knowledge-practice gap in addressing HIV-related stigma in Canada, this intervention study engaged service organizations and providers in a multi-phase implementation across Ontario and Alberta.Qualitative insights from post-intervention activity logs revealed three main areas of impact: 1) Structural reforms: Service providers are advocating for and revising organizational policies to enhance inclusivity, challenging discriminatory language and practices, organizing trainings on unconscious bias and HIV stigma, coordinating with law enforcement agencies and engaging in political mobilization to address selective criminalization of racialized immigrants for status non-disclosure; 2) Community empowerment: The service providers begun engaging and educating affected communities about HIV stigma, and fostering collective empowerment against social injustices. While some are volunteering with legal aid organizations to help racialized immigrants navigate disputes, others are joining charity organizations to set up donation centres to support racialized community members; and 3) Personal/professional growth: Providers reported acknowledging the privileges they enjoy as non-racialized individuals, becoming more intentional in addressing their personal biases, and ensuring inclusive practices in service delivery. In conclusion, sustained, community-informed implementation efforts are crucial for addressing entrenched inequities and ensuring a more inclusive, just, and effective HIV response for racialized immigrant populations in Canada.

“They have my number, but they have not called to check up on me”: Exploring trust in the health care system among sex workers living with HIV in Kumasi, Ghana. *Miesha Polintan, Queen's University; and Elijah Bisung, The Queen's University*

The global HIV epidemic remains a significant global health challenge, with sex workers disproportionately impacted. Despite significant progress, many sub-Saharan African countries, like Ghana, have fallen behind on the UNAIDS 95-95-95 targets. Successful responses to HIV require accessible testing and treatment for key populations, including sex workers. However, distrust in the health system hinders early testing and engagement, stemming from the discrimination faced by sex workers living with HIV (SWLH) due to the criminalization and stigma surrounding their profession. The unique intersectional experiences of SWLH often go underreported, as studies primarily focus on sex work or HIV in isolation. This ethnographic study explores how the intersecting identities and care experiences of SWLH influence their (dis)trust in the healthcare system in Kumasi, Ghana. This is addressed through three objectives: (I) exploring barriers and facilitators of trust that SWLH encounter within the healthcare system; (II) examining factors influencing the uptake of health services and programs among SWLH; and (III) formulating recommendations to support relevant programs that foster trust in the healthcare system among SWLH. SWLH and key informants from partner clinics/hospitals were interviewed to highlight the nuanced barriers to and facilitators of trust to enhance engagement and access to HIV services. From the interviews, data were thematically analyzed to identify potential avenues for (re)building trust. The research findings aim to help design and better support relevant programmes for SWLH in Kumasi and other similar contexts, serving as a resource to support culturally sensitive and patient-centred care.

Paper Session

Graduate Student Research on Environmental Change and Women’s Health

Supporting Girls’ Sport Participation: Development and Evaluation of an Evidence-Informed Parental Digital Toolkit. *Jayda Hylton-Pelaia, Ontario Tech University; Caroline*

Barakat, Ontario Tech University; and Efrosini Papaconstantinou, Ontario Tech University

Physical activity in pre-adolescence lays the foundation for lifelong health and well-being. Yet, in North America, fewer than 25% of children meet daily physical activity (PA) guidelines. While organized sports can help address this gap, girls' participation sharply declines with age, resulting in over one million Canadian girls missing out on the benefits of sport. Parental involvement plays a key role in shaping girls' sport experiences, yet little is known about what factors influence their decisions, and few resources exist to support parents in this role.This research explored how parents of girls aged 6-12 in the Greater Toronto Area (GTA) navigate decisions around sport participation and used these insights to inform the development of an evidence-based digital toolkit.A multi-method approach guided the study. We conducted qualitative, semi-structured interviews with parents residing in the GTA. Thematic analysis revealed themes related to sport type, daughter's agency and enjoyment, and parental experiences and attitudes toward sport. Building on these insights, we conducted a scoping review of existing toolkits, which identified a lack of gender-specific, comprehensive, and context-specific resources tailored to parents of girls in this age group.We developed the Sporty Daughters Playbook, an evidence-informed digital toolkit to support parents in navigating and enhancing their daughters' sport experiences. Grounded in implementation science, behaviour change theory, and equity-focused frameworks, the toolkit includes content across five sections: sport selection, parental involvement, sport environments, life balance, and trends in girls' sport, and features interactive elements including quizzes, videos, podcasts, and downloadable resources.The toolkit is currently being evaluated through a pre-post intervention study measuring changes in parental perceptions, as well as girls' sport enjoyment and participation.

Phthalates and Women's Hormonal Health: A Review of Exposure Evidence and Regulatory Labeling Contexts. *Maryam Ashraf, Ontario Tech University; and Caroline Barakat, Ontario Tech University*

This study examined geographical differences in phthalate exposure in relation to women's hormonal health, with particular attention to Canada and the European Union as contrasting regulatory contexts. Phthalates are endocrine-disrupting chemicals found in fragranced personal care products. Studies report significant associations between phthalates and altered hormone levels, menstrual irregularities, and reproductive health concerns among premenopausal women. Differences in fragrance disclosure requirements have shaped what consumers are told about the presence of phthalates in products, often allowing them to be listed as "fragrance," which limits consumers' ability to identify and avoid phthalate exposure.We conducted a systematic review of studies, published in the last decade and identified through MEDLINE (via PubMed), Scopus, and Web of Science, that focused on associations between phthalate exposure and hormonal or menstrual outcomes among premenopausal women. Information on exposure assessment, terminology, and study location was extracted. Policies, standards, and government documents from Canada and the European Union were reviewed to clarify how labels such as "fragrance," "scented," "unscented," and "fragrance-free" were defined and what exposure information they provided.The review identified substantial variation in how exposure was assessed, described, and translated into consumer information. Studies differed in whether exposure was measured directly through biomonitoring or inferred through product use, while regulatory documents varied in the disclosure and interpretation of fragrance-related terms. Comparison across contexts showed that regulatory environments shaped possibilities for exposure recognition and avoidance, positioning phthalate exposure as a medical geographic issue rather than only a biomedical one, with implications for labeling and consumer protection.

A Medical Geography and Health Equity Perspective on Women's Exposure to Bisphenol A. *Caroline Barakat, Ontario Tech University; and Katrina De La Cruz, Co-investigator*

Bisphenol A (BPA) is a chemical found in polycarbonate plastics and epoxy resins, which are used in toys, plastic bottles, and food cans. BPA is an endocrine-disrupting chemical (EDC) that mimics the hormone estrogen, responsible for reproductive development during puberty. When EDCs interact with the body's cells, hormonal imbalances occur

and can result in various health impacts such as early onset puberty. Given that women are likely more exposed to BPA through increased use of personal care and household products than men, it is a considerable issue for women's health. Despite growing evidence, the specific health impacts of exposure to BPA for women are not conclusive and continue to be the focus of scientific research. The current research adopts a medical geography and health equity perspective to conduct a comparative synthesis of evidence pertaining to the health impacts of BPA for women and related legislation. First, we will synthesize evidence on BPA-related health on women through a systematic review. The search will be conducted on four databases: MEDLINE (via Ovid and EBSCOhost), CINAHL, and Web of Science. Key searches will use the terms BPA exposure, personal care products, and female health impacts. Second, we will assess regulatory frameworks related to BPA exposure, with a specific focus on Canadian policy. Guided by the principle of health equity and the Information-Motivation-Behavioral Skills framework, findings will be integrated in an evidence-informed educational toolkit to support women's health literacy and encourage informed decision-making in personal care product consumer markets in Canada.

Impact of Tropical Cyclones on Violent Injury Emergency Department Visits by Women in North Carolina. *Lauren Babinetz, University of North Carolina at Chapel Hill*

Violence against women and girls represents a major public health problem with persistent social and health consequences. Elevated risk of violence is present during periods of social, economic, and environmental stress, all of which are increased during hurricane events. Qualitative studies document increases in violence against women following extreme weather, but validated, methodologically consistent quantitative evidence remains limited. This study examines the relationship between hurricane exposure and violence against women and girls in North Carolina using an ITS-ARIMA model. Using multiple definitions of binary exposure classifications from precipitation exceedance and wind gust data from Hurricanes Florence (2018) and Helene (2024) highlights multiple spatial definitions of storm exposure. Violence-coded emergency department visits among women serve as outcome measures in exposed zones. This study finds that hurricane exposure is associated with delayed excess visits at 12 weeks in most definitions of violence-related emergency department presentations among women and girls in North Carolina, an effect that is significant under conditions of extreme precipitation exposure. Modeling this system in the cases of hurricanes Florence and Helene has highlighted both agreements and potential future contributions to existing literature in spatial epidemiological method.

Gendered water-contact behaviour and schistosomiasis exposure pathways in Western Kenya.. *Urbanus Azupogo, Queen's University; and Elijah Bisung, The Queen's University*

Sub-Saharan Africa bears a disproportionate burden of schistosomiasis, a neglected tropical parasitic disease spread through contact with surface water, with around 90% of global cases. Schistosomiasis disproportionately impacts health and livelihoods based on gender because gender-specific roles and responsibilities related to water strongly influence schistosomiasis exposure pathways. This study examines how gendered water-contact behaviour shapes schistosomiasis transmission in Kisumu, Kenya.The study was conducted in three lakeside communities in Kisumu County. We employed stratified systematic random sampling of 600 male and 600 female household decision-makers. Data on participants' socio-demographics and water contact activities were collected alongside infection status. We conducted stratified logistic regression analysis for female (n = 363) and male (n = 433) sub-populations to identify gender-specific exposure risk pathways.Women participants who regularly collected lake water for livestock had significantly higher odds of infection in the dry season (OR = 20.30, p = .002) compared to the rainy season (OR = 31.61, p = .001). Similarly, women who engaged in waterside income activities (such as gardening and lake harvesting) showed higher odds of infection in the rainy season (OR = 8.75, p = .003). In contrast, while men had the highest infection rates, no specific activity was statistically significant.To reduce transmission, control measures must target key pathways, using strategies that address underlying social drivers. In addition, empowering women can reduce exposure from high-risk unpaid water contact activities.

Paper Session

Health and the Outdoors

Association between air temperature and unintentional drowning risk in the United Kingdom 2012-2019: a geospatial nationwide case-crossover study. *Matthew Hobbs, University of Canterbury; Samuel Hills, Bournemouth University; and Martin Barwood, Leeds Trinity University*

Objective: Drowning is a leading cause of death. The World Health Organization (WHO) and United Nations (UN) emphasise the need for population-level data-driven approaches to examine risk factors to improve water safety policies. Environmental or geosaptial factors including weather conditions, have the potential to influence drowning risk behaviours as people are more likely to spend time around water and/or undertake risky activities in aquatic spaces as a behavioural thermoregulatory response (e.g., seeking coolth).Methods: a case-crossover approach assessed associations between changes in daily maximum air temperature (data from the nearest weather station to each geocoded drowning event) and unintentional drowning risk using anonymous data from the validated UK Water Incident Database 2012-2019 (1945 unintentional deaths, 82% male). Control days were selected using a unidirectional time-stratified approach, whereby seven and 14 days before the hazard day were used as the controls.Results: Mean maximum air temperature on case and control days was 15.36 °C and 14.80 °C, respectively. A 1 °C increase in air temperature was associated with a 7.2% increase in unintentional drowning risk. This relationship existed for males only. Drowning risk was elevated on days where air temperature reached 15-19.9 °C (Odds Ratio; OR: 1.75), 20-24.9 °C (OR: 1.87), and ≥ 25 °C (OR: 4.67), compared with days <10 °C. The greatest elevations in risk appeared to be amongst males and when alcohol intoxication was suspected. Precipitation showed no significant association with unintentional drowning risk.Conclusions: identifying environmental or geospatial risk factors for drowning is an understudied area. Identifying such relationships highlights the value of considering wider factors including weather conditions when evaluating environmental risk factors for drowning, and may inform water safety policy and allocating resources to prevention and rescue.

Investigating the dose-response effect of walking in virtual urban environments on stress levels. *Reza Aghanejad, Luxembourg Institute of Socio-Economic Research (LISER), University of Luxembourg; Amit Birenboim, Hebrew University of Jerusalem; Louise Poppe, Ghent University; and Camille Perchoux, Luxembourg Institute of Socio-Economic Research (LISER)*

Background: Studies measuring the effects of environmental features on mental health typically focus on single features, overlooking the complex interactions between concurrently experienced exposures. Even fewer studies have examined how the duration of exposure impacts the effects of these environmental combinations.Objectives: This study investigates how concurrent exposure to greenness, traffic, and crowdedness affects physiological and psychological stress responses. It seeks to identify main and interaction effects of these features. In addition, the study examines how stress responses evolve over time during exposure.Method: The study employs a full-factorial experimental design, exposing participants randomly to one of eight scenarios (2×2×2 levels of greenness, traffic, and crowdedness) in virtual reality. Participants (N = 200; 25 per scenario) walked on a treadmill for 10 minutes while immersed in virtual urban streetscapes. Physiological responses—including skin conductance level (SCL), heart rate variability (HRV), and pupil diameter—were recorded continuously. Self-reported stress was assessed every two minutes.Findings: No significant effects of environmental factors emerged when averaging stress responses over the 10-minute exposure. However, physiological responses varied significantly over time and by environmental context. Under low traffic, greenness reduced SCL over time in low-crowded settings but increased HRV in high-crowded settings. Crowdedness reduced HRV in non-green, low-traffic environments. Pupil responses indicated greater attentional engagement associated with environmental features.Conclusions: This study addresses gaps in understanding the temporal dynamics of environment-stress relationships. Findings demonstrate the complex interactions between environmental features and imply that urban design should prioritize green, low-traffic environments to support stress recovery.

Incorporating nature in walkability indices. *Lauren Del Rosario, The University of Sydney; Thomas Astell-Burt, The University of Sydney; Jonathan Olsen, The University of Queensland; Susan Thompson, The University of New South Wales; Richard Mitchell, University of Glasgow; and Xiaoqi Feng, The University of New South Wales*

Both high walkability and green and blue spaces offer health benefits, though few studies consider green and blue spaces in the calculation of walkability indices. This could underestimate socioeconomic inequalities. We created walkability indices that incorporated aspects of green and blue walkability and compared them to more conventional methods. Multiple network buffers (400m, 800m, 1600m) were created for small areas in Sydney, Newcastle and Wollongong in NSW, Australia. Measures used for conventional walkability were population density, street connectivity, and destination availability. Green walkability included park and street tree canopy percentage, while blue walkability involved an estimation of blue space percentage (50 m buffer around beaches and a 10m buffer around waterbodies and coastlines). Z-scores for each measure were calculated and used to create walkability models: Conventional walkability; Conventional + green + blue walkability; and Green + blue walkability. Spearman's rank correlation coefficient was calculated for each of the models with socioeconomic disadvantage and between conventional walkability and green + blue walkability. Conventional + green + blue walkability had a weak correlation with low disadvantage (Rho= 0.2304, p-value<0.0001) at the 1600m scale for all study areas. When only considering green + blue walkability, there was a moderate correlation with low disadvantage (Rho=0.5163, p-value<0.0001). However, conventional walkability had a negligible correlation with high disadvantage (Rho=-0.0680, p-value<0.0001). Compared to conventional walkability measures, using green and blue space in walkability indices has revealed disparities for more disadvantaged areas. Investments in green and blue spaces should be geographically focused to address inequalities in walkability.

Measuring the Unmeasured: Investigation of Perceived Neighbourhood Walkability and Adaptation of the Neighborhood Environment Walkability Survey (NEWS) for Racialized Communities in Canada. *Ibrahim Ghanem, Department of Geography and Geomatics, UTM*

Despite comprising 26.5% of the Canadian population, racialized communities remain underrepresented in perceived walkability research, and no validated tool exists for measuring this construct within the Canadian urban context. Building on a global tradition of Neighbourhood Environment Walkability Survey (NEWS) adaptation, this two-phase study adapts and validates the NEWS for racialized populations residing in the Toronto Metropolitan Area. In Phase 1, a mixed-methods approach was employed to generate the contextual and methodological insights necessary to inform the adaptation. Data were collected from Canadian Arab adults (aged 20-64; N=48) across three participatory mapping sessions, integrating group discussions, hand-drawn neighbourhood boundary mapping, and a survey covering walking behaviour, access to destination, and overall walkability ratings. Objective walkability was operationalized using the Active Living Environment (ALE) index at the Dissemination Area level, with Arab ethnic enclaves identified through Local Moran's Index. Objective and perceived walkability misaligned significantly; neighbourhood boundaries diverged spatially; and culturally specific factors informed methodological revisions and new item additions to the adapted NEWS. In Phase 2, the adapted instrument is subjected to a two-stage validation framework. First, online cognitive interviews are conducted with members of the three largest racialized groups in the Toronto Metropolitan Area — South Asian, Chinese, and Black — to assess question clarity of the instrument. Second, a test-retest reliability assessment is administered to participants at two time points to evaluate the instrument's stability. The two phases produce a grounded tool suited to the diverse urban populations of Canadian metropolitan areas, with implications for health equity research.

Paper Session

Health in a Warming World

Thermal Rest Regimes: Embodied Thermal Precarity and the Politics of Rest in a

Warming Urban World. *Mildred Ajebon, Durham University*

In an era of intensifying urban heat, I propose Thermal Rest Regimes as a novel conceptual framework to explore how extreme heat intersects with embodied precarity and the politics of rest. I synthesize the concept of embodied thermal precarity (the lived bodily vulnerability to heat due to inequities in housing, energy access, and labour conditions) with the politics of rest, which interrogates who is able to rest, when, and under what conditions in a society structured by capitalist, patriarchal, and infrastructural power relations. Using feminist, labour, and urban infrastructure perspectives, I argue that heat amplifies existing injustices in the ability to recuperate and rest, making the simple act of rest a contested and unevenly distributed resource.Our approach draws on feminist geography and political ecology to highlight how care responsibilities and gender norms mediate thermal stress. It also engages labour geography to expose the exploitation and activism surrounding rest under extreme heat, and incorporates an urban infrastructure lens to reveal how the built environment (from cooling centers to energy access) shapes opportunities for respite.By conceptualizing rest as a critical component of health and wellbeing resilience under climate change, this work extends medical geography's conceptual toolkit. It calls for addressing the unequal distribution of rest opportunities in heat adaptation and health equity planning, positioning Thermal Rest Regimes as a vital concept for advancing climate justice in urban health.

Understanding Climate-Health Intersections: Embodied Political Ecology of Health and Wellbeing. *Yuki Yeung, University of Waterloo; and Susan Elliott, University of Waterloo*

The Seventh Assessment Report from the Intergovernmental Panel on Climate Change (IPCC) concludes with high confidence that climate change will undermine health and wellbeing through heat, malnutrition, wildfire, mental health, and displacement. These impacts are unevenly distributed, reinforcing inequities and underscoring the urgency for adaptation. To design appropriate adaptation interventions, it is necessary to understand the complexities of how climate change can impact health and wellbeing. This presentation presents a framework for understanding. Political ecology provides a multi-level analytical framework, with an explicit interest in place, which is supportive of alternative ways of knowing. We employ an embodied political ecology of health and wellbeing lens in this research that centers power and social, political, and ecological relations, while integrating the concept of embodiment from ecosocial theory to guide an exploration of how individual bodies become active components of the system, by biologically embedding places and by changing conditions of the environment. It further integrates climate change scholarship on vulnerability, conceptualized as exposure, sensitivity, and adaptive capacity. Within the framework, health and wellbeing sit in an interdependent circle of components: (1) agency, (2) availability and accessibility of environmental resources, and (3) economic choice, opportunity, and stability. Climate change is situated at the core to explicitly recognize its role in producing direct health effects and intensifying conditions that indirectly shape health outcomes. This framework provides a theoretically informed tool to examine how climate-related health inequities emerge in place and can persist and accumulate over time generating insights to inform policy and practice.

Beyond Home Loss: Exploration of Physical Health Pathways for Residents of Smoke-Damaged versus Destroyed Homes after a WUI Fire. *Colleen Reid, University of Colorado Boulder; Sarah Laughlin, University of Colorado Boulder; Grace Bowman, University of Colorado Boulder; Katherine Dickinson, University of Colorado Anschutz; Matthew Miller, University of Colorado Boulder; Yue Sun, University of Colorado Boulder; and Jessica Finlay, University of Colorado Boulder*

Wildfires have been increasing in frequency and intensity, causing both direct and indirect health impacts. Most research focuses on fires that predominantly burn vegetation, however, some recent wildfires have burned numerous manmade structures in addition to vegetation due to their location in the wildland urban interface (WUI), an area in which human developments abut wildlands. Many people living near WUI fires return postfire to find that their homes are either completely lost (CL) or still standing but have suffered smoke and ash damage (SD). To examine differential impacts of the fire among people experiencing CL or SD, we conducted interviews with 44 residents

affected by the 2021 Marshall Fire in Colorado (USA), a WUI fire that burned more than 1000 structures in one day. Reflexive thematic analysis identified that physical health impacts in the fire aftermath through disruptions to physical activity routines, diet, and sleep affected both CL and SD participants. People whose homes were SD experienced additional physical health impacts related to ongoing chemical exposures from living in or regularly returning to a contaminated home. These findings document how post-fire recovery conditions can shape physical health outcomes following the disaster and can inform public health guidance, remediation policies, and recovery planning for communities affected by increasingly destructive WUI fires.

A Mobile Ontology of Shade and Social Inclusion. *Anna West, Haverford College*

This paper explores the intersections of heat and social inclusion through attention to the embodied politics of movement and rest in urban public space. The ten hottest years on record since 1850 have all occurred in the past decade. Impervious surfaces, air-conditioned skyscrapers pumping heat onto the street, and traffic congestion render cities significantly hotter than surrounding rural areas. Heat is unevenly distributed across city landscapes, mirroring histories of racialized exclusion and dispossession. Our abilities to move through heat and the infrastructures we navigate are themselves products of earlier forced mobilities and persistent immobilities. Vulnerability to heat is further shaped by age, disability, illness, and medications that can alter the body's ability to regulate temperature. Drawing together scholarship from the new mobilities paradigm, disability studies, feminist geography, and critical transportation studies, I pursue a mobile ontology of shade to examine how efforts to navigate overheated cities--and to expand access to shade—shape, reflect, and enact social inclusion. Using ethnographic and phenomenological approaches, this paper figures shade as a mobile commons emerging in historically-politically-temporally-situated intersections of the built environment and social infrastructure. Examining municipal heat mitigation initiatives that center shade offers insight into how city planners and transportation managers conceptualize and operationalize shaded public spaces for the protection of heterogeneous publics with divergent needs and modes of urban inhabitation. I argue that a critical mobilities approach deepens and complicates our understanding of shade as a commons, offering a novel lens on city-scaled tactics for climate adaptation and heat mitigation.

Paper Session

Health Systems, Access, and Politics of Care - add Storer

The disutility of health reform? Leaders' responses to change in an over-constrained system. *Sarah Lovell, University of Canterbury*

Internationally, a failure to realise health reform goals has been attributed to 'system inertia', a tendency for health systems to produce the same outcomes regardless of system change (Braithwaite et al., 2005; Coiera, 2011). The context of health reform can increase the likelihood of system inertia with under-resourced and over-burdened systems lacking the human engagement to make new interventions a success. Adopting a case study approach, we examined health leaders' responses to the post-covid centralisation of New Zealand's health system and the establishment and rapid disestablishment of the Māori Health Authority. Drawing on qualitative interviews with regional health leaders and the evidential statements submitted by Māori health providers to the Waitangi Tribunal, we examine the tensions navigated by health leaders' as they engaged with health reform. Our analysis highlights leaders' concern over health reforms that threaten their (a) rangatiratanga (determination) over their population's health outcomes, (b) proximity to decision-making, and (c) the alignment of commissioning and reporting practices with organisational values. We contribute an understanding of the human cost of reform by examining the disutility experienced by health leaders who fear their ability to provide meaningful, transformative care for their populations is being diminished. We conclude that the disutility experienced by reforming an 'over-constrained' health system may be mitigated by aligning reform goals with organisational values. Braithwaite, J., Westbrook, J., & Iedema, R. (2005). Restructuring as gratification. Journal of the Royal Society of Medicine, 98(12), 542-544.Coiera, E. (2011). Why system inertia makes health reform so difficult. BMJ (Clinical research ed.), 342, d3693. https://doi.org/10.1136/bmj.d3693

Disability, immigration and the shifting politics of medical inadmissibility. *Robert Wilton, McMaster University*

Canada's Immigration and Refugee Protection Act states that economic and family class migrants can be found medically inadmissible if they constitute an 'excessive demand' on health and social services, defined in terms of potential cost or impact on wait times for Canadians. Disability and immigrant advocacy groups have long argued that these provisions are discriminatory. In 2017, a parliamentary standing committee recommended repealing these provisions as 'inconsistent with the modern values [we] associate with contemporary human rights protections' and yet close to a decade later they remain in effect. In this paper, I analyze recent policy documents and case law to examine the evolving nature of these medical inadmissibility provisions. My analysis is informed by a theory of ableism that critically assesses how norms of ability intersect with race and citizenship to shape assessments of human worth. Findings shed light on the ways in which the state works to assess and assign meaning to disability in the context of cases of the immigration system. They also illustrate how disabled people, families and advocates challenge and contest findings of medical inadmissibility. More broadly, the analysis advances our understanding of institutional ableism, and the 'dividing practices' used to assess and assign values to bodies in the context of the immigration system.

Access Without Arrival: Rethinking Health Equity Through the Geography of Deferred Care. *Drumond Dzakuma, University at Buffalo*

Access to healthcare has never been more extensive, and yet, completion of care pathways has never been less assured. Critical scholarship on healthcare access has conceptualized access as a spatial problem of coverage, proximity, mobility, but reaching care does not guarantee receipt. In practice, access unfolds as an indeterminate process in which care is accessible but systematically deferred. This paper introduces "deferred care geographies" to conceptualize access as a spatiotemporal phenomenon shaped by temporal stratification, procedural dispersion, administrative friction, and governed waiting. Central to this context is "arrivability" and "access without arrival" as an analytic lens, to foreground how inequity is produced not only through exclusion from services, but also via what occurs after access is secured. "Access without arrival" identifies a condition that is neither exclusion nor utilization, existing in liminal space between them, and theorizes institutionalized non-arrival, in which individuals circulate within healthcare systems without progressing toward the achievement of care. The paper shifts debates beyond spatial reach toward institutional organization of time, offering a conceptual lens for analyzing how waiting, delay, and deferral structure inequity. By theorizing time as a mechanism through which access is rendered fragile, it demonstrates how systems can satisfy conventional access criteria while systematically failing to deliver care. Positioned as a conceptual provocation, the paper does not advance policy solutions but redirects geographical debates toward the spatiotemporal organization of waiting as a constitutive feature of healthcare systems, arguing that inequity is produced not only by exclusion but also through unequal temporalities.

Under Pressure: Distress, Obligation and Care in Uganda and the UK. *Elizabeth Storer, Queen Mary University of London*

This presentation engages with three connected urban spaces to offer a feminist analysis of embodied obligations in postwelfare states. We draw from ethnographic research in Kampala and Arua in Uganda, and with Ugandan care workers in Newham, London, to follow discursive and material engagements with 'pressure' and related concepts linking chronic and psychological stress with the pain, stress and 'trauma' of financialised obligations in neoliberal contexts. Following 'pressure' places distress and related care work in historical, geographical, economic and relational context. It sheds light not only on resonant terminologies for expressing structural distress, but also on perceived pathways of embodiment and potential repair. Ethnographic engagement across these spaces thus makes visible realities of, and pragmatic responses to depletion of self and collective life in urban margins.

Paper Session

Healthcare Access and Equity Challenges: System Transitions

and Barriers to Care

Is This the New Normal?: The Escalation & Normalization of Emergency Department Closures in Ontario. *Emma Sage Milne, University of Guelph: School of Environmental Design & Rural Development; and Leith Deacon, University of Guelph*

Since 2019, Canada has experienced an unprecedented increase in hospital service closures, particularly affecting emergency departments (EDs). These closures have been unevenly distributed geographically; by 2025, all ED closures in Ontario occurred in rural communities with populations under 10,000. The loss of emergency services exacerbates existing health inequities by reducing timely access to care, increasing pressure and burnout among healthcare workers, and further straining limited health system resources. This study examines the impacts of rural ED closures through a comparative case study of Huron, Perth, Grey, and Bruce Counties in Ontario, Canada. The research employs a mixed-methods approach, including a literature review, a retrospective longitudinal cohort study of ED closure counts from 2022 - 2026 in Ontario, using the STROBE guidelines, a quantitative survey of 786 respondents in Huron, Perth, Grey and Bruce Counties, and key informant interviews. The analysis evaluates the geographic reach and degree of impact associated with both intermittent and permanent ED closures on rural emergency care in the study region. Anticipated findings aim to improve understanding of community perceptions of healthcare access and to inform policy discussions on sustaining rural emergency services. More broadly, this research contributes to ongoing debates about achieving social and health equity during periods of social, economic, and political transition.

Conceptualizing Healthcare Gentrification: Results From a Scoping Review. *Christine Loignon, Sherbrooke University; Justine Pineault, Université de Sherbrooke; Nataly Espinoza Suarez, Université Laval; Sophie Dupéré, Laval University; Julie Ouellet, Université de Sherbrooke, Université Laval; Simone Amagnamoua, Université de Sherbrooke; Philippe Apparicio, Sherbrooke University; Isabelle Dufour, Sherbrooke University; and Martine Shareck, Université de Sherbrooke*

Context: According to Helen Cole and Emily Franzosa (2022), healthcare gentrification refers to shifts in the type and geographic distribution of health services that increasingly cater to wealthier populations, often marginalizing those who are more vulnerable and reducing their access to quality care. Objective: This study maps existing definitions of healthcare gentrification and examines its links—along with neighborhood gentrification—to dimensions of healthcare access. Methods: We conducted a scoping review following the framework of Hilary Arksey and Lisa O'Malley (2005), with refinements by Danielle Levac et al. (2010) and Kathy Colquhoun (2014). Our team identified 9,469 references from peer-reviewed publications and 239 from the grey literature Two reviewers independently screened studies and synthesized findings using descriptive mapping and thematic analysis. Results: 28 peer-reviewed publications and 3 grey literature documents were included in the scoping review. Our review showed that healthcare gentrification and neighborhood gentrification jointly shaped equity in access to care. Healthcare gentrification shifted health systems toward profit-driven services and reduced investment in less profitable services. At the neighborhood level, gentrification increased residents' financial burden, contributed to residential displacement, and stigmatized services used by marginalized populations. Together, these processes reinforced structural barriers and deepened inequities in access to care. Conclusion: This scoping review demonstrates that healthcare gentrification can drive up healthcare costs and reduce access for lower-income residents, with disproportionate impacts on historically marginalized groups. Efforts should ensure that health systems remain accessible, culturally appropriate, and responsive to everyone's needs.

Insurance Literacy as a Global Barrier to Care: Insights from a U.S. Case Study. *T. Raquel Young, University of Missouri, Public Health; Aída Guhlincozzi, University of Missouri; Carolyn Orbann, University of Missouri, College of Health Sciences; Emilia Ramírez Paguay, University of Missouri, Communications; Hema Prasad, University of Missouri, Sociology; Megan Hirni, University of Missouri, Educational, School & Counseling Psychology; Rachel Riley, University of Missouri; and Cecilia Andrade, University of Missouri*

Health insurance systems vary globally in how coverage is organized and accessed, with the United States representing a lower-performing and highly fragmented model among high-income countries. Insurance literacy highlights how difficulties in understanding and navigating insurance systems translate into barriers to care. This study uses a U.S. case example to examine insurance literacy as a broader, globally relevant barrier to healthcare access.The analysis focuses on residents of Boone County, Missouri, a predominantly urban county that includes rural communities. The study assessed insurance status, coverage variation, and understanding of key plan features that influence decisions about seeking medical care. A survey was administered over a 14-month period to evaluate participants' knowledge of insurance premiums, co-payments, deductibles, and coverage limitations. Descriptive statistical analyses were used to identify patterns in insurance comprehension across participants.Findings indicate substantial gaps in insurance literacy. Many participants were unable to identify plan types, estimate potential out-of-pocket costs, or determine which healthcare services were covered. Levels of comprehension varied by income, gender, age, race, ethnicity, and other sociodemographic factors, reinforcing broader patterns of health inequity and differential access to care.Although grounded in a U.S. context, these findings align with international evidence that administrative burden, financial complexity, and policy opacity limit healthcare access across diverse systems. The results highlight insurance literacy as a structural determinant of healthcare access in both public and private systems globally, and community health workers emerged as critical partners for mitigating barriers. This research contributes to ongoing initiatives in public health research.

Charting the Evolution of a County EMS System through Service Privatization: A Probable Case of Hotelling's Law. *Richard Sadler, Michigan State University; Wally Wojciechowski, Michigan State University; Ryan Reece, Hurley Medical Center; Nichole Smith-Anderson, Greater Flint Health Coalition; Alan Harris, Michigan State University; and Heatherlun Uphold, Michigan State University*

Emergency medical service (EMS) systems are an essential component of pre-hospital care, delivering life-saving interventions before arrival to emergency departments. Many standard operational policies are inherently spatial, with EMS aiming to optimize response times by providing adequate service area coverage. Delivery type varies by region, including exclusive contracts with entire service areas, competing services from multiple companies, and government-led public ambulance services. Our team recently conducted a comprehensive evaluation of the EMS system for Genesee County, Michigan. A key feature of this overall system—that distinguishes it from other regions—is that some municipalities have competing companies while others have exclusive service agreement contracts. Here we evaluate how Genesee County's EMS system's response has shifted during this period of partial privatization. We conducted interrupted time series analysis to determine how fractal response time for emergency (tier 1) calls shifts over time. We then conducted yearly hot spot analyses to determine the relative shifts in company-specific service areas over time. Two key results from this work include a) that the move to private, exclusive contracts with individual companies did not yield benefits in fractal response times, and b) that the service areas of remaining companies not contracted with municipalities adjusted to capture remaining parts of the county that were not under contract. This work highlights a key aspect of Hotelling's Law: that given a reduced service area footprint, non-contracted/competing ambulance companies occupied the remaining space and provided adequate service, even while other municipalities retained exclusive contracts from individual companies.

Paper Session

Housing and Health

Neighbourhood revitalization, changes in housing, and young adult health and well-being: insights from go-along interviews in Sherbrooke, Canada. *Martine Shareck, Université de Sherbrooke; Clara Blache-Pichette, Université de Sherbrooke; and Jérémy Hugonnier, Université de Sherbrooke*

Background: Neighbourhoods across Canada are undergoing revitalization, which can positively impact health and reduce health inequalities. Revitalization may also lead to

housing insecurity, which is especially important in young adulthood, a key period of the lifecourse. Understanding how young adults experience changes in housing during neighbourhood revitalization, and how this affects their health can inform intervention development.Objective: We explored how young adults living in a neighbourhood undergoing revitalization experienced changes in housing and perceived their effects on their health and well-being.Methods: This qualitative study was part of a mixed-methods evaluation of the Sherbrooke (QC) downtown revitalization for its health impacts among young adults. We conducted go-along interviews four years after revitalization began with current (50%) and former (50%) residents (n=20; 20-34 years-old), and performed a framework analysis of interview transcripts. Results: Participants described the revitalization initiative as impacting multiple dimensions of housing: its availability, affordability and condition. They mostly expressed fear and apprehension with regards these changes. Although new rental housing had been built, it was deemed too luxurious and expensive for participants. Rents in the existing housing stock had increased substantially, although apartments were not renovated. Participants consequently felt stress and anxiety related to living in sub-standard conditions, incapacity to pay rent, and risk of eviction.Conclusions: Our findings contribute to knowledge on housing concerns in young adulthood, specifically with regards neighbourhood revitalization. They highlight the many ways in which revitalization affects housing and, consequently, young adults' potential to remain in place and their health and well-being.

Housing Instability and Transitions Among People Who Inject Drugs in Chicago and Surrounding Suburbs: A Hidden Markov Model Analysis. *Kathleen Kristensen, University of Illinois Chicago; Oksana Pugach, University of Illinois Chicago; Mary Ellen Mackesy-Amiti, University of Illinois Chicago; and Basmattee Boodram, University of Illinois Chicago*

Objective: To identify longitudinal patterns of housing instability among young people who inject drugs (PWID) and to assess how urban and suburban contexts, injection frequency, treatment engagement, and crack co-use shape transitions between housing states.Methods: Longitudinal data from a 2018-2023 study of young PWID in Chicago and surrounding suburbs (N= 202) were analyzed. Participants reported housing type for the prior 6 months at baseline and four 6-month follow-up visits. Hidden Markov models were used to identify latent housing states and estimate transition probabilities. Covariates were selected based on prior literature, and likelihood ratio tests, Akaike information criterion, and Bayesian information criterion were used to assess model fit.Results: The sample had a mean age of 26.8 years, a racial distribution of 60% white, 5% Black/African American, 27% Hispanic, and 7% Mixed/Other, and was predominantly male (70%). Four housing states were identified: own/family home, staying with friends, sheltered settings (e.g., treatment facilities), and unsheltered settings. Geographic residence (Chicago vs. other residence locations) significantly improved model fit for prior and transition probabilities, indicating distinct housing trajectories in urban versus suburban contexts. Daily injection, recent treatment engagement, and crack co-use were also associated with transitions between housing states.Conclusions: Housing among young PWID is dynamic, with frequent transitions between living situations shaped by substance use behaviors and geographic context.Policy Implications: Interventions should move beyond static definitions of homelessness and address transitions between housing states, with efforts tailored to local contexts to reflect differences in service availability, housing infrastructure, and risk environments.

Residential segregation, housing cost, and smoking behaviors in Black Americans. *Debarchana Ghosh, University of Connecticut*

The characteristics of where people live are increasingly recognized as influential in shaping health-related behaviors, including smoking. The adverse impact of poor neighborhood characteristics on health disproportionately plagues Black Americans, but also likely varies across subgroups within the Black community, leading to health disparities. This study examined the roles of residential segregation and housing cost burden in smoking behavior among a national probability sample of 2370 Black American adults. We further assessed whether individual demographics and social support moderated these associations. Survey data on health behaviors and psychosocial resources were merged with neighborhood characteristics. After adjusting for individual demographics and social support, we found that living in an economically

segregated neighborhood where a higher number of low-income (i.e., with ≤$25,000 in annual income) households were separated from the high-income (i.e., ≥$100,000 in annual income) households more than doubled the odds of being a current daily smoker (OR = 2.40, $p < 0.05$). We also identified statistically significant moderation effects, where Black women living in neighborhoods with a high housing cost burden of 30 % or more of their household income were more likely to have smoked 100 or more cigarettes in their lifetime. These findings highlight the importance of neighborhood context in shaping smoking behavior, particularly in segregated areas and among Black women facing housing-related financial strain. Our study underscores the need for multilevel interventions that address both structural and individual factors, such as strengthening social support networks and reducing neighborhood stressors to mitigate smoking-related health disparities among Black Americans.

A Strategic Implementation Framework for Affordable Housing in Hamilton, Ontario.
James Dunn, McMaster University

Most Canadian municipalities face accelerating pressure to increase the level and scope of their involvement in affordable housing, to dealing with the simultaneous challenge of crisis response and system reform. Given the challenge of these new responsibilities, municipal governments need strategic implementation frameworks and governance structures to work collaboratively with the private sector, non-market sector, other levels of government and other civil society organizations. In this paper, I present the background and results of the development of the Hamilton Sustainability and Investment Roadmap (HSIR), a strategic implementation framework for affordable housing, developed by the City of Hamilton and the Canadian Housing Evidence Collaborative (CHEC), and adopted by City Council in 2023. The Roadmap was the outcome of extensive consultation and background research to help guide the City's strategic directions on affordable housing. It identifies affordable housing construction, acquisition, preservation/retention and housing supports as its four key pillars. It also outlines key legislative, governance and regulatory changes needed to optimize the City's position in increasing its affordable housing stock to reduce housing insecurity and prevent homelessness.

Paper Session

Indigenous Health Geographies

Co-developing a community-based recipe book to support Urban Indigenous Food Sovereignty.
Chrishma D. Perera, Western University, Canada; Chantelle Richmond, Western University, Canada; and Evan Bowness, Western University, Canada

This study presents the process of collecting 26 traditional food recipes for a recipe book as requested by the Southwest Ontario Aboriginal Health Access Center (SOAHAC) in London. As a non-Indigenous international student having experience working with Indigenous communities in the global south, my new community relationships with SOAHAC emerged through cooking programs, from May to August 2025. Building on my previous experience and guided by the principles of respect, relevance, reciprocity, and responsibility, I listened carefully for teachings during the programs and respectfully asked questions when I needed clarity. This approach helped me understand the stories and relational meanings attached to Indigenous foods, as well as SOAHAC clients' deep desire to learn and practice traditional recipes in London. Building on this understanding, I compiled a collection of recipes across Canada, drawing on Indigenous-authored cookbooks and social media platforms. As this collection grew, I was guided by the SOAHAC's Indigenous Food Sovereignty Coordinator to ensure its relevance to community priorities. We conducted a sharing circle with Indigenous Elders, dietitians, and chefs to select the recipes most appropriate for London from the wider recipe collection, considering their nutritional and cultural values. These selected recipes will be used to curate a recipe book and to co-design cooking classes at the SOAHAC community kitchen. Ongoing community guidance throughout the project clarified my role as a researcher, highlighting the importance of both contributing my skills and stepping back to prioritize community leadership in creating outcomes that are more meaningful to the community.

Who Gets to Be Well? Indigenous Fat Bodies, Sovereignty, and the Limits of Health

Geography. *Courteney Morris, Western University*

Medical and health geography has increasingly engaged with the social determinants of health and, more recently, Indigenous social determinants of health, which foreground the impacts of colonialism, land dispossession, and structural inequities on wellbeing. Despite this critical turn, dominant health frameworks, including those aligned with Health at Every Size (HAES), often remain centred on individual responsibility, positioning fat bodies as flawed, irresponsible, or inherently unhealthy. These approaches obscure the knowledge, agency, and lived realities of fat Indigenous people while reproducing deficit-based understandings of health and care.This paper advances a conceptual intervention through a triadic framework of land, food, and body sovereignty. Wellbeing is understood as relational, collective, and inseparable from access to land, culturally grounded food systems, and the right to self-determine one's body. These domains are mutually constitutive; disruption in one destabilizes the others. Health, therefore, cannot be improved through individual behaviour change alone but requires supporting the reclamation of sovereignty across all three domains.This intervention emerges from an Indigenous Fat Studies roundtable and informs the design of a qualitative study with fat Indigenous women in urban space, conducted in partnership with the Southwest Ontario Aboriginal Health Access Centre (SOAHAC). Grounded in Anishinaabe and Métis epistemologies, the research employs narrative inquiry and storytelling to foreground relational accountability and participant sovereignty.By centring collective sovereignty, this work challenges dominant health geographies and advances a pluriversal approach to wellbeing.

Environmental Repossession in the City: Urban Indigenous Youth Reclaiming Place, Community, and Land in London, Ontario.. *Maya Morton Ninomiya, Western University; and Chantelle Richmond, Western University, Canada*

Urban Indigenous youth are the fastest-growing population in Canada. Today, more Indigenous youth live in Ontario's cities than anywhere else in Canada, a pattern that reflects intergenerational processes of colonial trauma and broad-scale disconnection from their histories, families, land-based practices, and original places.This research is guided by the concept of environmental repossession from Indigenous health geography, which refers to the social, cultural, and economic ways Indigenous people are reclaiming their connection to their lands, knowledge, and relationships to improve health and wellness. This framework orients the research towards what is currently just emerging in the literature: a more hopeful and empowering account of urban Indigenous youth agency that is conducted with youth as active participants, rather than on them as subjects. My master's thesis asks: How are urban Indigenous youth creating spaces of belonging in the city of London, Ontario and what does this mean for their health, wellbeing, and identity?This research is embedded within a summer community garden project through the Indigenous Food Sovereignty (IFS) project at Southwestern Ontario Aboriginal Health Access Centre (SOAHAC). Using photo-elicitation interviews and arts-based methodologies with urban Indigenous youth (ages 14-25), I will examine how youth understand, describe, and reclaim relationships to place, community, and land in urban spaces. Core themes emerging from youth will directly inform land-based food programming at SOAHAC for 2027. More broadly, this research challenges assumptions about what Indigenous land and place-making looks like in a contemporary urban context.

Indigenous Death Doulas: Creating Alimentary Pathways for Healthy Transitions. *Nadine Ryan, University of Toronto*

In this presentation, I will discuss the role of Indigenous death doulas within the resurgence of Indigenous caretaking traditions. Care is an important aspect of death and dying, and there are significant differences in end-of-life care and deathwork between Indigenous traditions and settler colonial medical systems and spaces. Within these hegemonic contexts, Indigenous care ethics and practices are often dismissed, leading to experiences of deficient cultural safety and anti-Indigenous racism. Ruptures to Indigenous care, in order to centre what Eva Jewell (2024) and Kim TallBear (2019) describe as settler colonial "regimes of care", effectively (re)configure our lands, bodies, and relations in ways that render us available for ongoing occupation and extraction (Lisa Stevenson in Jewell 2024, 169). In response, Indigenous death doulas create

alimentary pathways towards the cultural “repossession” of Indigenous spaces, places, and traditions (Big-Canoe and Richmond 2014, 133; also LaDuke and Cowen 2020). With a focus on the expanding profession of Indigenous death doulaship, I discuss important movements these practitioners are making: from the scale of the individual body/person to the family/community and ultimately to Land/Place (Jewell 2024; Watts 2013). At the heart, I make an argument for the “complex accountabilities” (Starblanket 2018) and creative interventions that Indigenous death doulas must develop, in contexts of deepening “colonial care” (Jewell 2024, 169), to honour and repair our connections to Indigenous Knowledges and practices that pertain to the cycles of life, death, and renewal (Anderson 2011; Daigle 2023; Hayward et al. 2024; Million 2023; Simpson 2025).

Paper Session

Inequities in Health and Health Care

Spatial variation of health resilience in Poland in the context of depopulation and external security threats.. *Joanna Stepien, University of Gdansk, Poland*

The COVID-19 pandemic led to an unprecedented decline in life expectancy in Poland, markedly greater than that observed in most other European countries. Despite the post-pandemic recovery, life expectancy in Poland still remains substantially lower than the European Union average, by more than five years for men and over three years for women. Despite the transformation of the Polish economy and healthcare system after the fall of communism in 1989, there is clear discrepancy between health situation of population and Poland's strong economic position (currently 20th rank globally). In addition, the ongoing conflict in Ukraine has caused a serious humanitarian and displacement crisis, putting additional pressure on the national healthcare system in Poland. The influx of refugees has not only increased the number of patients but also created new challenges in service delivery (e.g. funding regulations, war injuries, language challenges). What is more, for over ten years, the country has been undergoing a process of depopulation and accompanying aging of the population, which places a heavy burden on the functioning of the healthcare system. Persistently adverse health trends, together with substantial internal spatial disparities in life expectancy at the local and regional level and pronounced differences by gender, indicate limited effectiveness of the national health care system, which continues to face multiple structural challenges. The primary objective of this presentation is to discuss spatial variation in health inequalities as well as health resilience potential among local communities in Poland and to interpret the underlying factors contributing to these disparities.

Community Mapping of the pediatric autism diagnosis to services journey: a power analysis for identifying systemic barriers to care in Columbia, MO. *Aída Guhlincozzi, University of Missouri; Kristin Sohl, University of Missouri; Alexandra James, University of Missouri; Cecilia Andrade, University of Missouri; Rachel Riley, University of Missouri; Claire McMahon, University of Missouri; Alia Abu-Shanab, University of Missouri, International Association of Fire Fighters; Mark Palmer, University of Missouri; and Tatem Petet, University of Missouri*

Pursuing an autism diagnosis for a child can be difficult for parents or guardians, due to a number of systemic barriers. These systemic barriers have only been examined primarily through a financial lens, but this project seeks to examine them through a geographic access lens at multiple scales, from state to local. To do this, this project surveyed family members of children who had received a diagnosis for autism in the past 5 years to identify difficulties with accessing diagnostic care for their children. This presentation summarizes the results of 30 surveys from parents and guardians from the Columbia, MO area. This presentation will discuss the key themes of the preliminary analysis of the survey, and identify next steps for community-engaged research with this project.

Geographic Access to Gender-Affirming Hormone Therapy Across Major US Metropolitan Areas. *Katica Naude, University of British Columbia, Department of Geography; and Avery Everhart, University of British Columbia, Department of Geography*

Many factors limit and complicate access to gender-affirming hormone therapy (GAHT)

in the US. While some of those barriers have been documented, limited research applies spatial methods, and no literature has compared geographic access across regions, leaving us to speculate on differences across political, demographic, and geographic lines.In this paper, we analyze geographic accessibility of gender-affirming hormone therapy providers across the fifteen largest metropolitan statistical areas (MSA) in the US to study spatial differences across urban contexts. To estimate supply and demand, we use an updated version of Everhart et al's 2022 database of GAHT providers, and approximate the size of the trans population using Household Pulse Survey data together with US Census enumeration. We conduct a 3-Step Floating Catchment Area analysis based on driving times between census tracts and providers, calculating a spatial accessibility index (SPAI) for each census tract. We then analyze local spatial autocorrelation to identify clusters of high and low access across each MSA. Finally, measuring census tract SPAIs against benchmark metrics, we evaluate the proportion of each MSA which meets those benchmarks, and compare those proportions across regions.This research allows us to challenge assumptions around patterns of healthcare access for trans people, and gives us insight into heterogeneities in geographic access to gender-affirming healthcare in the US across axes of difference. Putting the results in context, we discuss what these patterns tell us about how care has - or has not - been planned in the past, and how we might plan in the future.

Designing a Framework for Measuring Equitable Access to Health Services. *Ray Jewett, University of Toronto; and Kathi Wilson, Department of Geography, Geomatics and Environment at UTM*

Achieving equitable access to health care in Canada is challenged by its sparse and diverse social geography. Communities differ in health needs, workforce capacity, and rates of change, producing locally distinct health system designs. These differences reflect how towns developed around highways, waterways, and terrain rather than system failure. Measuring access therefore requires place-specific data sources and methods. While "access to health services" is embedded in provincial, territorial, and regional mandates, no consistent operational framework exists to support equitable planning across diverse geographies. Drawing on critical geographic information systems and health services research, this study examines global research measuring adult access to primary care over the past 20 years. A Joanna Briggs Institute systematic review methodology was applied across PubMed/MEDLINE, Web of Science, CINAHL, and the Cochrane Library. Data were extracted and analyzed using the five dimensions of access (Availability, Accessibility, Accommodation, Affordability, and Acceptability) defined by Penchansky and Thomas, alongside factors predicting utilization described by Andersen. Studies largely agree on the definition of primary care but vary substantially in how access is defined and measured. Research in sparse or remote settings emphasizes Availability and Accessibility, while urban studies focus on Appropriateness and Acceptability. Many studies rely on indirect measures, mix spatial scales, introduce ecological fallacies, and exhibit modifiable areal unit problems without sensitivity testing. The five dimensions of access appear to follow a dependency order that supports health system maturation toward equity.

Climate change impacts on inequitable access to healthcare in Aotearoa New Zealand. *Jesse Whitehead, Te Ngira; Institute for Population Research, University of Waikato, Aotearoa New Zealand; Mitchell Pincham, Te Ngira; Institute for Population Research, University of Waikato, Aotearoa New Zealand; Sam Quinsey, Centre for Australian Research into Accessibility, Deakin Rural Health, Australia; and Marcus Blake, Centre for Australian Research into Accessibility, Deakin Rural Health, Australia*

Aims: To understand inequities in access to health services in Aotearoa after an extreme weather event.Methods: An exploratory quantitative analysis used publicly available geospatial data to estimate distance to nearest GP and hospital for every address (2.3 million) in Aotearoa under 'normal' conditions. The road network dataset was modified to reflect closures following Cyclone Gabrielle and access to health services estimated under new conditions. Statistical Area 2 boundaries were used to link data on health service access disruption to census-derived demographic and socioeconomic information. Estimates of access to services post Cyclone Gabrielle and under normal conditions were compared.Results: Cyclone Gabrielle related road closures severely disrupted health service accessibility. Approximately 80,000 addresses were isolated

from a GP, and ~100,000 were isolated from hospital services. Increased travel distances to a GP and hospital affected approximately 38,000 and 101,000 addresses respectively. Importantly, areas experiencing a “high” or “very high” level of service access disruption were more likely to be rural. The most remote (R3) communities experienced the largest disruptions to health service access. Māori, and people aged 65 or older were most likely to live in areas experiencing very high disruption. Conclusions: This research demonstrates a viable approach to creating dwelling-level accessibility datasets and evaluating the impacts of extreme weather on inequities in health service access, adding to evidence that rural and Indigenous communities are likely to be most severely impacted by climate change.

Paper Session

Mental Health Geographies I

Identifying the Mechanisms behind the Relationship between Voter Turnout and Adolescent Mental Health: Are Public Health Funding and School Connectedness Mediators?. *Xinyue Chen, University of Alberta*

Background: Adverse mental health has been increasing among adolescents, with those aged 12-17 reporting suboptimal mental health status increasing from 19% in 2019 to 26% in 2023. While evidence consistently links higher voter turnout with better health outcomes, the mechanisms driving this relationship remain unexplained. This study aims to evaluate public health funding and school connectedness as two potential pathways by which voter turnout influences adolescent anxiety and depression.Methods: This study used data from a cohort sampled among Canadian secondary school students in the Cannabis, Obesity, Mental health, Phsical activity, Alcohol, Smoking, and Sedentary behaviour (COMPASS) study (2021/22). The sample included 1,875 students across 44 Dissemination areas (DA) in Ontario. Multilevel path analysis was conducted to determine if the relationship between DA-level voter turnout and depressive symptoms was mediated by public health funding and school connectedness.Results: Higher voter turnout was associated with lower public health funding ($\beta = -6.549$, $SE = 0.935$, $p < 0.001$) and showed a non-significant positive trend with school connectedness ($\beta = 0.031$, $SE = 0.042$, $p = 0.457$). Higher level of perceived school connectedness was associated with less depressive symptoms ($\beta = -0.653$, $SE = 0.051$, $p < 0.001$). Voter turnout was not associated with depressive symptoms through either public health funding ($\beta = -0.020$, $SE = 0.051$, $p = 0.695$) or school connectedness ($\beta = 0.008$, $SE = 0.013$, $p = 0.533$). This mechanism is consistent across gender and ethnicityDiscussion: Findings from this study indicate that the relationship between voter turnout and adolescent mental health was not mediated by public health funding or school connectedness. These results offer a foundation for future research on civic participation and health and inform community efforts to protect youth mental health.

A Multi-Dimensional Framework of Factors Impacting the UK Mental Healthcare Journey. *Alice Varley, University of Liverpool; and Carmen Cabrera, University of Liverpool*

There is a widening treatment gap in England for mental health disorders, which has prompted a commitment from the government to improve the access to government-funded NHS mental health services. In order to improve access to treatment, it is first necessary to understand how accessible services are for different population groups. However, current literature is divided, largely focussing on either spatial or nonspatial factors impacting accessibility, and on either patient behaviours or service characteristics. As such, there is a need for a comprehensive framework detailing the process of accessing mental health treatment which integrates these notions. This framework is then used to inform the development of a comprehensive quantitative index of mental healthcare accessibility which incorporates the elements identified through the framework.This study addresses conceptual and methodological gaps in current research by developing a quantitative index of mental healthcare accessibility informed by a novel conceptual process framework. This is then applied to England to contribute towards improved knowledge around access to mental healthcare.Preliminary results reveal that whilst spatial and non-spatial barriers have distinct spatial patterns, they often compound one another, resulting in severely disadvantaged areas where mental health need is not being met. This study provides clear evidence of geographical areas and population groups which require targeted

interventions to address the inequity seen in accessing mental healthcare and ultimately receiving help for mental health conditions.

Spatiotemporal Dynamics of Urban Amenity Accessibility and Its Lagged Effects on Long-Term Mental Well-Being: A Case Study of Mississauga, Canada. *CONGPING Li, university of toronto; and Jue Wang, University of Toronto*

Amenities are crucial in shaping individual health behaviors and affecting physical and mental well-being through providing opportunities for physical activity, social interaction, and access to healthy food, healthcare, and community services. An imbalanced spatial configuration of urban amenities can lead to environmental injustice and health inequity. While existing studies often focus on the economic effects of amenity agglomeration, their mental health implications remain underexplored. Besides, most research on amenity accessibility and health relies on cross-sectional methods, without further considering the lagged effects of spatiotemporal changes. Given the significance of residential environments, particularly neighborhood-level influences on health, it is essential to evaluate accessibility within everyday Neighborhood Life Circles (NLCs). Yet, many studies use uniform buffers that neglect street-network constraints. The study addresses these gaps by applying GIS-based spatial analysis and 15-minute walkable NLCs generated by a context-based Crystal-Growth algorithm to explore the spatiotemporal changes in mental wellness-related amenities throughout 2014-2023 in Mississauga. By linking accessibility patterns to DA-level mental health outcomes through lagged exposure regression models, the results reveal that inequitable amenity trajectories are spatially structured, and that trajectories and predictability of access, not density alone, matter for mental well-being during public health crises. It highlights that improved amenity accessibility is associated with better mental well-being, and that spatial patterns of amenity disruption, particularly during COVID-19, have intensified existing mental health inequities in socioeconomically disadvantaged areas. These findings offer valuable insights into equitable urban planning and public health interventions.

Mental wellbeing and loneliness in Aotearoa, New Zealand: A spatial microsimulation approach. *Phoebe Eggleton, GeoHealth Laboratory & Geospatial Research Institute, University of Canterbury, New Zealand; Malcolm Campbell, Te Kura Aronukurangi | School of Earth and Environment, University of Canterbury, Te Taiwhenua o te Hauora | The GeoHealth Laboratory, University of Canterbury; and Lukas Marek, GeoHealth Laboratory & Geospatial Research Institute, University of Canterbury, New Zealand*

Mental wellbeing is consistently recognised as a public health challenge, and in particular loneliness has emerged as a significant public health concern in the post-COVID-19 world. However, our understanding of sub-national or small-area geographical distributions across New Zealand are limited by data as they often lack the spatial granularity needed to inform place-based policy.We aim to present the research approach and initial findings focused on social and environmental determinants of health. This research uses a spatial microsimulation model, integrating individual-level New Zealand Health Survey data with the most recent Census 2023 data to estimate the prevalence and distribution of mental wellbeing and loneliness at finer level geographies. Algorithms are then created using a combination of both data sources to create synthetic populations based on estimated characteristics. This method identifies small area geographic locations of interest where at-risk populations might otherwise be masked in a national-level analysis, surfacing patterns that may not be shown through regular aggregate data. The advantage of using a spatial microsimulation approach is to design hypothetical scenarios of people and place, for example focusing on specific age, ethnic or socioeconomic groups by location. These scenarios can be used to test interventions and advise policy by identifying at-risk populations and places. By creating scenarios and addressing the spatial limitations of existing national health data, this research aims to offer methodological solutions to inform targeted public health policy and interventions within New Zealand.

Paper Session

Mental Health Geographies II

A perception-integrated bio-geo informatics framework for multi-scale dynamic

mental well-being. *Yanjia Cao, The University of Hong Kong*

Understanding how people move through cities and how their environment affects their stress and wellbeing is a complex challenge. Current mapping and analysis tools often fall short in capturing the dynamic ways urban settings influence stress levels over different places and times.To improve this, we developed a new approach that combines geographic information, with biological indicators of stress and self-reported perceptions. Our method enhances traditional mapping techniques by linking real-time stress data with movement patterns, analyzing these relationships at multiple spatial and temporal levels, and considering how environmental features impact stress responses. This allows us to monitor continuous individual stress and investigate how it interacts with changing urban environments.We tested this approach in Hong Kong with 100 participants over a week, collecting data from survey questionnaires, wearable sensors and GPS devices. We present four key aspects of our framework: 1) continuous monitoring of stress responses across indoor and outdoor envrionments, 2) diverse envrionmental effects on stress levels mediated by physical activities, 3) recovery trajectory from envrionments over a week, and 4) discrepancies between objective and subjective measurements.This framework helps identify specific locations and environmental factors that contribute to stress, providing valuable insights for urban planning and health interventions. It also opens the avenue for personalized strategies to reduce stress and improve wellbeing in urban populations

Reform of community care and wellbeing for individuals with mental health problems in Japan. *Yuka MATSUOKA, NAGOYA University*

Inpatient treatment has long been the mainstream approach in Japanese psychiatry. However, inpatient treatment, which often isolates individuals with mental health problems from the community, has been criticized both domestically and internationally. To achieve social inclusion of individuals with mental health problems, the transition to community care in psychiatry is being promoted, although there are still challenges ahead. This study examined a case in Ehime Prefecture, which is a leading example in Japan. In-depth interviews with healthcare and social welfare professionals and individuals with mental health problems were used to analyze the care system and wellbeing of individuals with mental health problems. The study area was situated at the periphery of the country where industries and population have declined rapidly. The reforms of the care system for individuals with mental health problems were implemented primarily by psychiatrists and mental health and welfare workers to support community living without hospitalization. These reforms in the care system were undertaken alongside the creation of residential and employment opportunities. Through the reform process, the possibilities for the social inclusion of individuals with mental health problems have expanded, and there are now more opportunities for individuals with mental health problems and local residents to interact daily. Accordingly, the wellbeing of individuals with mental health problems in the community also gradually improved.

Effects of the Number and Sequence of Environmental Exposure Episodes on Stress Responses. *Reza Aghanejad, Luxembourg Institute of Socio-Economic Research (LISER), University of Luxembourg; Amit Birenboim, Hebrew University of Jerusalem; and Camille Perchoux, Luxembourg Institute of Socio-Economic Research (LISER)*

Research on environmental effects on stress has largely focused on contrasting urban and natural settings. However, the temporal dimension of environmental exposure has been overlooked and simplified, with the time typically averaged over extended periods. In particular, the frequency and ordering of exposure to more stressful or restorative environmental features may play an important role in shaping stress responses. This study addresses this gap by investigating how the sequence of environmental exposures —conceptualized in terms of number and order of exposure episodes—shapes physiological and psychological stress responses during walking.We present the design of a controlled virtual reality experiment. Participants (N = 180) will walk on an omnidirectional treadmill through simulated urban settings. Two contrasting streetscapes are developed: a relaxing environment (i.e., presence of greenness, low traffic and noise, low-rise multifunctional buildings) and a non-relaxing environment (i.e., no greenery, high traffic and noise, high-rise monofunctional buildings). A 3×2 factorial

design generates six scenarios that manipulate the number and order of exposure episodes while maintaining total exposure duration to both environments constant. Stress responses will be assessed using continuous physiological measures (i.e., electrodermal activity, heart rate, pupil diameter) and repeated in-VR self-reports collected every three minutes.We expect that exposure to identical environments will yield different stress responses depending on their temporal configuration, with certain sequences amplifying or mitigating stress. These insights can inform urban design and planning strategies by emphasizing the arrangement of environmental features along walking routes, such as integrating restorative segments within otherwise stressful urban settings.

Acute Stress Responses and Mental Health Impacts: Rapid Evidence from the Deadly Tai Po Fire in Hong Kong. *Ying Chen, The University of Hong Kong; Yanjia Cao, The University of Hong Kong; Tianyu Li, The University of Hong Kong; Jiashuo Sun, The University of Hong Kong; Dorita Chang, The University of Hong Kong; and Casper Zhang, The University of Hong Kong*

Research on the mental health impacts of urban traumatic events has mainly relied on retrospective questionnaires. While useful for capturing subjective experiences, these methods are vulnerable to recall bias and cannot detect acute stress responses. This limits knowledge of how traumatic events affect mental health beyond the incident site.Wearable biosensors combined with GPS offer a methodological alternative by capturing physiological stress responses as people move through changing environments. However, few studies have applied this approach to traumatic events. We use this method to examine indirect stress responses during the November 2025 Tai Po Fire in Hong Kong, the city's deadliest fire in nearly 80 years, which claimed 168 lives. The fire rapidly changed natural and social environments, with air pollution spreading citywide and news covered on social media.Following our published protocol, we analyzed 166,114 minute-level electrodermal activity (EDA) records and GPS trajectories from 19 participants, along with 227 daily surveys. PM2.5 and PM10 exposures were estimated at participants' locations using inverse distance weighting. Mixed-effects models examined pollution-related stress responses during the incident.Results showed that 42% of participants had significant EDA elevations during the fire period. Stress responses were positively associated with fire-related air pollution. Negative affect increased significantly, while higher screen time was associated with lower positive affect. These findings show the value of integrating biosensors, GPS, and survey data to capture multi-pathway stress responses that traditional methods may overlook. Policies should consider both environmental and digital stressors beyond the incident site in mental health responses.

Paper Session

Methodological Innovations in Environmental Health

Environment and health insecurity experiences of vulnerable populations at the local scale. *Carmen Anthonj, University of Twente, The Netherlands*

Vulnerable population groups often face disproportionate environmental, demographic, and socio-economic challenges that shape everyday living conditions and affect their health and well-being. These include unequal access to safe water and sanitation, exposure to pollution and environmental risks, limited access to green and blue spaces, and social exclusion. Despite these challenges, they are often underrepresented in research and official statistics, highlighting the importance of local-scale studies to understand how health is shaped through lived experiences in everyday settings.Drawing on case studies from the Slovakia, Germany, The Netherlands and Kenya, our work engages diverse groups - including residents of disadvantaged neighbourhoods, unhoused individuals, marginalised ethnic minority communities, and residents of informal and formal urban settlements - across different environmental health and justice-related challenges. All studies employ participatory mixed methods integrating qualitative, quantitative, spatial, and physiological data from focus groups, photovoice, arts-based research, surveys, go-along interviews, participatory mapping, environmental and microbiological sampling, remote sensing, and laboratory experiments. Reflecting on which methods work well in different contexts highlights the importance of trust-building, methodological flexibility, and sensitivity to local contexts

to capture lived experiences, support meaningful participation, and generate knowledge that can inform inclusive, context-responsive strategies to improve health and well-being.

The water incident database (WAID) 2012 to 2019: a systematic evaluation of the documenting of UK drownings. *Samuel Hills, Bournemouth University; Matthew Hobbs, University of Canterbury; and Martin Barwood, Leeds Trinity University*

Background: Death by drowning is a leading cause of accidental death in the United Kingdom (UK) and worldwide. However, seldom has a spatial perspective been applied to drowning due to data and methodological related limitations. The World Health Organization (WHO) states that effective documentation of drowning is required to describe drowning frequency and spatial patterning and to underpin effective drowning prevention intervention, thus improving the quality of data describing drowning frequency represents a key initiative. The water incident database (WAID) has been used to document UK fatal and non-fatal water-based incidents since 2009. WAID has not undergone a systematic evaluation of its data or data collection procedures to establish if the database meets the WHO requirements or if it could be used for spatial analyses. The present study investigated the characteristics of UK fatal drowning incidents and audited current WAID data capture procedures.Methods: Data for the fatal drowning cases recorded between 2012 and 2019 were reviewed. Descriptive data were generated 1) to describe fatal drownings in the UK's WAID in this period; 2) a sub-set of drownings were audited i) for completeness of data entry and, based on source documents, ii) for quality of data entry; 3) these processes were used to make recommendations for onward revisions to WAID.Results: A total of 5051 fatalities were recorded between 2012 and 2019. Drowning was most frequent amongst males aged 35 to 60 years (n = 1346), whilst suspected accidents and suicides accounted for 44 and 35% of fatalities. Suicide by drowning was at a peak in the most recent year of data analysed (i.e., 2019; 279 cases) highlighting an urgent need for targeted intervention. Audit part 2i) indicated that 16% of all fields were incomplete, thus indicating potential redundancy, duplication, or the need for onward review. Audit part 2ii) indicated high levels of agreement (80 ± 12%) between audited cases and the 'true' WAID entries.Conclusions: This study confirms WAID as a rigorous, transparent and effective means of documenting UK drownings thereby meeting WHO requirements for data quality; yet future improvements are recommended. Such findings allow researchers and policy makers to use WAID to further investigate UK drowning, including by employing a spatial focus, with a view to improving public safety measures and drowning prevention interventions. Observations alongside several expert recommendations have informed a revised version of WAID.

Beyond Residence: Rethinking Environmental Exposure Assessment in Health Geography Using Mobile Phone Location Data. *Vanessa Brum-Bastos, School of Earth and Environment, University of Canterbury, GeoHealth Laboratory, University of Canterbury; Lukas Marek, GeoHealth Laboratory & Geospatial Research Institute, University of Canterbury, New Zealand; Phoebe Eggleton, GeoHealth Laboratory & Geospatial Research Institute, University of Canterbury, New Zealand; and Malcolm Campbell, Te Kura Aronukurangi | School of Earth and Environment, University of Canterbury, Te Taiwhenua o te Hauora | The GeoHealth Laboratory, University of Canterbury*

Understanding how environmental exposures shape individual and population health outcomes is central to health geography. Exposure is commonly operationalised as a static measure based on residential location; however, this approach overlooks the spatiotemporal variability inherent to daily mobility, potentially misrepresenting exposures and their associated health risks. The increasing availability of mobile phone location data (MPD) enables fine-grained analysis of human movement, supporting a shift toward dynamic, mobility-informed exposure measures. In this study, we use MPD to estimate two types of $PM_{2.5}$ exposure in Ōtautahi | Christchurch: (1) a static exposure based on residential location derived from mobile phone locational data, reflecting longstanding practice, and (2) a dynamic exposure that incorporates individuals' movements to locations such as workplaces and leisure environments, that more fully account for individual variability in daily exposures to the environment. We then quantify differences between these two approaches and examine the extent to which there is variation across socioeconomic indicators. Our analysis includes over 100,000

individuals and reveals substantial discrepancies between static and dynamic exposure estimates, with important implications for interpreting exposure-health relationships. Together, these findings challenge the continued reliance on residence-based exposure metrics and highlight the advantages of dynamic, mobility-informed approaches to represent exposure and its uneven distribution across urban populations, based on each individual's daily urban mobility preferences and patterns.

Exposure Reconstruction for Environmental Health Research. *Michael Jerrett, University of California, Los Angeles*

Reconstructing exposures is important for epidemiological health effects assessment, search and rescue, eligibility for insurance claims, legal claims, and justifying enhanced environmental monitoring and biomonitoring. Reconstruction of past exposures is particularly relevant to diseases with long latency (e.g., lung cancer) and for disasters related to climate change and industrial accidents. Recent advances in low-cost sensors, mobility tracking, remote sensing, chemical transport models (CTM), and crowd-source volunteered geographic information (VGI) are advancing the field of exposure reconstruction.In this presentation, I will introduce a framework for guiding exposure reconstruction. Four key questions guide the presentation. First who was affected and for how long (i.e., impact zone and extent of exposure)? Second, where did the people go during the disaster and afterwards? Third, what are the physical-chemical properties of the pollutants emitted? Fourth, what level of confidence can be ascribed to the derived exposure fields. Using quantitative examples, I will demonstrate how each of these questions can be answered for exposure reconstruction of disaster events. I will focus on illustrative examples of the methods for answering these questions from two major disasters in Southern California: (1) Aliso Canyon Natural Gas Leak Disaster (2015-2016) that resulted in the single largest release of methane ever in the United States along with many hazardous air pollutants, and (2) the 2025 Palisades and Eaton wildfires in Los Angeles affecting nearly 20 million people. Although these disasters have different exposure profiles, many of the same methods can be used to reconstruct exposures.

Spatial Reasoning in the Age of GeoAI: Rethinking Mobility and Exposure for GeoHealth Research. *Jue Wang, University of Toronto*

Recent advances in GeoAI have greatly expanded our capacity to model environmental exposures and health outcomes at fine spatial and temporal scales. However, many GeoAI applications in GeoHealth still lack explicit spatial reasoning, often treating exposure as static, mobility as unconstrained, context as fixed, and exposure-health relationships as universal. These assumptions risk misrepresenting how exposures are actually experienced in daily life and may limit the interpretability and usefulness of GeoHealth research.In this research, I argue that spatial reasoning is a missing but essential analytical layer in GeoAI-enabled GeoHealth research. Drawing on time geography, spatial epidemiology, and empirical evidence, I introduce the Four-Pillar Spatial Reasoning Framework for GeoHealth Research, which integrates: (1) space-time representation of individuals, mobility, context, and environment; (2) human and structural constraints that shape mobility, exposure opportunities, and inequality; (3) context-based inference of exposure-health relationships; and (4) decision processes that translate spatial understanding into actionable public health strategies.Using examples from my work on dynamic noise exposure, food environments, and spatial heterogeneity in chronic disease risk, I illustrate how neglecting mobility feasibility, routine-based constraints, contextual delineation uncertainty, and temporal variability can lead to incomplete or misleading conclusions. I further discuss why most existing GeoAI models do not inherently address these challenges and outline future directions for developing context-aware inference, spatial reasoning-capable GeoAI, and evaluation metrics that better reflect lived exposure experiences. By reframing exposure as a dynamic space-time process shaped by human behavior and structural constraints, this study highlights how spatial reasoning can move GeoHealth research beyond pattern recognition toward more meaningful interpretation, explanation, and decision support.

Paper Session

Methodological Innovations in Health Geography Research

Challenges in using fully-automated GEMA survey with online recruitment - Insights from the FragMent study on environmental determinants of stress. *Camille Perchoux, Luxembourg Institute of Socio-Economic Research (LISER); Noémie Topalian, Luxembourg Institute of Socio-Economic Research (LISER); Sylvain Klein, Luxembourg Institute of Socio-Economic Research (LISER); Olivier Klein, Luxembourg Institute of Socio-Economic Research (LISER); Allyson Missling, Luxembourg Institute of Socio-Economic Research (LISER); Christina Röcke, Universität Zürich - ZH, CH; Guy Fagherazzi, Luxembourg Institute of Health (LIH); Basile Chaix, Sorbonne Université, INSERM, Institut Pierre Louis d'Épidémiologie et de Santé Publique, Nemesis research team; and Philippe Gerber, Luxembourg Institute of Socio-Economic Research (LISER)*

Background: Geographic-explicit ecological momentary assessment (GEMA) studies, combining GPS tracking and the repeated assessment of participants' momentary experiences, are increasingly used to provide in-depth understanding of people-place interactions. Few studies detail recruitment efforts, cost, challenges and potential bias. This study describes of a fully-automated multi-component GEMA study (FragMent), from recruitment to web and smartphone surveys, with national coverage, on environmental stress determinants. We report recruitment effectiveness, completion rate, sample representativeness, and data quality, to inform future GEMA studies. Methods: The FragMent study (10/2024-09/2025) recruited a convenience sample of adults in Luxembourg. The protocol, automatically executed according to a pre-established study script, comprised: (i) a web-survey on chronic stress and environmental perceptions; (ii) a map-based mobility survey; and (iii) a 15-day GEMA survey including GPS tracking, 4-6 daily stress assessments, and vocal tasks. Participants opted for either the full protocol (all components) or a partial option (questionnaires only). Results: Of 1,869 registered eligible participants, 41.3% (n=772) chose the full option, completing two 30-minute questionnaires and the GEMA survey. Of the total sample, 76.7% participants completed the environment/stress web-survey (n=1,434), 59% the map-based survey (n=1,121), and 14.8% the GEMA survey (n=276). GEMA participants (median age: 41) were primarily female (53.6%) and highly educated (46.4%). The study yielded a 53.1% completion rate, with a stable response rate over the 15-day period.Conclusion: Automated GEMA studies are feasible and scalable across a wide adult age range. Nevertheless, FragMent's multi-component and 15-day follow-up design poses challenges for participant retention and minimizing step-wise attrition.

Systematic Review of the Geospatial Risk Factors of Parkinson's Disease. *Regina Chua, University of Canterbury*

The spatial epidemiology of neurodegenerative diseases, particularly Parkinson's disease (PD), is an emerging area of research. Geographic variables may influence PD onset and progression, while environmental exposures such as air pollutants (nitrogen dioxide, PM10) and carcinogenic chemicals like trichloroethylene have been implicated in elevated PD risk. However, the literature remains fragmented, and gaps in spatial data continue to limit our understanding of these associations.This systematic review synthesises current literature (2020-2025) on geographic and environmental risk factors associated with PD, with a focus on methodological innovation. Studies were identified through a targeted search of PubMed, augmented by a Natural Language Processing (NLP) pipeline using TF-IDF to improve search precision and reduce retrieval noise. Database querying was automated via API requests to enhance reproducibility and scalability. A large language model (LLM) implementation is additionally being developed to support pre-screening of records, an approach that reflects the growing role of computational tools in health geography research.These innovations align with calls for intersectoral collaboration between epidemiology, data science, and public health to translate spatial research into actionable policy. Preliminary findings highlight geographic clustering of exposure risk and underscore the need for standardised spatial data collection. This work contributes new methodological directions for environmental health research and has implications for targeted public health interventions in high-risk regions.

How would a disabled person drive their own experience, memories, and research in places for group dining?. *Thalia Toha, PhD Student*

This auto-ethnographic and self-reflexive research deepens the discourse on accessibility for the disabled by investigating how group-oriented places like food halls in Boulder, Colorado affect adults with physical, sensorial, or cognitive challenges. The research implements a self-led walking tour conducted by a disabled adult wherein the geocoded data of spontaneous stopping points is tracked and mapped live with GPS, which is later translated into GIS maps to aid analysis. The objective is to involve the participant in the research from start to finish by highlighting the participant's autonomy in making, recording, and self-authoring both the field observations and the subsequent self-reflexive analysis in the form of written and/or art pieces. On-site participatory reactions geocoded during the walking tour include time-stamped photographs of stopping points, field notes, and descriptive words. Food hall spaces encountered include exterior entrance, rooftop bar, point-of-sale cashier, and interior dining area. Interactions with these spaces influenced the participant-author's perceptions on memory recall, especially when encountering spaces that complicate interpretations around home v. work space and public v. private space. Issues around gastronomic nostalgia, sensory discomfort, and the concept of ingesting a place all bring further complexity. Overall, the findings indicate that as the participant-author progressed into the food hall, certain sensorial reactions and memory recalls were thwarted while others inversely activated. Better understanding on how the disabled experience group-oriented food consumption places from an individual level is imperative in the pursuit of creating safe, equitable, and nurturing spaces that can then improve day-to-day autonomy and public health for the vulnerable population.

GeoTranslator: A Translation-Layer Paradigm for Spatial Evidence Production in Health Geography Research. *Congyuan Zheng, University of Colorado Boulder, Institute of Behavioral Science*

Spatial analysis remains structurally inaccessible to qualitative and mixed-methods health geography researchers. The barrier is not conceptual: researchers in this domain routinely possess well-formed spatial hypotheses grounded in extensive fieldwork. The barrier is translational. A researcher studying pharmacy deserts among low-income older adults may have eighteen months of qualitative evidence and a fully articulated spatial question, yet face no viable path from that question to defensible spatial evidence that does not require either outsourcing methodological decisions or absorbing a technical skill set her research timeline cannot accommodate.This paper introduces the translation-layer paradigm: a design principle for AI-assisted spatial research in which large language models serve as execution engines rather than methodological advisors. Rather than recommending a single spatial method, the system simultaneously instantiates multiple method prototypes from a natural-language research question, enabling researchers to evaluate competing analytical approaches through direct comparison of outputs, assumptions, and data-quality risks. Method selection is conditioned on demonstrated researcher comprehension, operationalized through a behavioral verification gate that requires researchers to articulate and defend their chosen method before execution proceeds.The system, GeoTranslator, is currently deployed in a pilot study with health geography researchers at a major research university. Preliminary observations suggest that researchers without prior GIS training can produce defensible spatial methods sections within a single session. We discuss the paradigm's implications for methodological agency, epistemic justice in research tool design, and the structural conditions under which AI assistance preserves rather than displaces researcher authorship of spatial evidence.

Paper Session

Nature-Based Interventions and Social Prescribing for Health and Wellbeing

Co-producing an innovative social prescribing pilot for individuals living with lupus: A study protocol. *Satveer Dhillon, University of Waterloo; and Susan Elliott, University of Waterloo*

Background:Lupus is an autoimmune disorder characterized as gendered, racialized, episodic, idiosyncratic, and invisible. People living with lupus experience distinct physical, emotional, and social challenges. Symptoms such as severe fatigue and joint pain disrupt work, family roles, and social life, increasing stress, reducing social support,

and negatively impacting daily life. Despite these challenges, tailored non-clinical interventions to support the wellbeing of affected individuals remain limited. Social prescribing is one such mechanism offering a more holistic, personalized approach. Objectives:This research aims to: 1) co-produce, implement and evaluate a social prescribing pilot for individuals living with lupus in Ontario, Canada, 2) evaluate the co-production process; and 3) assess the pilot's impact on participants' wellbeing.Methods:The research will be conducted in three phases. Phase 1 will include deliberative dialogues with knowledge users to co-produce the pilot. In Phase 2, the 6-month pilot will be implemented, and 35 individuals living with lupus will be recruited: 25 as clients and 10 as link workers. A mixed-methods approach will be used to evaluate the pilot and its impact on participants' wellbeing. Phase 3 will involve post-pilot deliberative dialogues with knowledge users to disseminate results and facilitate discussion. Knowledge users will complete the RQ+ 4 Co-Pro+ rubrics to evaluate the co-production process.Conclusion:The results of this research will contribute much-needed evidence to support the use of social prescribing programs for those living with autoimmune disorders and inform practice, policy and future research.

A Dose of Nature: Stakeholder Perspectives on Nature-Based Social Prescriptions.
Tara T. Chen, Department of Geography and Environmental Management, University of Waterloo; and Susan Elliott, University of Waterloo

Rising rates of loneliness, mental distress, and chronic disease highlight the importance of social and environmental contexts for understanding health beyond biomedical models of care. Nature-based social prescribing uses non-clinical referral pathways to connect individuals with a dose of nature through natural settings, facilitated activities, and park access initiatives. While these initiatives are expanding across Canada, limited evidence exists on how nature-based social prescribing is implemented/experienced across geographies. This exploratory qualitative study examines how prescribers and providers conceptualize nature as a health resource, and how place-based contexts shape implementation. Semi structured interviews were conducted with key informants (n = 36), including family physicians, link workers, and providers of nature spaces and programs across Southern Ontario. Audio-recorded interviews were transcribed and analyzed thematically to examine how nature-based social prescribing is embedded within local nature resources, collaboration processes, and the referral pathways across diverse social and geographic contexts. Findings highlight how relationships between people, place, and health systems shape implementation of nature-based social prescribing. Although outdoor activities are recognized as health-promoting, stakeholders highlighted that receiving a prescription helps construct these spaces as therapeutic landscapes. Implementation varied across settings, with formal partnerships enabling structured referrals while others relied on informal networks and locally accessible natural spaces. Participants identified a range of challenges to sustainable implementation including: gaps in awareness among prescribers, limited funding, and time demands. Overall, stakeholders highlighted the potential of nature-based social prescribing to address public health concerns, with prescriptions serving as a key tool for implementation.

Using a Gaming Intervention to Increase Awareness of and Therapeutic Benefits from Urban Nature.
Joonsoo Lyeo, McMaster University

Nature exposure is recognized as an important determinant of physical, psychological, and social development and well-being. However, it has been suggested that today's youths are less likely to engage with the natural world than the generations before them. This trend has been attributed, at least in part, to recent behavioural and attitudinal shifts exacerbated by the rise of sedentary lifestyles, digital hobbies, and nature disaffection. These factors have been especially pronounced for those living in urban areas. There may be an opportunity to counter this growing nature disconnection through the promotion of opposing behavioural and attitudinal shifts. Persuasive games offer a promising avenue for achieving this by leveraging the intrinsically motivating elements employed in game design to encourage nature exposure. The primary objective of this study will be to understand to what extent a mixed-media gaming intervention can be used to incentivize urban nature exposure, while also strengthening the therapeutic benefits associated with said urban nature exposure, in a population of university-attending youths. Older youths (18-25 years old) attending McMaster

University will be invited to participate in a mixed-media, persuasive gaming intervention modelled after 'photo bingo'. In this intervention, participants will be challenged to score points by taking photographs of select features in their urban nature surroundings. Each participant will have the opportunity to elaborate on their photographs in a semi-structured, one-on-one interview, drawing from a modified photovoice methodology. The resultant interview transcripts will be analyzed through qualitative thematic analysis.

Vulnerabilities in Touristic Areas (VITA) : Mental health and the development of tourism in Quintana Roo, Mexico. *Sebastien Fleuret, ESO-University of Angers; and Clement Marie-Dit-Chirot, ESO-University of Angers*

This presentation is based on the assumption that the hyper-specialization of a region in tourism impacts health determinants within that region. Our presentation is a case study focusing on mental health in the state of Quintana Roo in Mexico. This territory is a textbook case due to the rapid transformations that have taken place since the creation of the tourist center of Cancun in the 1970s. These upheavals have resulted in profound economic, demographic, cultural, and environmental changes, manifested in accelerated urbanization. While contributing to regional dynamism, the development of tourism in Quintana Roo has been accompanied by the emergence of acute mental health issues (one of the highest suicide rates in Mexico, similar trends for addiction and anxiety disorders). The project VITA (Vulnerabilities In Touristic Areas) addresses mental health issues in their multifactorial nature, at the crossroads of culture (influence of Mayan cultures) and economy (working conditions, specificities of the job market marked by the weight of the service and construction sectors, housing conditions in a context of very high land pressure, precariousness of the public health system, etc.), demography and migratory processes linked to the recent settlement of this state, and environmental phenomena with a strong impact on tourism (hurricanes, Sargassum seaweed). This presentation will present the preliminary results of an approach that aims 1) to measure the extent of mental health issues through a quantitative survey of the population, and 2) to examine these vulnerabilities in the light of individual trajectories (migration, family life, professional life, etc.) as part of a qualitative survey (biographical interviews), but also 3) to question stakeholders in tourism, health, and local authorities on how this issue is taken into account in public policy.

Paper Session

Necropolitical Geographies: Spaces of Abandonment and Survival I

Vicious Terrain and the Production of Premature Death: Validating a Structural Violence Index in Necropolitical Geographies. *Maya Lakshman, Johns Hopkins Bloomberg School of Public Health*

Health geography has long mapped the spatial distribution of disease and mortality; necropolitical theory compels us to ask how such distributions are actively produced. This paper operationalizes necropolitical geographies within the United States by developing and validating a tract-level Structural Violence Index (SVI) that captures spatialized conditions of state abandonment and systemic neglect. Grounded in critical medical geography and theories of slow violence, the SVI conceptualizes structural violence as the cumulative effects of racialized economic segregation, environmental exposure, infrastructural disrepair, housing precarity, carceral intensity, and the withdrawal of public investment.Rather than treating premature mortality as an outcome of diffuse disadvantage, this study interprets life expectancy as a spatial marker of sovereign decision-making—where the dismantling of social safety nets, uneven environmental protections, and disinvestment in care infrastructures materially delimit survival. Using American Community Survey and administrative geospatial data, the SVI is constructed across all U.S. census tracts and validated against small-area life expectancy estimates to assess whether higher levels of structural violence correspond to systematically reduced survival.By empirically linking necropolitical spatial arrangements to measurable differences in life expectancy, this paper advances a methodological bridge between critical theory and population health measurement. It argues that tract-level variation in survival reflects not incidental inequality but territorially patterned exposure to slow violence. The paper concludes with reflections

on the ethical stakes of quantifying “death-worlds” in the Global North and the possibilities such measures create for identifying sites of resistance, resource redistribution, and collective survival.

Frames of neglect: necropolitics and the discursive construction of Ghana’s galamsey environment-health Crisis. *Cynthia Musah, Department of Geography and Environmental Management, University of Waterloo, Canada; Susan Elliott, University of Waterloo; Isaac Luginaah, Western University; Daniel Amoak, School of the Environment, Trent University, Canada; Elijah Bisung, The Queen's University; Joseph Kangmennaang, Queen's University; Francesca Cardwell, Department of Geography and Environmental Management, University of Waterloo, Canada; Thelma Abu, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA; Alexa Bennett, Department of Geography and Environmental Management, University of Waterloo, Canada; Pascal Meho-Akakpo, School of Kinesiology and Health Studies, Queen’s University, Canada; Julius Jebuni, School of Kinesiology and Health Studies, Queen’s University, Canada; Rebekah Kim, Department of Geography and Environmental Management, University of Waterloo, Canada; Isaiah Walwanga, University of Waterloo; Olivia Ainooson, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA; and Russhielder Boadu, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA*

Frames of neglect: necropolitics and the discursive construction of Ghana’s galamsey environment-health CrisisIllegal artisanal gold mining has intensified into a major environment-health crisis in Ghana. Over 7,000 mining sites are estimated to contaminate more than 60% of the country’s water bodies with heavy metals, exposing marginalised populations, particularly women and children, to significant health risks. While existing scholarship has examined the environmental degradation and political economy associated with galamsey, less attention has been paid to the discursive processes through which some populations’ health and wellbeing are rendered peripheral within public debate and policy concern. Drawing on Mbembe’s theorisation of necropolitics, this study examines how media narratives on galamsey distribute voice, silence, and legitimacy, and what these discursive patterns reveal about the governance of health and wellbeing among affected groups. To address this question, we undertake a thematic content analysis of 920 newspaper articles published in seven Ghanaian outlets between 2014 and 2025. Our findings reveal asymmetries in both voice and framing. Government officials and security-enforcement narratives dominate coverage, while accounts of affected communities, women, and miners themselves are markedly marginalised. Likewise, crime and illegality are the dominant framing over public health concerns, such as the psychosocial health impacts and the everyday precarity marginalize groups experience. We conceptualise these patterned omissions as “frames of neglect,” wherein systematic silences in media discourse function as necropolitical governance that renders certain populations’ suffering invisible and reinforces their disposability. Overall, the study underscores the need to interrogate environmental health crises through the material distribution of harm and the representational politics that shape recognition, response, and whose lives are discursively valued.Keywords: small-scale mining, necropolitics, health equity

Responsibilizing Health and the Changing States of Care. *Brian King, Pennsylvania State University; Halie Kampman, Pennsylvania State University; and Andrea Rishworth, University of Toronto*

The diverse threats to human health have long been understood as socio-environmental hazards; however, the rapidly expanding co-occurrence of epidemics are an emerging biopolitical crisis. While it remains common for social science disciplines to evaluate health hazards in isolation, political ecology frameworks analyze them as multi-faceted and synergistic events that are generated by a confluence of political, social, and environmental dynamics. One recent example is the coincidence of the U.S. opioid epidemic and the COVID-19 pandemic. Despite significant progress made in recent years toward reducing over-prescription of opioids and expanding access to critical harm reduction and treatment services, the COVID-19 pandemic compromised many of these advances and raised new challenges for mitigating opioid use and misuse. This paper integrates quantitative and qualitative data from 2018 - 2025, including opioid-related overdose incidents and qualitative interviews with public health provides from

across the Appalachian region to identify the key factors influencing opioid misuse and transformations in addiction treatment practices. We argue that leveraging political ecologies of health frameworks help in identifying more informed policy interventions to assist the public health sector in managing co-occurring epidemics and improve local overdose response in places that are experiencing dynamic change.

Paper Session

Necropolitical Geographies: Spaces of Abandonment and Survival II

Assessing Agroforestry for Climate Change Mitigation in Semi-arid Ghana from a Human-Environment Health Perspective. *Thelma Abu, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA; Hanson Nyantakyi-Frimpong, University of Denver; and Stephanie Yamoah, University of Denver*

Large-scale tree-planting is increasingly prioritized in achieving the Sustainable Development Goals' (SDGs) climate and ecological restoration targets. Governments and non-governmental organizations often promote agroforestry by integrating income-generating trees into crop farming to enhance climate adaptation and mitigation. However, these initiatives risk intensifying the socio-ecological and health vulnerabilities of intensive water-stressed and traditional farming communities. Guided by embodied political ecology, we explored the pathways through which large-scale tree-planting initiatives promoting agroforestry impact farmers' health in semi-arid Ghana. Using qualitative methods, we conducted 30 in-depth interviews and body-mapping exercises to uncover farmers' embodied experiences. First, participants expressed affective ambivalence through positive emotions (e.g., hope) towards thriving farms or earning prospects, and negative emotions (e.g., multilayer despair) toward socioecological uncertainties and agency. Second, embodied metabolism, corporeal experience, and medication dependence emerged due to cumulative strains of labor under socioecological uncertainty. Pain was an outcome, a driver of work capacity and severest on the waist. Third, multi-scalar production of embodiment (donor-driven targets, household relations and community tenure systems) uncovered disproportionate gendered and intergenerational labor burdens (e.g., irrigation). Finally, individual negative embodiment (e.g., sleeplessness) scaled up to communal insecurity and stress. Our findings demonstrate that farmers' bodies absorb political-ecological pressures, making health, labor, and security essential to achieving the SDGs. Climate mitigation efforts must prioritize survival on farms over seedling-planting counts. Theoretically, our study underscores the value of including positive affect in EPE and health geographies of environmental intervention and further illustrates that climate change can increase health risks through chronic pain and medication dependence.

Towards Bridging Stakeholder Realities and Institutional Policies on Climate and Mental Health in Semi-Arid Northern Ghana. *Russhielder Boadu, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA; Thelma Abu, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA; and Meshack Achore, Hofstra University*

The disproportionate effects of climate change on mental health in communities are increasingly recognized, globally. Yet the policy attention to climate-induced mental health remains limited, particularly in sub-Saharan Africa. The mental health dimensions of climate change are still largely overlooked in climate vulnerability assessments, emergency responses and adaptation policies in contexts that suffer from historical patterns of uneven development. This paper explores the extent of mental health integration in climate interventions in two regions of Northern Ghana. Drawing on the political ecology of health theory, we conducted 33 Key Informant (KI) interviews with officials from the State's environment and healthcare institutions, Non-Governmental Organizations (NGOs), and grassroots organization leaders regarding their work experiences with the climate-mental-gender nexus, institutional framing of this intersection, and policy implications. Findings revealed that most KIs acknowledged the gendered mental health impacts of climate change in their everyday work. However, this recognition is rarely reflected in formal policy, and their willingness to act is further constrained by uneven governance, including competing priorities, weak implementation capacities, and limited resources. Additionally, results highlight the role

of stakeholders in informally embedding climate change education, mental health support, and coping interventions within their existing programs and routines. These findings emphasize the need for collaborative and institutionalized integration of mental health into climate change responses for sustained good health and well-being (SDG 3), gender equality (SDG 5), reduced inequalities (SDG 10), and climate action (SDG 13) in the climate-vulnerable settings.

The Hidden Costs of Flooding and Combined Sewer Overflows: Evidence from a Systematic Media Analysis (1970-2025). *Olivia Ainooson, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA; Thelma Abu, Department of Geography, Sustainability, Community, and Urban Studies, University of Connecticut, USA; and Fiona Vernal, University of Connecticut*

Historically, combined sewer systems were perceived as cost-effective measures and developed to transport rainwater runoff, domestic sewage, and industrial wastewater through a single pipeline to treatment facilities. However, the increasing frequency of extreme weather events such as heavy rainfall or snowmelt has intensified combined sewer overflows (CSOs), where untreated wastewater is released into homes, waterbodies, or streets. In Connecticut, USA, these events pose disproportionate ongoing environmental and health risks, and the media have been instrumental in highlighting these differential challenges. We draw on environmental justice (EJ) and necropolitics theories to provide a comprehensive spatialized analysis of environment and health risk exposure to CSOs in Connecticut from 1970-2025 through media coverage. The data was processed and thematically analyzed using Covidence and NVivo, respectively. Findings reveal vulnerability structured in power and policy, including differential state infrastructure upgrades and spatialized abandonment rooted in racialized histories of segregation and redlining. In addition, recurring exposures to CSOs are linked to mental health challenges (eg, chronic anxiety, depression, and post-traumatic stress) in low-income and racially marginalized communities. Physical health impact revealed included waterborne diseases (e.g., gastroenteritis, E. coli infections, and cholera). In addition, the study recorded ecological impacts, including farmlands and aquatic pollution. Consequently, the study highlights the urgent need for justice-centered urban resilience strategies that prioritize health equity in climate adaptation planning. This aligns directly with the Sustainable Development Goals (SDG 3), reducing health disparities, (SDG 6) equitable access to safe water and sanitation, and (SDG 11) promoting inclusive, safe, and resilient urban environments.

Places of life in fear: the necropolitics of violence against children. *Susan J. Elliott, University of Waterloo; Abraham Nunbogu, United Nations University Institute for Water, Environment and Health; and Satveer Dhillon, University of Waterloo*

More than one billion children experience violence annually, more so in low and middle income countries. Regardless of form, violence impacts children's health and wellbeing and is perpetuated by socio-cultural norms that normalize this behaviour. Mbembe's work on necropolitics describes the structures shaping the places within which we live, work and play that determine who may live and who will die; he describes these as 'places of life in death'. For children living with daily violence, we describe 'places of life in fear'. Qualitative data were collected using focus groups and interviews with primary and secondary school children in five countries to explore the lived experiences, perceptions of, and attitudes towards violence at school and home. We present preliminary results from Tanzania, organized around three themes. First, the children report their views of what is 'normal' and common/typical including the identities of perpetrators as well as their own definitions of punishment versus violence. Second, the children share the impacts of those experiences on their health, wellbeing, social relationships. Third, they describe their views of how the norms around the daily violence they experience should and could be changed. These findings allow us to understand how the children contextualize their experiences and form their own norms around violence and visions for the future. The children have strong views about how to alter their 'places of fear'; achieving their vision will require substantial changes in both policy and practice, as well as the socio-cultural norms currently (re-) producing their violent landscapes.

Paper Session

Neighbourhoods and Health Behaviours

Spatial-Temporal Associations between Alcohol Outlet Access and Neighborhood Gun Violence Risk in Washington, D.C.. *Michael Desjardins, Johns Hopkins Bloomberg School of Public Health; Samuel Roubin, Johns Hopkins Bloomberg School of Public Health; Timothy Shields, Johns Hopkins Bloomberg School of Public Health; Cassandra Crifasi, Johns Hopkins Bloomberg School of Public Health; Mallory O'Brien, Johns Hopkins Bloomberg School of Public Health; Frank Curriero, Johns Hopkins Bloomberg School of Public Health; and Daniel Webster, Johns Hopkins Bloomberg School of Public Health*

Alcohol outlet density has long been linked with increased community violence, but the nuanced roles of outlet type, hours of operation, and spatial accessibility in shaping neighborhood gun violence risk remain understudied. This study examines how these factors interact to influence spatial-temporal patterns of gun violence in Washington, D.C. We integrated gun violence incident data (2014-present) with geocoded alcohol outlet information, including on-premise vs. off-premise outlet types and hours of operation, across D.C. census tracts. Using Bayesian hierarchical spatial-temporal regression models, we analyzed associations between outlet access, operating hours, neighborhood socio-demographics, and gun violence rates. Spatial clustering and spillover effects were assessed to evaluate neighborhood risk diffusion. Preliminary modeling indicates that neighborhoods with higher densities of late-hour alcohol outlets exhibit increased risks of gun violence, particularly when outlets are off-premise and accessible after midnight. Spatial analyses reveal that proximity to such outlets not only affects the immediate neighborhood but also exerts spillover effects into adjacent areas. Outlet type and extended hours significantly contribute to temporal spikes in incidents, especially during weekends. Outlet accessibility, type, and extended hours are salient predictors of neighborhood gun violence risk beyond outlet density alone. These findings highlight the importance of accounting for outlet operations and characteristics when designing violence prevention strategies. By clarifying how specific alcohol outlet features contribute to gun violence, this study provides actionable evidence for policymakers. Regulating outlet types and limiting late-hour operations may represent effective interventions for reducing firearm-related harm in high-risk communities.

Identifying barriers and facilitators to the implementation of zoning policies to equitably reduce neighborhood tobacco retailer availability. *Amanda Kong, Wake Forest University School of Medicine; Kandice Reilly, Wake Forest University School of Medicine; Ashley Strahley, Wake Forest University School of Medicine; Daniel Giovenco, Columbia University Mailman School of Public Health; Cassidy White, Wake Forest University School of Medicine; and Mark Meaney, Public Health Law Center*

Introduction: Living in a neighborhood with greater tobacco retailer availability (TRA) is associated with higher tobacco use, and tobacco retailers are more prevalent in neighborhoods with lower socioeconomic status and a higher percentage of certain racial/ethnic groups. Zoning regulates how land is used and may be an innovative tool to equitably reduce TRA, especially in communities that are preempted from other types of retail-based policies. We qualitatively identified facilitators and barriers to the implementation of pro-equity zoning-based tobacco control (ZBTC) policies in Oklahoma (USA).Methods: We purposively recruited 15 key representatives, defined as individuals who lead or advocate for the implementation of tobacco control policies or public health professionals who educate policymakers on tobacco control. We conducted virtual semi-structured interviews and asked participants about their perspectives on the acceptability, feasibility, and implementation of ZBTC policies. Two coders thematically analyzed transcripts. Results: Facilitators included partnering with local organizations, educating community members and lawmakers about zoning, providing toolkits on how to implement ZBTC policies, and emphasizing community and youth health benefits. Barriers included a lack of understanding of zoning, the perception that ZBTC policies as anti-business, tobacco industry pushback, and lack of capacity to implement and enforce policies. Participants discussed that ‘equity’ based policies may face significant hurdles in the current federal climate. Conclusions: ZBTC policies were generally supported by participants for their potential to protect youth and improve community health, but education, local partnerships, and strategic messaging are essential to building political will and capacity for efficacious implementation given anticipated challenges.

Problematic Social Media Use, Loneliness, and Neighbourhood Social Cohesion: A study of Canadian Adolescents. *Gina Martin, Athabasca University; Caroline Buzanko, 1. Faculty of Health Disciplines, Athabasca University, Canada; Raven Gonzales, 1. Faculty of Health Disciplines, Athabasca University, Canada; and Nathan King, 3. Department of Psychiatry, Queen's University, Canada, 4. Department of Public Health Sciences, Queen's University, Canada*

Background: Adolescent loneliness is a growing public health concern in Canada and globally. Because peer relationships are central to well-being during this developmental stage, rising loneliness is particularly concerning among this age group.Social media constitutes a major aspect of adolescents' daily lives. Although not all social media use is harmful, Problematic Social Media Use (PSMU), defined as compulsive, unhealthy engagement that interferes with daily functioning, has been associated with loneliness. However, limited research has explored how contextual factors may shape this relationship. NSC, defined by community safety, trust, and positive interpersonal ties, is protective for youth mental health; however, its role in an increasingly digital society remains insufficiently understood.This study examined associations between PSMU and loneliness, NSC and loneliness, and whether NSC moderates the PSMU-loneliness relationship among Canadian adolescents.Methods: Data were from the 2022 Canadian Health Behaviour in School-aged Children survey, a nationally representative sample of adolescents aged 11-15 (n=20,008). PSMU, NSC, and loneliness were assessed using validated self-report measures. Associations were examined using multivariable log-binomial regression.Results: 11% of students reported PSMU over the past year, and 23% reported frequent loneliness. PSMU was associated with an 89% increased likelihood of reporting loneliness, while moderate and high NSC were associated with 33% and 42% reductions in loneliness, respectively. Notably, the association between PSMU and loneliness was strongest among adolescents living in high-cohesion neighbourhoods.Conclusion: These findings suggest that the protective effects of neighbourhood social cohesion are weakened when PSMU is present.

Longitudinal analysis of geographical inequalities in retail density of tobacco and nicotine vapour products in Scotland, 2020-2024. *Chunyu Zheng, University of Edinburgh; Niamh Shortt, University of Edinburgh; Catherine Best, University of Stirling; Asiya Hamid, Scottish Centre for Social Research; Andy MacGregor, Scottish Centre for Social Research; Anne Marie Mackintosh, University of Stirling; Amber-Jane Morgan, University of Stirling; Allison Ford, University of Stirling; and Jamie Pearce, University of Edinburgh*

Objectives: Legislative efforts have aimed to reduce the visibility and accessibility of tobacco to limit use and prevent uptake, but less attention has been paid to emerging new nicotine products (NNPs). This study examines changes in the density and socio-spatial distribution of tobacco and nicotine vapour products (NVPs, the primary type of NNPs) in Scotland between 2020-24.Methods: National register data from 2020-2024 were used to examine changes in the count and density of outlets selling tobacco and /or NVPs across Scotland. Kernel Density Estimation (KDE) was utilised to assess outlet density in neighbourhoods, differentiated by income deprivation and urban-rural classification. Trends were analysed using non-parametric methods and stratified by outlet types.Results: Over the study period, the total number of registered tobacco and/or NVP outlets slightly increased. Retail density remained constant for all outlet, and all outlets selling tobacco, with a noticeable rise in outlets selling both tobacco and NVPs and a decrease in tobacco-only outlets. Income-deprived neighbourhoods and large urban areas had a persistently higher density of outlets selling tobacco and NVPs, with socio-spatial inequalities widening over time.Conclusions: The study highlights the dynamic retail landscape of nicotine delivery products in Scotland, particularly the sustained proliferation of NVPs in socioeconomically disadvantaged and urban settings. The findings underscore the necessity for comprehensive regulatory approaches to reduce the availability of tobacco and NNP products to minimise public health risks and address inequalities in exposure among vulnerable populations.

Paper Session

Neoliberal Epidemics and their Political Cure? The political economy of social and spatial inequalities in health

Cripping care: reimagining the landscape of disability care and support. *Ed Hall, University of Dundee*

Care and support accessed by disabled people is in a critical condition, defunded by enduring austerity, and increasingly unable to meet the promise of ensuring wellbeing and enabling social participation. In a post-welfare era, disabled people are having to develop new skills and seek resources for 'self-building' care and support, with families, friends, advocates, and community organisations (Power et al, 2020). Inevitably, the capability and resources of individuals, their social networks, local neighbourhoods, and the opportunities available, are place dependent and highly unequal.The paper proposes a radical departure from the fragile and contested care and support system. The argument developed draws on 'crip theory' (McRuer, 2006; Kafer, 2013; Price, 2024), to critique the assumptions and structures that underpin neoliberal care, and fail disabled people. Further, it imagines an enabling and accessible landscape of care which values the capabilities of disabled people, incorporates diverse spatio-temporalities, and recognises the centrality of interdependent relationships and communal activities and settings (Hall, 2005; Power et al, 2022).The paper draws on examples of emergent networks and sites of care that demonstrate how disabled people and their allies are devising innovative sites, forms, and practices of care/caring that offer an alternative potential future to the neoliberal norm (Tronto, 1993), albeit within a damaged social infrastructure. Importantly, cripping has a wider significance, in its emphasis on ableism as oppressive to everyone (Thorneycroft, 2024): reimagining the landscape of care and caring as one of interdependent relations, flexible temporalities, and accessible community spaces, benefits all who need support.

Mapping at the science-policy interface: Academic engagement in evidence-based policy.. *Malcolm Campbell, Te Kura Aronukurangi | School of Earth and Environment, University of Canterbury, Te Taiwhenua o te Hauora | The GeoHealth Laboratory, University of Canterbury*

This presentation explores the science-policy interface using exemplars of academic engagement with government, which will be of interest to health geographers. A key aim of the presentation is to encourage consideration of opportunities for academic engagement, demystify the praxis of academic engagement, and consider how to evaluate the potential costs and benefits of academic engagement.The presentation uses exemplars of academic engagement with policymakers to curate thematic lessons learned and articulate strategies that lead to mutual benefit for both the academic and the host. Engagement by health geographers in contributing to evidence-informed policy often occurs in tandem with a more metricised focus on 'real world research impact', creating inherent tension. Moreover, in some contexts, there is an important role for academics to be a 'critic and conscience' of society: testing existing ideas, posing new ideas, and offering, when needed, unpopular or controversial opinions for the public good. Additionally, necessary occupational and professional differences between academics and public servants, who are often required to be politically neutral and to provide effective, independent advice to the government of the day, are explored.In conclusion, four broad themes are articulated for consideration when embarking on academic engagement. The themes cover the domains of relationships (who and why), geographical proximity (the capital advantage), pragmatism (and perfectionism) and embedding science (timely evidence) in policy. Overall, a key reflection is that there is significant mutual benefit from health geographers engaging in academic exchange with policymakers, to both the academic and the host organisation.

Water inequities in low-income communities in high- and upper-middle-income countries: a political ecology of wellbeing. *Rodrigo Curty Pereira, University of British Columbia Okanagan; and Susan Elliott, University of Waterloo*

Safe access to water, sanitation, and hygiene (WASH) is key to human health and wellbeing, yet billions continue to experience insecurities. While most WASH-deprived populations are in low- and lower-middle income countries, historically marginalized communities in high and upper-middle income countries (HICs and UMICs, respectively) face similar challenges. This research examines the role of civil society organizations (CSOs) in promoting solutions to WASH inequities, using Brazil - an upper middle-

income country with abundant water resources - as a case study. Specifically, we explore the impacts of WASH inequities on the wellbeing of low-income communities in Brazil through a political ecology of health lens. Using an integrated knowledge translation approach, we conducted a parallel case study in three municipalities in the Metropolitan Region of Rio de Janeiro, whose populations experience varying levels of access to WASH and CSO support. Interviews with local CSO leaders (n=7) and focus groups with low-income community residents (n=24) in each municipality were undertaken, digitally recorded, and analyzed thematically using NVivo. Results revealed that WASH inequities affect several dimensions of participants' wellbeing but centred on emotional health and sense of dignity. This is perhaps linked to comparisons of their own living conditions to that of their neighbours, recognizing persistent multiscalar structural inequities. This research extends theories of political ecology of health through a political ecology of wellbeing lens; arguing that exploring and understanding "wellbeing" in context is essential for comprehending and explaining how WASH access affects low-income communities in high income countries beyond physiological and psychosocial health.

Neoliberal Epidemics: How Politics Makes Us Sick. *Ted Schrecker, Newcastle University (emeritus)*

In the second edition of How Politics Makes Us Sick (Palgrave, 2025), colleague Clare Bambra and I built on the expanded evidence base for considering many contemporary health inequalities as "neoliberal epidemics", operating via the interacting policy-driven pathways of economic inequality; insecurity; austerity; and commercial determinants of health. We borrowed the concept of "necrostratification" from historian Salvador Regilme to foreground the life-and-death consequences of neoliberalism's social and economic impacts. (This session is therefore directly complementary to the one on Necropolitical Geographies, but distinctive in its focus on neoliberalism as an indispensable explanatory variable.) In this presentation, I (a) provide strategic spatially oriented illustrations and key updates to the evidence base, focussing on jurisdictions that have embraced neoliberalization most enthusiastically; (b) cite some specific examples from the Canadian context, where neoliberalism's historical trajectory and health impacts have been less well documented; and (c) briefly summarize findings from a separate study by Bambra and colleagues of four policies that reduced the inequalities driving neoliberal epidemics. A cross-cutting theme, evidentiary politics, directly challenges claims like the bizarre conclusion of a major UK inquiry that: "Beyond eliciting sympathy, it is not clear what to do with the evidence on health inequalities". Deciding how much evidence justifies action is a political choice, and must be understood as such against a background of growing inequalities in the ability to influence political decisions.

Paper Session

Novel and Hidden Geographies of Children and Youth Health(care) I

Neighbourhood social and environmental conditions for children and youth in Canada's 30 largest cities. *Daniel Rainham, Dalhousie University; Saeed Saffari, Dalhousie University; and Zoe Davis, University of Melbourne*

Differential exposures to environmental and socioeconomic conditions are important drivers of children's health inequities. Few studies have empirically examined the intersection of multiple dimensions of environmental quality and socio-economic conditions. The objectives of this study were to (1) estimate the proportion of children and youth (ages <14 yrs) living in neighbourhoods with lower and higher environmental quality, and (2) identify neighbourhoods where children experience "double jeopardy" or that are both socioeconomically marginalized and of lower environmental quality. We employed the Canadian Environmental Quality Index (Can-EQI) as the measure of neighbourhood environmental quality across several domains. Census data were used to determine the proportion of children and youth residing in neighbourhoods with lower or higher Can-EQI values. A series of ANOVAs were employed to explore differences in environmental quality across scores from the Canadian Index of Multiple Deprivation. The analysis included 27,866 neighbourhoods, representing a total population of 19.3 million (55% of the Canadian population). Median estimates show that 34% of children

(33.4% female, 35.7% male) live in neighbourhoods classified as having lower environmental quality. Neighbourhoods experiencing greater residential instability and that have a greater proportion of immigrant populations are more likely to also have poorer environmental quality. These findings suggest that a significant proportion of children and youth in Canada's largest cities are living in neighbourhoods with below average environmental quality. Children and youth are also more likely to experience greater hardship in neighbourhoods where there is greater residential instability and greater ethno-cultural diversity.

A collaborative geospatial analysis of access to high quality parks with youth in London, Ontario, Canada. *Alexander Wray, The University of Tennessee Knoxville; Angus Cruikshank, The University of Western Ontario; Shawna Lewkowitz, The University of Western Ontario; HEALYAC Members 2024/25, The University of Western Ontario; and Jason Gilliland, The University of Western Ontario*

Parks offer people opportunities for physical activity, making social connections, and mental restoration. There may be certain park types and features that better serve the needs of young people. However, there is limited research related to how young people experience parks, particularly the park features like swings, benches, courts, and sport courts, that attract them to use the park thereby supporting healthier behaviours. The Human Environments Analysis Lab Youth Advisory Council (HEALYAC) co-created a novel approach for assessing the quality of parks for youth, in collaboration with the researchers. HEALYAC members (aged 13-29) used a survey instrument and group discussions to assess the relative importance of different park features. This dataset was merged with an existing dataset on the quality of parks (n=490) in London, Ontario, Canada that was collected by the researchers as part of the ParkSeek Canada project. Youth feedback was then used to compute weights for each park feature and then applied to every park to arrive at an overall youth supportiveness score for the park. These scores were then used in an enhanced two-step floating catchment area analysis to determine where youth have access to high-quality parks across the entire municipality at the dissemination area scale. Our analysis revealed London's youth are considerably underserved in their access to high quality parks due to suburbanization and urban growth processes in the region. This work illustrates the potential of collaboration with youth to ensure geospatial modelling is an accurate reflection of participant perspectives.

Additive, Compensation, or Spillover? A Spatio-Temporal Analysis of the Contribution of Active School Travel to Children's Weekly Physical Activity. *Jason Gilliland, The University of Western Ontario; Peiqi Zhang, Western University; Shiran Zhong, Western University; and Jamie Seabrook, Western University*

Active school travel (AST) is a convenient source of moderate-to-vigorous physical activity (MVPA), but its contribution to children's overall MVPA is debated. AST-related MVPA may be additive, reflect behavioral compensation (lower MVPA elsewhere), or positive spillover (higher MVPA elsewhere). We examined these patterns and differences by gender and school context.Participants included 678 girls and 475 boys aged 9-14 from 31 Ontario schools. Data were gathered using surveys, daily activity diaries, and wearable GPS and accelerometers logging location and movement at 10s intervals for one week. Students' weekday data were classified into four time-blocks: travel to/from school, in-class, school recesses, and out-of-school. Minutes of MVPA were calculated for each time-block and compared by student travel mode (AST vs. bus vs. car), gender, and home-school distance.Compared to those using passive modes, students using AST accumulated more total MVPA on weekdays (+8min vs. bus; +14min vs. car) and on weekend days (+5min and +6min, respectively). MVPA during in-class time did not differ by travel mode. During recess, bus riders accumulated more MVPA than walkers and car users. Compared with car users, AST students accumulated more MVPA during out-of-school time ($p<0.01$). Boys accumulated more MVPA than girls across time blocks; girls who used AST accumulated similar MVPA during out-of-school time and weekends.Overall, AST appears additive to children's total MVPA, with little evidence of compensation. Findings indicate a positive association between AST and out-of-school MVPA, consistent with the spillover theory. Given lower MVPA among girls, AST appears particularly beneficial for them.

Evaluating the Impact of Spatial Accessibility to Cannabis Retailers on Youth Cannabis Use in Canada from 2018 to 2023. *Shiran Zhong, Western University; Jason Gilliland, The University of Western Ontario; Adam Cole, Ontario Tech University; Anne Philipneri, Public Health Ontario; Kelly Anderson, Western University; Caroline Barakat, Ontario Tech University; Gina Martin, Athabasca University; Scott Leatherdale, University of Waterloo; and Jamie Seabrook, Western University*

Following cannabis legalization in Canada, the proliferation of retail outlets has raised public concerns about youth exposure, particularly around schools. This study examined the cross-sectional relationship between school-level spatial accessibility to cannabis retailers and youth cannabis use across four Canadian provinces: Alberta, British Columbia, Ontario, and Quebec. Using data from the COMPASS study (Canada's largest cohort study of youth health), we examined cannabis use behaviour among secondary school students from 2018-2023 (n≈417,000). Primary outcome variables were ever, past-year, and past-month cannabis use. We estimated school-level spatial accessibility to cannabis retailers using national-scale geodatabases of schools and retailer locations for each year. For each school, we calculated three accessibility indices: distance to nearest retailer (DTN), retailer density (DEN), and inverse distance weighting (IDW). Repeated cross-sectional multilevel models were fitted separately for each year, adjusting for individual-level covariates (sex, grade, ethnicity, pocket money, and perceived difficulty of obtaining cannabis) and school-level sociodemographic covariates derived from the 2021 census data. Spatial accessibility to cannabis retailers showed no significant association with past-year use of cannabis (yes/no). However, among students who had ever used cannabis, greater accessibility was associated with higher frequency of use, particularly in earlier years immediately following legalization (2018-2019; IDW coefficient=0.47, $p<0.05$). As cannabis retailers proliferated, spatial accessibility became ubiquitous, and its impact on youth cannabis use attenuated over time. This pattern is concerning from a public health perspective, as physical availability of cannabis retailers is no longer a limiting factor for higher-frequency cannabis use among youth.

Paper Session

Novel and Hidden Geographies of Children and Youth Health(care) II

Individual and Community Determinants of Adolescent HPV Vaccination in Iowa. *Allison Hill, University of Iowa; Margaret Carrel, University of Iowa; Amanda Kahl, University of Iowa; Don Callaghan, Iowa Department of Health & Human Services; Bethany Kintigh, Iowa Department of Health & Human Services; and Natoshia Askelson, University of Iowa*

Human papillomavirus (HPV) vaccination during adolescence is critical for preventing cervical and oropharyngeal cancers. However, HPV vaccination among adolescents varies across communities, reflecting inequities in preventive healthcare access. This study examined how individual-level and area-level factors influence HPV vaccine initiation and completion in Iowa. Using Immunization Registry Information System (IRIS) data from children ages 9-17 in 2024 (birth years 2007-2015), individual characteristics of sex, race, insurance, and receipt of other adolescent vaccines were linked to ZIP Code Tabulation Area measures of rurality, poverty, education, language, and housing. We estimated a hierarchical Bayesian spatial model using Integrated Nested Laplace Approximation (INLA) with a BYM2 specification to account for spatial autocorrelation and unstructured variation. Findings revealed that individual-level factors were more strongly associated with HPV vaccination than area-level characteristics. Receipt of other adolescent vaccines was the strongest predictor of initiation and completion. Female adolescents and those with private or public insurance had higher odds of initiation and completion than males and uninsured adolescents. Among area-level characteristics, higher poverty and a greater percentage of non-English speakers were associated with increased initiation, while other social vulnerability indicators were not significant. An interaction term indicated that the positive effect of private insurance status was attenuated in rural areas. Despite limited significance in community socioeconomic measures, spatial random effects demonstrated strong geographic clustering, suggesting that unmeasured place-based factors impact vaccination patterns. Targeted interventions that promote individual

preventive care engagement and address geographic variation may improve adolescent vaccine uptake and reduce the risk of HPV-related cancers.

Paper Session

Physical Activity and Sport

Investigating the Relationship Between Psychological Stress and Physical Activity through Individual-Based Geographic Ecological Momentary Assessment. *Haoxuan Peter Ge, University of Toronto, University of Toronto Mississauga; and Jue Wang, University of Toronto*

Psychological stress is a major public health concern linked to adverse physical and mental health outcomes. Physical activity (PA) is known to buffer stress, yet evidence remains limited when examining real-time stress responses alongside objective measures of activity and environmental exposures in daily life. To address the gap, this study employs a Geographic Ecological Momentary Assessment (GEMA) framework that integrates accelerometer, GPS tracking, and survey data. The primary objective of this study is to assess the association between self-reported psychological stress and moderate-to-vigorous physical activity (MVPA) during the hours preceding GEMA prompts. Additionally, the study explores a potential causal direction by examining whether engaging in PA later in the day is associated with greater reductions in stress relative to morning baseline levels. Data were collected from over 100 participants from the Greater Toronto Area over a seven-day period. Through a Cumulative Link Mixed Model, results revealed that higher levels of MVPA in the 5-hour window preceding GEMA prompts were associated with significantly lower odds of reporting higher stress. During weekends, the stress reduction effect was stronger after completing PA later in the day compared to weekdays. Participants from higher-income groups were also more likely to report lower stress. Lower-income participants engaged in outdoor MVPA in environments perceived as safer, more beautiful, and greener compared to those of higher-income participants. The findings demonstrate the value of GEMA in capturing dynamic behaviour - environment - health interactions and highlight the importance of equitable access to supportive environments that promote both physical and mental health.

Sport as Crisis Infrastructure: Displacement, Governance, and Belonging Amid a Humanitarian Crisis. *Paul Mokrzycki, McMaster University; Bruce Newbold, McMaster University; and Grzegorz Chrobak, Wrocław University of Environmental and Life Sciences*

This paper examines changing social and institutional environments in Eastern Europe under geopolitical uncertainty and forced displacement following Russia's invasion of Ukraine. Focusing on Poland and the broader European football landscape, it analyzes how organized American football operates as an everyday environment that reorganizes stability, belonging, and social order amid crisis across neighborhood, regional, and transnational scales. Drawing on communal weathering and communal repair, the study shows how prolonged instability disrupts shared routines, networks, and the temporal structures that underpin community life. Sport environments counter these challenges through regulatory adaptations. Using qualitative narrative and document analysis, we analyze the rulebooks for the Polish Football League and European League of Football, as well as the NFL documentary Who If Not Us. This paper reveals how rules, huddles, team buses, and charity matches create relational infrastructures mediating health and well-being across spaces of transit, refuge, and settlement. Yet, these environments remain politically produced and uneven. Documentation burdens, selective legal recognition, and the absence of injury insurance expose displaced athletes to precarity even as participation fosters cohesion. Western institutions extract resilience narratives while local clubs bear material costs. The paper contends that societal futures amid geopolitical crises rely on the reconfiguration of everyday environments through institutional rhythm and relational restoration. It contributes to research on society and environmental futures by showing how sport and sport governance mediate uncertainty across scales, offering lessons for climate displacement, informal collectives, and crisis reconfiguration.

Participation, Performance, and Potential for Health: Towards Critical Geographies of Health and Sport. *Rebecca E Jackson, University of Nottingham; Stephanie Coen,*

Department of Geography & Environment, Western University, School of Geography, University of Nottingham; Ali Bowes, Nottingham Trent University; Alice Kempski, The Football Association; Sarah Jewitt, University of Nottingham; and Joanne L Parsons, University of Manitoba

Organised sport settings serve as key spaces for the potential production, maintenance, and experience of health. Although scholars have highlighted the problematic practices associated with health in these domains, it remains that participation in organised sport can offer the opportunity for distinct health and wellbeing benefits across a range of physical, mental and social outcomes. Yet, geographic research has rarely explored these spaces in relation to health, rather focusing on the capacity of individualised practices of fitness and exercise to promote or inhibit health. This paper considers how an integrated critical geography of health and sport could take influence from their respective geographic sub-disciplines and explore how the organisation of sporting spaces influences and constructs experiences of health and wellbeing. By combining a gendered environmental approach with the concept of enabling places, the paper illustrates how social, material, and affective resources come together to shape individuals' participation, performance, and health outcomes within organised sport settings. While often left unattended within the broader field, sports geographies can play a critical role in expanding the potential of health geographies to assess and address the role of sporting environments in shaping health and wellbeing outcomes.

Paper Session

Researching Distress: Geographical Engagements within - and beyond - Treatment Gaps

Care in Crisis: Involuntary psychiatric detention as a violent practice of care. *Ed Kiely, Queen Mary University of London*

Psychiatric crisis interventions target people whose mental illness may render them unable to consent to treatment. Those who meet certain thresholds in mental health assessments can be lawfully detained and forcibly medicated. In practice, this involves close collaboration between psychiatric teams and police, with people from racialised minorities - in particular Black people - the most likely to be held against their will. Yet these coercive actions are not punitive - nominally, they are intended to improve a person's health.Seen in this light, crisis interventions are riven with contradictions. These are forms of care underpinned by threats of violence; health treatments enacted by carceral agencies; sites of profound, racialised inequality which profess allegiance to egalitarian, universalist ideals. This paper draws on a study of psychiatric detention practices in the Netherlands to investigate these contradictions. Through interviews with clinicians from a crisis team, plus observations of their decision-making practices, it interrogates the relationship between care and violence within the contemporary mental health system.The paper explores how healthcare professionals make sense of their participation in violent practices, including racialisation, and how they justify this in relation to their identity as carers. When is coercion viewed as warranted and when is it excessive? To what extent are forms of violence recognised and named, rather than displaced or disavowed? And what constitutes good care in this context? The paper concludes with reflections on the role of policing within postcolonial healthcare institutions. What does this mean for the reparative and liberatory potentials of care itself?

"If I don't do this, you'll lose me another way": the moral economies of UK-Türkiye medical tourism for elective bariatric surgery. *Charlotte Stevens, Queen Mary University of London*

This paper examines the moral economies of medical tourism for elective bariatric surgery, drawing on narrative interviews with eighteen UK residents who travelled to private facilities in Türkiye between 2021 and 2024. While medical tourism research has highlighted impacts on destination contexts, its situated implications within 'source' countries remain underexamined. Set within participants' encounters with the UK's National Health Service, whose mores of health governance are entangled with cultural framings of fatness as both personal failure and fiscal burden, this paper considers moral-evaluative organisations of bodily distress. It reconceptualises cross-border

mobilities for bariatric surgery as situated refusals: weight-normative domestic pathways marked by stigma, prolonged waithood, contested qualification including assessment of psychological contraindications, and demands to prove deservingness produce the conditions under which surgically facilitated weight loss is sought abroad. Cross-border mobility both meets urgent embodied need and desires for 'repair', and re-entrenches stratified access to care, with long-term reliance on kith and kin networks and re-engagement with domestic providers persisting upon return. These fraught interdependencies raise questions about how moral economies in/visibilise distress; traceable in how participants narrate suffering through and against the normative evaluative frameworks that govern their access to care.

'Fighting him': Following distress in hostile migratory environments. *Elizabeth Storer, Queen Mary University of London*

This presentation explores the psychological impacts of the UK housing crisis among a collective of British Somali mothers in Birmingham. It is grounded in feminist theories of social distress, applied through a participatory methodology consisting of housing biographies and therapeutic workshops. Research was conducted between June 2022-December 2023. Findings reveal the cumulative forms of distress generated through poor housing, eviction and placement in temporary forms of accommodation. Such distress was articulated in multiple genres which spanned somatic, social reproductive, bureaucratic and psychological harms. Participants pushed back on biomedical categories of mental ill-health in relation to housing distress. Hostile migratory contexts contour the expression of suffering generated through poor housing, particularly in relation to women's mental health. We suggest that ethnographic approaches can lead us beyond social determinants models, revealing forms of distress which accumulate across and within policy domains.

Trauma, mapepo, and the limits of "treatment gaps" in Ituri, Democratic Republic of Congo. *Stephen Taylor, Queen Mary University of London; Moise Bashiga, Université Libre des Pays des Grands Lacs; and Laurent Mavinga, TAS Goma*

Global Mental Health has increasingly framed distress through the language of "treatment gaps," rendering suffering visible as a deficit in need of biomedical intervention. This paper challenges such framings through an ethnographic study of conflict-affected communities in Ituri province, Democratic Republic of Congo. Drawing on interviews, participant observation, and case histories with families, healers, and health workers, we examine how distress is understood and addressed through overlapping yet distinct frameworks: biomedical trauma and mapepo (resentful spirits). We conceptualise these as a syndemic formation, in which psychological, social, and spiritual afflictions are mutually constituted through ongoing violence, displacement, poverty, and fractured kinship relations. While humanitarian and global health actors prioritise trauma-focused interventions, local moral worlds foreground obligations to the dead, spiritual accountability, and collective repair. Families pragmatically navigate these plural repertoires of care—moving between hospitals, churches, and traditional healers—in ways that exceed the logics of formal mental health provision. Attending to the spatial and relational dimensions of distress, we argue that dominant "treatment gap" approaches enact a form of epistemic reduction, obscuring the moral and spiritual geographies through which suffering is lived and addressed. By foregrounding mapepo and extending syndemic thinking to include the spiritual, the paper calls for geographical approaches to Global Mental Health that take seriously plural epistemologies, situated care practices, and the infrastructures of everyday survival in contexts of protracted violence.

Paper Session

Rethinking Health Geography

Social geography and health geography: Emerging and missed opportunities. *Geoffrey DeVerteuil, cardiff university*

This paper is based on the recent experience of writing a social geography textbook, and how this experience could usefully inform pressing issues in health geography. Five areas of potential interface are identified: geographies of care and voluntarism; mental

health and addiction; geographies of alternative spaces, resilience and slow/quiet activism; poverty and marginality; and the housing crisis (homelessness, gentrification and generation rent). For each, I suggest some key insights from the textbook that could improve the conversation between the two sub-fields, especially around notions of (1) the social, (2) so-called 'social problems', (3) social justice, and (4) relationality and encounter.

Reflecting on a decade of health and medical geography: A systematic review. *Francesca S. Cardwell, University of Waterloo; Susan J. Elliott, University of Waterloo; and Gavin J. Andrews, McMaster University*

Health geographers have long investigated the complex dynamics between spaces, places and health. During this time the world has not stood still and rapid social, economic, political, technological and environmental changes have provided important new contexts that have shaped the form and scope of research. The journal Social Science & Medicine has been at the forefront of publishing important contributions in the sub-discipline, playing a substantial role in the evolution of medical geography as a spatial (social) science to health geography as a critical social science. To document the changing contributions of health/medical geographers and explore the trajectory of the sub-discipline, we conducted a systematic review of papers published by the Medical Geography (now Health Geography) desk of Social Science & Medicine between 2014 and 2024. A total of 830 research and review papers were included. A data extraction tool was developed to document variables such as research design, geographical origin and scale, study population, theoretical perspective, methodology, empirical focus, policy/practice implications, knowledge translation practices, and recommendations for future research. Data extraction was completed using Covidence, a web-based platform designed to support the systematic review process. This paper provides an overview of the substantive, methodological, and theoretical trends identified in the review, and reflects on the trajectory of the sub-discipline in the context of global change.

Has open access publication benefited health geographers from middle and low-income countries?. *Mark Rosenberg, Queen's University*

There is no official date that sets the beginning of “open access” scholarly publishing. Some would place its genesis in the early 1990s and some around 2000. While there are many arguments for and against open access scholarly publication, the focus of this paper is on whether open access fees have worked in favour of the publication of research by health geographers outside of the main countries that have supported the IMGS (Canada, France, Germany, New Zealand, the United Kingdom and the United States). The analysis focuses on 2011, 2021 and 2025; first authors and the institutional affiliations they provided at the time of publication; and the Medical Geography Section of Social Science & Medicine, Health & Place, and the International Journal of Environmental Research and Public Health. An analysis of the percentage of publications by researchers from middle and low-income countries shows that researchers outside of high-income countries continue to struggle to publish in the journals where health geographers are most likely to publish.

Beyond planetary boundaries: Towards a geography of planetary health. *Sarah Dickin, Uppsala University*

'Planetary health' is an increasingly prominent concept in health research and policy. Yet despite its inherently spatial character, planetary health remains largely untheorised within health geography, with little disciplinary engagement with how space, place, time, and scale mediate the relationship between Earth system change and human health and wellbeing. This paper explores how geographical concepts can strengthen and extend planetary health scholarship, addressing tensions between Earth system frameworks such as ‘planetary boundaries’ and community health outcomes, drawing on examples within Swedish and Kenyan waterscapes. Within the context of space, I explore a shift from 'global' to 'planetary' within a health context and how this relates to multiscalar processes, resulting in planetary health frameworks that are poorly equipped to account for the uneven ways planetary health burdens are produced and distributed. Addressing the neglect of place, I draw on the case of the neglected disease schistosomiasis transmitted in Lake Victoria, East Africa, to discuss the localised nature of certain

planetary health burdens, despite the role of planetary changes in increasing risk. Examining temporal dimensions, I draw on a futures-based workshop using arts-based methods to explore planetary health futures in relation to the Baltic Sea and Lule river, reflecting on the possibilities and limitations of this approach. I conclude by discussing how health geographers are uniquely positioned to advance planetary health research through concepts such as space, place, and time across a range of health concerns, bringing attention to issues of equity and planetary health justice amidst interacting health and sustainability crises.

Paper Session

Rural Health Geographies

“Take Care of the People, the People Take Care of the Business”: Exploring the Municipal Economic Development Role in Rural Wellbeing through Disruption, Recovery, and Resilience. *Adam Medeiros, University of Guelph; and Leith Deacon, University of Guelph*

In a context of rapidly shifting social, economic, and environmental conditions—while many regions continue to grapple with the lingering effects of the global pandemic—it is increasingly important to examine how local governments advance community wellbeing through economic development policy.Within a market-based political system such as that of Ontario, Canada, wellbeing is closely intertwined with economic development, particularly at the local level and especially in rural communities. Yet economic development policy in rural Ontario largely continues to prioritize external commercial investment over locally rooted growth strategies. This prevailing paradigm persists despite a growing body of evidence demonstrating that endogenous, community-driven development can foster more sustainable and resilient local economies, particularly when the concept of the “economy” is broadened to encompass human and social capital alongside financial capital.The COVID-19 pandemic provides a valuable “policy window” to explore how rural governments respond to economic disruption, the factors or barriers that support their resilience, and their capacities to adapt, learn, and evolve into a more resilient state that allows for better and sustained wellbeing in rural geographies.This presentation summarizes findings from a mixed-methods case study of two rural counties in Ontario: Huron County and Elgin County. The analysis identifies key implications for municipal policy and broader governance contexts, while contributing to scholarship in geography, planning, community development, and related fields. In particular, the research advances conceptual understanding of the links between local economic development and wellbeing.

Blizzards, boom and bust cycles, and… babies? How physical and cultural geographies of northern Ontario shape regional perinatal health inequities.. *Monika Krzywania, PhD Candidate, University of Northern British Columbia*

Northern Ontario communities face pervasive perinatal health inequities, an untenable crisis that is, unfortunately, also borne out across other northern, rural, and remote regions in Canada and around the world. Rooted in critical geographies of health, this research takes a place-based case study approach. My work centres on interviews with practitioners and in-person community visits to ‘zoom in’ on challenges, solutions, and innovations at the community level. I situate these on-the-ground realities in contexts of multijurisdictional governance. Delving beyond metrics (recruitment targets, birth volumes, and travel times), this research turns its attention to the fascinating ways that material geographies - the stuff of weather, migration, and resource extraction, to name just a few - impact how perinatal care is organized and delivered, and, importantly, how perinatal risk is understood, assessed, and mitigated.In weaving together these physical and cultural geographies of ‘The North’, and by nuancing characterizations of rurality and remoteness, this research elucidates how geography is an active force shaping experiences of perinatal care. Furthermore, this work traces ways that geography is positioned discursively, including as a way of ‘explaining away’ gaps in local services. In a context of tightening budgets coupled with increased political gestures to ‘bring care closer to home,’ my work examines the complex and contested flows of power in northern perinatal care landscapes; from dogged struggles to re-open shuttered obstetrical departments to small-town programs routinely performing deliveries

without C-section back-up, this work sets out to map the socio-ecological context surrounding how local perinatal care is delivered.

“I had to load up a car full of people to get tested”: Rural and Remote Red River Metis experiences of COVID-19. *Michelle Driedger, University of Manitoba; Frances Chartrand, Manitoba Metis Federation; Olena Kloss, Manitoba Metis Federation; Ryan Maier, University of Manitoba; and Nathan Nickel, University of Manitoba*

The COVID-19 pandemic illustrated how disease outbreaks negatively impact Indigenous Peoples, reflecting underlying social and colonially-rooted inequities. Manitoba is the traditional homeland of the Red River Métis Nation. While about half of Métis people reside in the large southern provincial capital, Winnipeg, the remainder live in smaller cities, towns, and communities across the province, including remote areas in the North. Depending on where one lives, pandemic experiences can be highly diverse, particularly with respect to the potential risk of exposure and proximity to health services and pandemic management activities/resources. In a series of focus groups (n=20), researchers gathered perspectives from Red River Métis citizens (n=94) living in Manitoba in 2022 on their experiences of the COVID-19 pandemic to that point. Despite some similarities to urban Métis, we found that Métis living in rural and remote communities experienced significantly different challenges that not only reflected rural-urban gradients of viral risk and of relevant service provision, but also the realities of a community still fighting a legacy of colonialism and structural racism as Métis. Rural and remote participants reported obstacles in accessing testing and vaccination. They also described how pandemic information/updates, response activities/regulations, and official decision-making appeared to reflect the situation in Winnipeg more than that in the diverse regions beyond the capital’s perimeter. Ultimately, better support is needed during a pandemic for those living in regions that are already under-resourced and whose residents face additional obstacles, such as distance to services, transportation, costs, and the double-edged sword of isolation.

Beyond Service Deserts: Mapping Lived Healthcare Landscapes in Rural Ontario Using Survey and GIS Methods. *Leith Deacon, University of Guelph; and Daniel Layden, University of Guelph*

Health and medical geography have traditionally emphasized mapping the distribution of services, providers, and infrastructure to identify spatial inequalities in access to care. While these approaches are valuable, they do not fully capture how rural residents experience the adequacy of healthcare in their daily lives, nor how these experiences influence wellbeing and residential decision-making. This presentation draws on survey and GIS methods to explore lived healthcare landscapes across rural Ontario, using data from the Health, Economy, Adaptation in Rural Communities (HEAR) Initiative.Drawing on household and individual-level survey data, this analysis examines whether respondents feel their health and healthcare needs can be met locally, and whether health-related concerns shape decisions to remain in or leave their municipality. These subjective, household-level indicators are integrated with ArcGIS to map spatial variation in perceived healthcare adequacy across rural Ontario. In doing so, the study moves beyond conventional measures of rural health access-such as distance, provider counts, or service availability-to consider how access is shaped by lived experience, household circumstances, and place-based constraints.The presentation contributes to ongoing methodological conversations in medical geography by demonstrating the value of integrating survey research with geospatial analysis to better understand rural wellbeing. By mapping perceived access alongside health-related pressures to stay or leave, it offers a more grounded and nuanced account of uneven wellbeing across Ontario’s rural communities.

Paper Session

Science, Interrupted

Cervical cancer risk and intersecting vulnerabilities among female sex workers in Uganda as global health support structures erode. *Kirsten Beyer, Medical College of Wisconsin; Alenna Beroza, Medical College of Wisconsin; Faith Bobholz, Medical College of Wisconsin; Julia Dickson-Gomez, Medical College of Wisconsin; Dan Katende, Uganda Harm Reduction Network; Arthur Kiconco, Medical College of Wisconsin; Kyomya Macklean,*

Alliance of Women Advocating for Change; Resty Magezi, Alliance of Women Advocating for Change; Edoseawe (Godwin) Okoduwa, Medical College of Wisconsin; Charles Okoth, Alliance of Women Advocating for Change; Simple Ouma, The AIDS Support Organisation; and Sarah Rine, Medical College of Wisconsin

Female sex workers (FSW) face a range of intersecting vulnerabilities, putting their health at risk. Among problems disproportionately impacting FSW is cervical cancer, the top cancer killer in Uganda. Although cervical cancer is largely preventable and treatable, girls and women in low resource settings lack access to basic services, including vaccination, testing, screening, education, and treatment. For FSW, this lack of access is magnified by poverty, discrimination, criminalization of sex work, and poorly adapted programs. Civil society organizations (CSOs) have begun to adapt to deliver cervical cancer services to FSW. Delivery of services to key populations (KPs), including FSW and people who use drugs, has largely been accomplished by leveraging the HIV service delivery infrastructure. This infrastructure includes CSOs and their Drop-in-Centers (DICs)/Safe spaces, which are locations where KPs can obtain information, rest, and access services and referrals. CSOs also maintain networks of “peer educators” who are members of the KP communities they serve and specially trained to support KPs. This infrastructure is funded primarily by foreign governments via programs such as PEPFAR and the Global Fund. Unfortunately, with the abrupt cancellation of billions of dollars in global health funding by the Trump administration, this infrastructure has been severely compromised. We will discuss ongoing work among our partnership of Uganda and USA based grassroots civil society, academic, and government organizations and how the erosion of KP-serving infrastructure threatens to undermine not only HIV prevention, but also efforts that would leverage this infrastructure to control cervical cancer and related conditions.

Climate Change & Health Experiences among Queer Communities: Learnings from Research Collaborations in the United States. *Sandy Wong, The Ohio State University; Brandon Rothrock, The Ohio State University; Cyenna Ulrich-Cech, The Ohio State University; Kelsea Best, The Ohio State University; and Smitha Rao, The Ohio State University*

Changes to the climate, particularly the increasing frequency and severity of environmental hazards and disasters, have far-reaching consequences for community well-being. Environmental burdens and the negative effects of climate change, however, are not distributed equitably among populations. Socially marginalized communities often experience amplified exposure to climate change and its effects while having lower access to resources to respond, adapt, and recover from those impacts. Our interdisciplinary research collaborations seek to draw attention to the environmental burdens experienced by queer communities, who have been largely underrepresented in environmental justice research and policy. However, like many other environmental justice researchers in the United States, our research team is facing challenges in securing funding and sustaining our work. There is no state or federal funding for research on climate change impacts nor on queer populations, both of which are central to our research. We share our journey, which began with a seed grant in 2024 from Ohio State’s Sustainability Institute that required co-PIs to be affiliated with different departments. Then our work was supported by a second seed grant in 2025 from Ohio State’s Kirwan Institute. Currently, we have two manuscripts under review in peer-reviewed journals, with a third manuscript underway. We also share unsuccessful grant applications and tentative future strategies for sustaining our interdisciplinary and community-based collaborations.

Science, Interrupted: Anxiety, Adaptation, and an NIH Grant Renewal. *Debarchana Ghosh, University of Connecticut*

This abstract tells the story of an NIH grant renewal overshadowed by political uncertainty and the quiet compromises that followed. As a Principal Investigator of an NIH-funded project, Multidimensional Structural Racism and Moderating Role of Psychosocial Resources on Cancer-Control Behaviors in African Americans, I co-lead a collaboration across two universities that supports international graduate students. What should have been a routine Year-3 renewal became a period of fear, confusion, and painful recalibration. The uncertainty began when our program officer suddenly became unreachable, and email communication failed just as we were preparing the required

progress report. At the same time, federal scrutiny of research on structural racism, equity, and health disparities was intensifying. Faced with the real possibility of losing the grant, we made a difficult decision: we revised the project language, replacing terms such as “equity,” “disparities,” and “structural racism” with less politically vulnerable language such as “neighborhood disadvantage.” Even as we submitted the report, we were also seeking emergency institutional support and quietly preparing for the possibility that the project might not continue. The grant was ultimately renewed after six weeks of uncertainty, but the experience did not end with the notice of award. It left behind anxiety and new questions about how to mentor through instability, especially international graduate students whose research positions are especially precarious. This story highlights the hidden costs of politically interrupted science and asks what it takes to preserve integrity, protect trainees, and sustain equity-oriented research when survival itself becomes part of the work.

Science Interrupted: Grant Terminations, Political Interference, and the Struggle to Sustain Trust in U.S. Research. *Amber Pearson, Michigan State University*

Recent U.S. policy shifts and actions have introduced significant disruptions to academic research. This presentation involves my personal experiences with a grant termination and stop work order. Abrupt cancellations destabilized research teams, halted data collection, and created uncertainty, with early-career scholars and those working in politically sensitive areas disproportionately affected. Beyond immediate effects, these actions raise long-term concerns about trust in science and career trajectories. The presentation concludes by highlighting forms of resistance, including diversification of funding through philanthropic sources, cross-institutional collaboration, and advocacy for changes in academic performance evaluation. Efforts to expand open-access dissemination and strengthen community partnerships illustrate how researchers are working to resist silencing while sustaining scientific integrity and public trust.

Paths Forward for Environmental Health: Survey Results. *Jane E. Clougherty, Drexel University Dornsife School of Public Health; Seulkee Heo, Yale School of the Environment; and Michelle Bell, Yale School of the Environment*

IntroductionWe are working through a uniquely challenging time in environmental epidemiology - including the loss of funding and declining public support for science and public health. This moment raises different challenges for senior, mid-level, and junior scholars. We believe, however, that this is also an opportunity to carve out a new path forward for environmental and public health.MethodsWe designed a one-question survey, administered on the Qualtrics platform and distributed via email snowball sample to environmental health researchers based in the U.S.. We invited “brave, creative solutions… (towards) identifying those creative paths forward that may help us build a stronger, more resilient future for environmental health.”ResultsWe have received over 100 responses to date. Some senior scholars suggested means of diversifying funding streams and… Some junior scholars suggested broadening training to enable them to take jobs in other fields during lean years.DiscussionWe will compile responses, identify key themes and novel suggestions, and distribute results in manuscript and other forms. Our hope is to foster proactive, forward-thinking discussion.

Paper Session

Sexual Orientation, Health, and Wellbeing

To what extent do patterns of IPV-related emergency department visits differ across sexual orientations, and do these disparities vary by sex?. *Elena Levitskaya, York University; Yihong Bai, University of Manitoba; Peiya Cao, York University; and Antony Chum, York University*

Background: Intimate partner violence (IPV) is a major public health issue with substantial health and healthcare impacts. Although sexual-minority populations report higher IPV exposure than heterosexual individuals, evidence is largely based on self-reports, and disparities in clinically documented healthcare use remain understudied.Objective: To examine differences in IPV-related emergency department (ED) utilization across sexual orientations and assess variation by sex.Methods: We

conducted a population-based cohort study of Ontario adults (≥18 years) using seven cycles of the Canadian Community Health Survey (2007-2019) linked to health administrative databases (National Ambulatory Care Reporting System; Discharge Abstract Database). Participants were followed from interview to first IPV-related ED visit, death, loss of eligibility, or March 31, 2019. IPV-related ED visits were identified using ICD-10 codes for partner-related abuse. Sexual orientation was categorized as heterosexual (reference), gay/lesbian, bisexual, or other. Parametric survival models (log-logistic) estimated time ratios (TRs) and 95% confidence intervals (CIs), adjusting for sociodemographic factors.Results: Bisexual individuals had shorter times to IPV-related ED visits compared with heterosexual individuals (TR = 0.63, 95% CI: 0.48-0.82). Gay/lesbian individuals showed a similar but non-significant pattern (TR = 0.79, 95% CI: 0.60-1.03). Disparities were more pronounced among females, particularly bisexual women (TR = 0.58, 95% CI: 0.42-0.79).Conclusions: Disparities in IPV exposure among sexual minorities extend to clinically documented acute care use. These findings underscore sexual orientation as a key axis of inequity and highlight the need for inclusive surveillance, prevention, and culturally competent healthcare responses.

Geographic Patterns of Domestic Violence and Abuse: Sexual Orientation Disparities in Ontario. *Kristine Ienciu, York University; Gwen Ehi, York University; Peiya Cao, York University; Antony Chum, York University; and Yihong Bai, University of Manitoba*

Lesbian, gay, and bisexual (LGB) individuals face heightened risks of domestic violence and abuse (DVA), compounded by stigma and potentially amplified by rural-urban divides and regional differences. This study investigated sexual orientation disparities in DVA-related acute healthcare use among Ontario adults, incorporating health geography through rural/urban residence and provincial health region (former LHIN/OHT) stratification.The Canadian Community Health Survey was linked to Ontario health administrative databases to capture emergency department visits and hospitalizations via validated ICD-10 codes for maltreatment syndromes, neglect, and abuse. Sexual orientation categories included heterosexual (reference), homosexual, bisexual, and other. Parametric survival models analyzed time-to-first-event for respondents aged 18+, stratified by gender and adjusted for age, marital status, race/ethnicity, rural residence, employment, education, and health region; interactions tested geographic effect modification.LGB adults exhibited elevated DVA-related acute care risks versus heterosexuals (fully adjusted homosexual TR=0.18, 95% CI: 0.05-0.58; bisexual TR=0.40, 95% CI: 0.17-0.96), with disparities greatest among men and in rural/northern regions. Sex-stratified analyses confirmed higher risks for bisexual (TR=0.33, 95% CI: 0.11-0.98) and homosexual men (TR=0.21, 95% CI: 0.08-0.56) versus heterosexual men, absent among women. Rural-urban differences amplified risks among sexual minority men across northern and peripheral health regions. Male sexual minorities face elevated risks of DVA-related events and rural isolation and regional service variations exacerbate inequities. Targeted screening, LGB-sensitive training, and region specific prevention policies are needed in high-burden Ontario areas.

Local Online Spaces, Rural Wellbeing, and 2SLGBTQ+ Exclusion: Rethinking Digital Geographies of Health in Rural Ontario. *Leith Deacon, University of Guelph; and Daniel Layden, University of Guelph*

Research on 2SLGBTQ+ online life often emphasizes digital spaces as sites of connection, identity exploration, and resilience. However, these accounts are frequently shaped by broader or non-local online environments and may not reflect how local digital spaces function in rural communities. Drawing on a secondary analysis of mixed-methods data from a previous study in Perth and Huron Counties, Ontario, this presentation examines how local online environments shape experiences of belonging, exclusion, safety, and wellbeing among 2SLGBTQ+ people. The analysis is contextualized through a scoping review of recent literature on 2SLGBTQ+ online experiences.Findings suggest an important distinction between local and non-local online spaces. While broader online platforms were sometimes described as useful for connection and support, local online spaces, especially community Facebook pages, were more often experienced as hostile, exclusionary, and emotionally harmful. Participants described these spaces as sites where anti-2SLGBTQ+ rhetoric was made visible, normalized, and difficult to avoid, with consequences for mental wellbeing, participation, and access to local support. The findings also suggest that online hostility may constrain service

providers by discouraging visible digital outreach.The presentation contributes to medical geography by reframing digital environments as place-based social determinants of wellbeing. It argues that rural online spaces should be understood not simply as virtual settings, but as localized environments that shape health, safety, and the possibilities for belonging in rural communities.

Uneven Geographies of Preventable Acute Care: Sexual Orientation Inequities in Ambulatory Care-Sensitive Conditions in Ontario, Canada. *Gwen Ehi, York University; Yihong Bai, University of Manitoba; Peiya Cao, York University; Kristine Ienciu, York University; and Antony Chum, York University*

Hospitalizations and emergency department visits for ambulatory care-sensitive conditions (ACSCs), including asthma, diabetes, and congestive heart failure, indicate health system performance and inequities in primary care. While sexual orientation disparities are documented in mental health, inequities in preventable acute care remain underexplored. This study examines ACSC-related acute care risk by sexual orientation in Ontario across sociodemographic contextsCanadian Community Health Survey data were linked to administrative records of emergency department visits and hospitalizations (2007-2019). Sexual orientation categories included heterosexual (reference), gay/lesbian, bisexual, and other or undisclosed. Parametric survival models assessed time to first ACSC-related event, stratified by gender and adjusted for sociodemographic factors. Planned subgroup analyses will assess rural-urban and provincial variation.Gender-stratified analyses revealed disparities in ACSC-related acute care risk by sexual orientation. Among men, bisexual men (HR = 1.29; 95% CI: 0.96-1.72) and those reporting other or undisclosed orientations (HR = 1.61; 95% CI: 1.42-1.82) had higher hazards. Among women, bisexual women had higher hazards (HR = 1.24-1.38; 95% CI: 1.06-1.61). No consistent differences were observed for gay men, lesbian women, or women with undisclosed orientation. Rural residence increased risk, while employment and education were protective. Future subgroup analyses will assess urban-rural differences and provincial variation.Bisexual men and women, and men reporting undisclosed sexual orientations, face higher risks of preventable ACSC-related acute care use. These findings suggest inequities in primary care access and need for equity-oriented, place-sensitive reforms. Further analyses will identify geographic inequities across provinces and rural-urban contexts.

Paper Session

Social Connections and Relationships Through the Lifecourse

Re-imagining the Sandbox: Playfulness, Place, and Social Connection in Later Life. *Janine Dodge, Queen's University*

Amid global population ageing and growing concern about loneliness and social isolation, there is increasing interest in how environments shape wellbeing in later life. However, within health and medical geography, these questions are often approached through individual outcomes or capacities, with less attention to how social connection is experienced and expressed within social environments. At the same time, playfulness—despite its associations with positive affect, cognitive vitality, and social bonding—remains underexamined in research on older adults outside of therapeutic or trait-based frameworks.This paper explores how playfulness offers a lens for understanding social connectedness in later life. Drawing on a multi-case study of community centres in São Paulo, Brazil, it introduces the Relational Playfulness Framework, which conceptualizes playfulness among older adults as emerging through the convergence of joy, agency, and belonging within social interaction. Situated within social infrastructure, the paper examines how these relational experiences unfold within community-based settings.The analysis draws on over 50 hours of structured observation and 42 semi-structured interviews with older adult participants, complemented by interviews with facilitators. Preliminary findings suggest that the value of playfulness lies less in specific activities and more in how interactions are experienced—particularly in fostering moments of connection, lightness, shared enjoyment, and opportunities for learning and rediscovery.The paper highlights the potential for intentionally incorporating playfulness within community-based programmes—as both a facilitation approach and a social practice—to support social connection, enjoyment, and a sense of belonging among older adults.

Negotiating Mobility: Methodological Insights from Older Adults' Activity Diaries.
Amber DeJohn, Florida State University; and Ainsley Bowie, Florida State University

Older adults' mobility is a growing area of research, with multiple methods being employed to understand whether older adults can adequately access key destinations. This has resulted in increased interest in older adults' activity spaces, and a concomitant rise in methods employed to work with these individuals. While GPS-based data collection has advantages, traditional paper surveys remain in use due to their perceived low barriers to entry for participants and researchers. Relatively little is known regarding the appropriateness and validity of paper-based, self-reported activity diary data collection with older adults. Using qualitative feedback on activity diary surveys deployed in rural and urban communities and the activity diaries themselves, we argue that paper, self-reported activity diaries are viable instruments for recording older adults' geographies. Further, qualitative feedback demonstrates how older adults confront their mobility, memories, and communities. We identify perceived mobility deficits, difficulties remembering, community visibility, and positive affect among our participants. Our findings suggest participating in activity diary surveys is a generally positive experience for older adults, but for some may engender a sense of inadequacy regardless of their activity level. We make recommendations for methodological enhancements specific to working with older adults.

What Makes Places Social? Pathways to Connection in Neighborhood Social Infrastructure. *Mallory Sagehorn Sagehorn, University of Colorado Boulder*

Neighborhood social infrastructure and third places are widely understood to foster connection and support community wellbeing, yet the mere presence of these spaces does not automatically produce meaningful interaction or community belonging. This paper looks beyond proximity to examine how connection emerges from social infrastructure using qualitative interviews from the Places That Shape Us study. Drawing on experiences of 45 emerging adults (ages 18-31) in Denver (CO, USA) navigating shifting social networks and residential mobility, reflexive thematic analysis identified three pathways to connection, emphasizing the importance of both people and places in shaping attachments to neighborhoods and communities. First, ambient sociality cultivated connection in shared environments (e.g., parks and cafés) where the presence of others fostered feelings of familiarity and belonging even without direct social interaction. Second, participants found connection through interpersonal relationships that extended across multiple spaces, suggesting the primary importance of social ties themselves—not specific places—for feeling connected. Third, structured activities were critical in transforming spaces into sites of connection. Shared interests and repeated participation in activities such as recreational sports, hobby groups, or community events created opportunities for interaction, particularly for those who reported difficulty forming friendships or meeting new people. These findings suggest social infrastructure alone does not generate community connection. Rather, places become socially connective through the social routines, intentions, and activities that structure interaction within them. By highlighting how emerging adults navigate different pathways to connection, this study contributes to debates on social infrastructure, belonging, and the geographies of everyday social wellbeing.

Later-Life Mobility as a Relational Process: Insights from Older Adult Migration Data.
Alicia Corbiere-McNutt, McMaster University; and Bruce Newbold, McMaster University

In the context of future uncertainty, older adults are increasingly required to navigate complex decisions about mobility, care, and belonging. This paper examines how social relationships, identity, and autonomy shape older adult migration decision-making. Drawing on qualitative analysis of discussions, within online Reddit communities - this study reveals the relational and emotional dimensions of later-life mobility. It situates migration decisions within temporal shifts in social infrastructure, care systems, and lived environments. Within these communities, three interconnected themes emerged. First, proximity to informal care networks (kin and community) play a vital role in shaping residential preferences. Commenters prioritized remaining near established social relationships over relocating to more desirable or affordable locations. This revealed that aging is closely tied to the individual's capacity to remain embedded within

supportive and known social environments. Secondly, identity, (primarily caregiving roles) structured mobility decisions and often produces immobility. These enduring roles reflect broader social expectations in caregiving relationships, revealing how individuals negotiate belonging and responsibility within changing familial and societal landscapes. Lastly, autonomy emerges as aspiration. While aging is often associated with declining independence, commenters articulated a desire to maintain control over their environments and futures. Autonomy was not independent of care systems though, as sustained social connectivity was seen to expand possibilities for sustaining agency across distance and time. Therefore, these findings highlight how later-life mobility is a fluid and negotiated process shaped by changing social environments and care geographies, which highlights the need for relational approaches to aging within uncertain environmental futures.

Paper Session

Substance Use Patterns and Prevention

The Financialization and Digitalization of Opioid Treatment. *Brian King, Pennsylvania State University; and Andrea Rishworth, University of Toronto*

This paper explores how the opioid use recovery landscape is becoming increasingly shaped by the dominance of financial motives, institutions and actors. We draw on interviews with 35 participants who work in the field of opioid use recovery. We found that participants noted parallels between MOUD and earlier pharmaceutical exploitation, citing provider incentives, mis-prescriptions and drug diversion. Participants also revealed a moral economy in which diversion is sometimes viewed as a rational response to systemic exclusion, particularly among the under-insured and incarcerated populations. Recovery housing was described as another site of market-driven responsibilization, where managers often bear institutional burdens and patients sometimes must navigate exploitative care environments. The findings illustrate how logics of marketization and individual accountability leave vulnerable individuals to navigate recovery within an opaque and sometimes hostile market. While popular coverage of financial interests in the original opioid crisis is well documented in the literature, this study sheds light on the less obvious and potentially more insidious patterns of marketization that increasingly shape the recovery landscape.

Climate, Overdose, and Resilience: Combining Open Source Data to Examine Seasonality in Opioid Overdose and Shelter Utilization in Toronto. *Amanda Norton, Department of Statistical Sciences, University of Toronto, Department of Geography and Planning, University of Toronto; Lindsey Smith, Department of Geography and Planning, University of Toronto; and Monica Alexander, Department of Statistical Sciences, University of Toronto*

Introduction: Unhoused populations and people who use opioids are highly susceptible to climate exposures. Toronto shelters are routinely at capacity and supervised injection sites have been closed, further exacerbating population vulnerability. Aims: This analysis used open-source data to identify climate-related seasonal and spatial patterns in unhoused populations and populations who use opioids and examined Reddit user discourse related to these sub-populations. We hypothesized there would be more persons in crisis in parks and other public spaces during warmer months, and more shelter utilization and central intake calls during the colder months. Methods: Central Intake Calls, Overdose Deaths, Shelter Deaths, and Shelter Utilization were collected from Toronto Open Data; Reddit threads and subsequent comments containing keywords (e.g., encampments, unhoused, overdose) within the r/Toronto, r/AskTo, and r/TTC subreddits were collected via the RedditExtractoR package. Climate data were collected from Daymet and Environment and Climate Change Canada. Daily persons in crisis call counts were evaluated using Besag-York-Mollie models at the neighbourhood level spatial resolution. Reddit qualitative data were analyzed using topic modelling and sentiment analysis. Preliminary findings indicate weak seasonal variation between climate, unhoused populations, and people who use opioids. Results: Preliminary analysis of public perception reflects discourse on housing affordability, and negative sentiment towards subpopulations who use opioids or are unhoused. Conclusions: These preliminary findings may inform climate-resilient city planning and locate where

resource reallocation can most benefit these at-risk sub-groups of the Toronto population.

Opioids in the Extreme Weather? An In-Depth Look at Temporospatial Distribution of Opioid Overdose. *Cade Canepa, Creighton University School of Medicine, Omaha, NE 68178; and Dhitinut Ratnapradipa, Creighton University School of Medicine, Omaha, NE 68178*

The purpose of this study is to explore the connection between extreme temperatures and deaths from opioids. It has been known that opioids can disrupt the body's thermoregulatory system.Deaths from opioid overdoses spike following cold weather events. We acquired data from the CDC's State Unintentional Drugs Overdose Reporting System (SUDORS) database. The data was stratified into three groups. The first group is complete data and accounts for states that have overdose death data for all 4 years. The continuous group has less than four years of years of data, but all states have no gaps in data years. The third group has incomplete data with gaps in the years reported. We first plan to demonstrate a geo-temporal distribution of overdose deaths by state by mapping overdose deaths by state over the 48 months of data. For this distribution, we only plan to use the states that fall into the complete and continuous data groups.We next plan to demonstrate a relationship between temperature and overdose deaths. We plan to use a modified time-stratified case-crossover design for our study to assess the association. A normal case-crossover design also allows each individual to serve as their own control, thus limiting the impact from any confounding variables (sex, race, ethnicity, SES) in our study. However, the public data set aggregates all deaths by month, thereby preventing an individual case from being closely observed.

Visualizing the location and utilization of health resource vending machines as part of an opioid overdose intervention through a local health department. *Dhitinut Ratnapradipa, Creighton University School of Medicine, Omaha, NE 68178; Kevin Boes, MPH, Creighton university School of Medicine, Omaha, Nebraska 68178; Matt Ogledzinski, MD, Creighton university School of Medicine, Omaha, Nebraska 68178; Leah Casanave, DrPH, Douglas County Health Deapartment; and Timothy Guetterman, PhD, University of Michigan, Ann Arbor, MI*

Public health interventions to reduce morbidity and mortality related to opioid overdose can be challenging, but the challenge has brought together representatives from community agencies and local and state health authorities. One intervention being implemented is the health resource vending machine. These self-service kiosks are being introduced into multiple jurisdictions throughout the United States as part of the Centers for Disease Control and Prevention's Overdose to Action (OD2A) funding program. The health resource vending machines dispense a variety of health products free of charge to the recipient, including anti-overdose supplies such as Naloxone. This presentation uses local maps to highlight the kiosk efforts in Douglas County, Nebraska, with data supplied by the Douglas County Health Department.

Paper Session

The Care Economy: Exploring Trends, Challenges and Social Innovation

Barriers and Builders to Belonging: Insights from Community Organizations on Supporting Older People Living with HIV in Long-Term Care and Assisted Living in British Columbia's Fraser Health Region. *Leah Coppella, Simon Fraser University; Valorie Crooks, Simon Fraser University; Janice Sorensen, Fraser Health Authority; Sherin Jamal, Fraser Health Authority; Surita Parashar, B.C. Centre for Excellence in HIV/AIDS; Akber Mithani, Fraser Health Authority; and Catherine Youngren, Fraser Health Authority*

Background: Older people living with HIV (human immunodeficiency virus) (OPLWH) are a growing demographic that faces distinct needs, particularly when they enter long-term care and assisted living homes. Community-based organizations have long supported OPLWH, yet these organizations' perspectives remain under-considered in relation to the intersection of HIV and long-term care and assisted living. This study addresses that gap by drawing on the insights of community-based organization leaders in a health region of British Columbia, Canada, to explore the barriers to and builders of

belonging for OPLWH in long-term care and assisted living.Approach: From January to September 2024, we conducted key informant interviews with leaders (n=9) of organizations that collectively serve hundreds of OPLWH in a single regional health authority. Interviews were professionally transcribed. Investigator triangulation was used to identify meta-themes as part of the thematic analysis process and enhance qualitative rigour.Findings: Key informants identified three barriers preventing OPLWH from feeling they belong in long-term care and assisted living: stigma within care homes, misalignment between health system and community values, and negative experiences with the health system that create an expectation that residential care will be harmful. Builders of belonging included: fostering trust with OPLWH through partnerships with community-based organizations; care staff education on the lived HIV experience; and resident-driven initiatives that promote a shared sense of belonging.Conclusion: These findings underscore belonging as an affective experience vital to OPLWH's quality of life in long-term care and assisted living, thus identifying a pathway to strengthen relationships between health systems and community-based organizations. We propose specific tools and strategies to foster belonging for OPLWH within long-term care and assisted living.

Shaping Support: Federal Funding and Policy Divisions for Canada's Compassionate Care Benefit. *Halston Morgan, McMaster University; and Allison Williams, McMaster University*

Building carer-inclusive workplaces across Canada: Evaluating the uptake of standardized workplace policies. *Brooke Chmiel, McMaster University; and Allison Williams, McMaster University*

The Invisible Toll: Women's Caregiving and the Hidden Labour of Enduring Climate. *Wania Khan, McMaster University; and Allison Williams, McMaster University*

Paper Session

Therapeutic Landscapes and Health-Enhancing Environments

"My Paycheck Makes Me Happy, But Place Relieves My Stress": Mental Health, Income, and Therapeutic Landscapes among Migrant Care Workers in Japan. *Fikriyah Winata, Department of Geography, Texas A&M University, College Station, Texas, USA; Ikuho Yamada, Center for Spatial Information Science, The University of Tokyo, Tokyo, Japan, Interfaculty Initiative in Information Studies, The University of Tokyo, Tokyo, Japan; and Wataru Morioka, Department of Geography and Geosciences, Salisbury University, Salisbury, Maryland, USA*

Existing literature documents workplace-related stressors and a high prevalence of mental health (MH) issues among migrant care workers in Japan's eldercare sector. Although therapeutic landscape (TL) encounters have been shown to support wellbeing among transnational migrants, their role within the broader socioeconomic conditions of migrant care workers in Japan remains understudied. To address this gap, we adopted a mixed-methods approach to examine whether access to landscapes regularly visited by workers for stress relief and emotional regulation is associated with better MH. We further assessed the significance of these landscape-related experiences relative to socioeconomic conditions, commonly regarded as primary drivers of transnational migration. 96 Indonesian care workers completed an online survey, and 23 of them participated in semi-structured interviews to explore their everyday work experiences. We applied Classification and Regression Tree analysis, a supervised machine learning technique, to identify hierarchical interactions based on MH scores. The mean MH score was 66.17 (out of 100). Across all Regression Tree models, communication difficulty with older adults was the strongest predictor of MH. In the Income Tree model, income ranked second, with interview insights suggesting greater satisfaction with earnings in Japan than in Indonesia. The TL Tree model showed that access to TLs was associated

with higher MH scores among workers aged under 35 who work in hospitals and home-based care, while male technical intern training visa holders without access to TLs scored 10 points below average. To support MH among care workers, policies should prioritize both workplace interventions and access to health-promoting landscapes beyond the workplace.

Extending geographical conceptualisations of health-enhancing environments: cultivating amelioration, new practices and social transformation. *David Conradson, University of Canterbury, New Zealand; and Sarah Bell, University of Exeter*

Over the past four decades, geographers have employed the notion of therapeutic landscapes to conceptualise the health-enhancing effects of a variety of places and environments. While this work has illuminated the diverse ways in which place encounters can contribute to health, there has been less focus on how therapeutic experiences endure within, are constrained by or may on occasion even transform the contexts that generate ill-health. In an effort to extend this scholarship, this paper draws on qualitative participant observation and interviews conducted from 2017-18 with staff and youth interns at an urban community farm in Aotearoa New Zealand. The farm was developed on a vacant central city site in Christchurch after a series of major earthquakes (2010-11). It offered internships to young people not in education or employment as a way of enhancing their skills and cultivating individual, community and environmental wellbeing. In our analysis, we contextualise the interns' therapeutic experiences within the farm's broader social and economic context. Building upon work by Kayley et al (2019), we reflect on how their time on the farm facilitated (i) emotional amelioration (e.g. reducing distress, even if only temporarily), (ii) new practices (e.g. around diet and sleep, with some temporal durability), and (iii) social transformation (altering some of the wider relational structures that appeared to undermine or harm their health). In doing so, we suggest value in (re)connecting therapeutic landscapes research with the longstanding attention in health and social geography to systemic processes that generate ill-being and wellbeing.

Recovering in Place: A Spatial Approach to Equity, Lived Experience, and Addiction Recovery. *Victoria Burns, University of Calgary, Recovery on Campus*

Addiction recovery has traditionally been framed as an individual process, with limited attention to the environments that make recovery possible or sustainable. While socio-ecological models have expanded understanding of contextual influences, they have not fully accounted for how recovery is experienced in and through place. This paper advances a place-based perspective on recovery, positioning environments as active determinants of equity, access, and long-term wellbeing.Drawing on the 'Recovering in Place' framework, this presentation integrates phenomenological and critical geographic approaches to examine how physical, emotional, and socio-political dimensions of place shape recovery trajectories. From this perspective, inequities in recovery are embedded within spatial systems, including housing, urban design, and institutional cultures that can either support or constrain recovery.This work is informed by community-based and lived experience-informed research, including the author's dual perspective as a researcher and person in long-term recovery. It also draws on the development of Recovery on Campus, a province-wide initiative supporting campus recovery programs across post-secondary institutions in Alberta, Canada, as a case example of translating place-based theory into practice.Using examples from campus recovery programs and broader recovery-oriented initiatives, the paper illustrates how recovery-supportive environments can foster belonging, ontological security, and inclusion, while recovery-hostile environments may reinforce stigma and exclusion.By situating recovery within equity and justice transitions, this work calls for a spatial turn in recovery science and for greater integration of lived experience in shaping more inclusive, place-based approaches to health and wellbeing.

Therapeutic Landscapes Between Meaning and Measurement. *Sebastian Völker, Research Center for Public, Planetary and Digital Health (P^2D), IU International University of Applied Sciences; Julia Jungbluth, Research Center for Public, Planetary and Digital Health (P^2D), IU International University of Applied Sciences; Sikko Tammena, Research Center for Public, Planetary and Digital Health (P^2D), IU International University of Applied Sciences; and Falko Krügel, Faculty of Environmental Sciences, Chair of Geoinformatics, Technical University*

Dresden

Spaces can influence health and subjective well-being in manifold ways. To describe these complex interrelations, the concept of Therapeutic Landscapes has become well established, understanding the health-promoting effects of places as the result of an interplay between different spatial dimensions. At the same time, the concept itself points to its own limitations: places are not considered therapeutic per se, but merely as "potentially therapeutic", since their effects are contingent upon individual perceptions, meaning-making, and processes of appropriation. For spatial planning practice and health services research, this gives rise to a methodological tension. Analyses aimed at identifying health-promoting environments frequently rely on aggregated regional data for quantification. However, to avoid an ecological fallacy, no direct inferences about individual experience may be drawn from such structural data. A purely quantitative, spatially structural model thus captures the therapeutic potential of a place, not the actual individual health reality and appropriation. This presentation takes up the tension between theoretical aspiration and empirical feasibility. It explores the question of to what extent the multidimensional Therapeutic Landscape concept can be quantified at all. While physical environmental resources are comparatively robust to measure, health effects depend substantially on subjective quality and meaning, which often elude large-scale standardization. The presentation discusses whether the pragmatic reduction to physical dimensions constitutes a necessary strategy for generating planning-relevant evidence or whether this entails the loss of central theoretical core elements. The aim is to harness the discrepancy between measurable spatial-structural potential and individual lived reality productively to develop the concept further.

Paper Session

Uncovering Trace within Geographies of Health and Wellbeing I

The Disruptive Potency and Potential of Bearing Witness to Overdose Fatalities.
Suzanne Withers, University of Washington

As a society, we embrace the longing to bear witness to historical traumas. Memorials like the Arlington Cemetery, the Vietnam Veterans sculpture, and 9/11 Ground Zero pay visual homage to overwhelming collective suffering. Since the 1990s, communities across the United States have been ravaged by the opioid epidemic. In the age of Big Science, we closely trace the deaths of the epidemic at the population level, but what of the hundreds of thousands of fatalities, the human dimension of loss? In this paper I explore our collective efforts to testify to the contemporary trauma of the opioid epidemic. I describe the landscape of tribute, with keen focus on the community organizations who are actively attesting to the loss of life, familial devastation, and community decay. There exists a myriad of grass-roots collectives whose energies refuse to let us forget the lives that once thrived. Drawing from my encounters with Women in Black, Leaves of Remembrance, The Black Poster Project, and others, I share deep insight as to their impact. I emphasize the disruptive potency and potential these groups bring in redirecting our collective response to the epidemic. Ranging from silent witness, traveling memorials, participatory mapping to political lobbying, the tracing of lives at this scale brings about real change. Lastly, bearing witness is a powerful, non-violent act of civic engagement. I contend that the current historical moment of redaction, revision, and rejection, makes efforts to resist dehumanizing the epidemic important acts of care and resistance. In memory they live on.

Traces and spaces: the past's presence on the quarantine islands of Aotearoa's archipelago. *Robin Kearns, University of Auckland*

Islands were secured as bounded sites set apart from population centres to accommodate and isolate those afflicted with infectious disease prior to the innovation of vaccination. One such site was established in each of the four harbours associated with the establishment Aotearoa New Zealand's historically significant cities. Today, the confinement of diseased persons is long past. However, a transformation of the same geographical features (close but far, sea as barrier, defined boundedness) has led to newer uses for recreation and wildlife conservation. What evidence of former use remains and how is the past re-membered? Drawing on Anderson's contention that

place should be understood as an ongoing composition of traces, I argue for the pervasive presence of the past in these contemporary island landscapes. This presence transcends memorialisation. Rather, in an era of revived vigilance to infection, the deceased are granted an opportunity to speak to the perils of complacency.

Tracing blue space assemblage trajectories across disabled people's lived experiences in Scotland. *Mitia Aranda, University of Dundee*

Despite being a relatively blue space rich country, access to blue spaces (BS) in Scotland is not equal across society. As a result, many disabled people are excluded from the potential benefits of BS exposure, such as increased physical activity, reduced stress levels, and improved mental health. This paper examines the traces of BS assemblages in relation to Blue Space Access and Engagement (BSAE) in the lives of disabled people in Scotland, with the aim of identifying ways to increase accessibility and inclusion to BSs. The study adopts a fourfold mixed-methods approach, combining geospatial analysis, in-situ field surveys, online quantitative surveys, and qualitative data from in-depth semi-structured interviews. Findings suggest that BSAE are produced through dynamic assemblages in which material, social, economic, institutional, and embodied elements must come together in particular ways. Turbulent or broken traces, where components fail to align, reveal BSAE experiences that remain fragile or impossible. However, when these components do align, they can enable meaningful, relational, and sustained experiences, even before participation in BS related activities. By focusing on disabled people's lives, the paper identifies often overlooked aspects of BS health and wellbeing studies that focus exclusively on those abled and able to make it to BSs often ignoring the rest. The insights gained from investigating these traces may support meaningful change and contribute to a broader paradigm shift, ultimately benefiting everyone by promoting more accessible BS experiences for all.

Trace and the Sanitorium: Assembling a Hydro-Relational Geography. *Ronan Foley, Maynooth University, Ireland*

Recent research on therapeutic landscapes and blue spaces is increasingly shaped by relational components that link time, space and place. Adding the word trace into the mix opens up potential for further explorations of hydro-relations - tracing connections, bodies, material remains and memories in and through settings associated with healing waters. All of these themes are found within Ireland's first Sanitorium, the St. Ann's Hill Hydro, and this paper discusses representative traces from its material, social and medical history. Trace is also methodological, reflected in an archival assemblage of material from newspapers, visitor accounts, texts, family collections and oral histories. The Hydro existed as a working sanitorium/health resort from 1843-1953 and five traces are briefly introduced; familial, hydro-therapeutic, socio-cultural, moral and hydro-diffusive. It was built and managed by four generations of one family and had a complex relational spatial form and business history, within which hydrotherapeutic treatments ebbed and flow over time. The Hydro's social history was all about connection, building social capital and networks within an Anglo-Irish world that contrasted at times with the lived experience of local staff and citizenry. A further trace was associated with moral performances of temperance and hygiene, while a final example drew from the development and exportation of a new form of Turkish Bath, that created a relational trace from the Hydro that went global. The Hydro's own material trace has now almost completely disappeared, but this paper and ongoing research will hopefully reinscribe a trace that sustains in many complex forms.

Paper Session

Uncovering Trace within Geographies of Health and Wellbeing II

Tracing disability in the creation of just climate futures. *Sarah Bell, University of Exeter*

The climate crisis is disabling; it is affecting the lives and health of people and communities worldwide. Yet the people who often know best how to navigate barriers caused by a disabling world - disabled people - have been widely overlooked within current climate action and just climate futures. If considered, disabled people are typically framed as inherently 'vulnerable', an 'expected loss' or a 'cautionary tale' of the

risks of inaction.Reflecting on and countering these framings, this presentation will trace the threads of disability in the creation of just climate futures. It will draw on qualitative and arts-based research conducted from 2024-26 in Bristol and Glasgow, UK, as part of ‘Sensing Climate’; an interdisciplinary project examining how to build fairer communities through collective climate responses informed by the priorities and insights of disabled people.More specifically, the presentation will trace how climate harms are deepening the wounds of longstanding chronic crisis in the body-minds of disabled people, while reflecting on the wisdom that braids through the seams of those wounds: knowledge of how to cope when the fit between body and world unravels; how to cultivate compassionate community; and how to resist political and economic systems that exploit, debilitate and then abandon. These knowledges are essential in collective efforts to weather and adapt to the unpredictability of climate change, to witness and tend to its wounds, and to bring into being just climate futures that nourish and affirm the full weave of life and the plurality of wisdom within it.

Tracing Biosocial Ambiguities: Young People with Disabilities Negotiating Everyday Spaces. *Johannes Melchert, Heidelberg University; Jan Misera, Heidelberg University; and Tabea Bork-Hüffer, Heidelberg University*

People with disabilities often have to navigate everyday spaces characterised by persistent ambiguities - subtle exclusions, stigmatizing encounters, and the pressure to overcome bodily difference under an ableist gaze. These experiences leave affective traces: e.g. shame, stress, neglect, and the internalization of normative assumptions about what constitutes a "healthy" body. Yet disability and health are neither static nor binary; they exist on a relational continuum where social, cultural, and material forces continuously shape embodied wellbeing.This paper extends the biosocial approach to health geographies by engaging with relational/ critical disability studies. Drawing o qualitative-dominant mixed methods research conducted with young people with disabilities in Austria, this paper investigates how participants negotiate place-based ambiguities embedded in biomedical-social narratives of everyday life.Central to this analysis is the tension between pathogenic traces - the cumulative burden of ableist structures, microaggressions, and forced overcoming - and the salutogenic possibilities that emerge when young people reframe bodily difference outside deficit models. By attending to how participants sense, articulate, and resist these traces, the paper foregrounds disability as relationally shaped by specific settings, social doings, and material encounters.The paper contributes to geographies of health and wellbeing by demonstrating how trace operates as a connective thread between embodiment, place, and inequality. It argues for approaches that hold pathogenic and salutogenic dimensions in productive tension, refusing binary framings of disability while remaining attentive to the real harms of ableist structures.

Where You Are and Who You Are: Intersectionality and Traces of Health Perceptions Across African American Communities in the U.S.. *Arunima Dasgupta, University of Connecticut; and Debarchana Ghosh, University of Connecticut*

Objective: This study investigates how place and social identity intersect in shaping perceptions of neighborhood health among African American communities across five U.S. states. Guided by intersectionality theory, it examines how gender and civic role shape understandings of health barriers, issues, and support networks, and how traces of structural inequality leave lasting marks on perceptions of vulnerability and resilience.Methods: Eighty-one interview transcripts were coded using a framework developed in NVivo and systematically applied in Dedoose, from which three primary domains emerged: health barriers, health issues, and community support. Participant gender and civic role were added as descriptors to enable intersectional analysis. Content analysis identified thematic patterns across states, followed by intersectional matrix analysis between gender and civic role within each domain. Themes mentioned by five or more participants within each intersectional category are discussed.Results: Poverty, racial discrimination, cancer, and food insecurity emerged as shared concerns, yet how these were understood varied by place and identity. Connecticut participants highlighted environmental hazards and structural racism, while Alabama and Mississippi participants centered on poverty and food access. Women in Maryland and Missouri identified a broader range of barriers and support resources than men. Community Health Workers emphasized food access and drug abuse, Faith Leaders highlighted

education gaps and stress, and Community Professionals pointed to crime and gentrification, revealing how identity and place co-produce distinct perceptions of vulnerability and resilience.Conclusion: Findings highlight the need for targeted public health strategies to uncover variability in the traces in place and identity to support equitable, community-informed interventions.

Paper Session

Urban Environments, Neighbourhoods and Health

Samplıng The Cıty: Revısıtıng The Neighborhood Effect Averagıng Problem Through The Interplay Between Mobılıty And Socıo-spatıal Contexts. *Yuhan Cui, The Chinese University of Hong Kong; and Mei-Po Kwan, The Chinese University of Hong Kong*

Background: The Neighborhood Effect Averaging Problem (NEAP) describes how mobility-based measurements (MBM) of environmental exposure converge towards regional averages compared to residence-based measurements (RBM). Despite frequent documentation, underlying statistical mechanisms remain unclear. We hypothesize MBM acts as repeated micro-environmental samples through a Markov Process, where means converge via the Mean Ergodic Theorem (MET) and distributions approach normality via the Lindeberg-Feller Central Limit Theorem (LCLT). This convergence is modulated by individual mobility and spatiotemporal heterogeneity in real-world contexts.Materials and Methods: We analyzed 7-day trajectories of 732 Hong Kong residents to assess individual-level MBM exposure to nine urban services: living, catering, shopping, sports and leisure, recreational and tourism, hospitals and health, educational, consolation, and transportation services. We calculated Residence-based Urban Service Availability (RUSA) and Mobility-based Urban Service Availability (MUSA). Using multilevel linear mixed-effects models, we examined MUSA's central tendency and normality as functions of mobility patterns, service distributions, and initial RUSA distributions.Results: Our analysis confirms that greater exposure diversity, driven by higher mobility entropy and dispersed time-available services, significantly intensifies the NEAP, supporting our statistical mechanism. A critical three-way interaction was observed: spatially clustered services constrain the averaging effect of mobility, thereby perpetuating residential disparities. Conversely, well-distributed time-available services allow mobility to effectively overcome segregation barriers.Conclusions: The NEAP is a predictable statistical outcome of 'exposure diversity', where physical urban structure regulates the equalizing potential of human mobility. This implies differential equity strategies: structural planning prioritizing spatiotemporal dispersion is foundational for distributing health-promoting resources (e.g., urban service/green space), whereas mobility-focused interventions are practical for avoiding pervasive hazards where structural change is difficult (e.g., pollution). Methodologically, researchers must evaluate specific spatiotemporal contexts - resource clustering versus mobility levels - to quantify potential residence-based measurement errors and select the appropriate design (residence- vs. mobility-based) for accurate health outcome assessment.

Measuring the Impacts of a New Light Rail System on Work Performance and Health Outcomes in the Greater Montréal Region. *Yu Zhang, Queens University, McGill University; Nancy Ross, Queen's University; and Ahmed El-Geneidy, McGill University*

Transit investment can lower air pollution and traffic accidents and alter the daily activities of large groups of people, becoming a surprisingly efficient tool to help achieve population level health goals. This paper takes the Réseau Express Métropolitain (REM) light rail in the Greater Montréal Region as a case study, analyzes if and how commuting with the new light rail system impacts work performance, health outcomes and overall quality of life. Using a multi-dimensional self-assessed well-being measure from the Montreal Mobility Survey (MMS), this study models the impact of the REM on health and well-being. Commuters riding the REM report better physical health and quality of life than auto commuters, and slightly better than bus and regular metro commuters. Scenario-based analysis further reveals that while longer travel times generally diminish well-being, active and high-quality transit modes like the REM provide a "buffering" effect, showing a higher tolerance for longer durations compared to car and bus users. We also examine associations between teleworking, daily sedentary time, commute duration and working performance, physical and mental health and overall quality of life.

Marginal effects were generated to facilitate interpretation of the results into policy implications. The REM study shows that transit investment-induced modal shift not only has economic and environmental benefits, but also has substantial health and well-being benefits which are often overlooked. Public health objectives could be achieved together in transit investment.

Burden of disease from road traffic noise and associations with socioeconomic marginalization in Toronto, Canada. *Tor Oiamo, Department of Geography and Environmental Studies, Toronto Metropolitan University; Anette Kocbach Bølling, Norwegian Institute of Public Health; and Gunn Marit Aasvang, Norwegian Institute of Public Health*

This paper examines the burden of disease from traffic noise as disability-adjusted life years (DALYs) in Toronto, Canada, and its association with four dimensions of socioeconomic marginalization based on the Ontario Marginalization Index. Previous research found that 7% of all Canadians and up to 36% of residents in certain areas of Toronto are highly annoyed by traffic noise. Exposure to traffic noise has also been associated with ischemic heart disease in Toronto and other urban areas. However, it is not clear how the disease burden due to traffic noise in Toronto compares to other cities and how it is related to socioeconomic indicators. Building facade traffic noise levels from the US FHWA Traffic Noise Model (TNM2.5) were applied to estimate attributable DALYs from high annoyance, sleep disturbance and ischemic heart disease. A total of 25,725 DALYs at a rate of 942 per 100,000 were estimated to be lost annually to traffic noise exposures in Toronto. We also found statistically significant correlations between the estimated DALYs and socioeconomic marginalization at the dissemination area level. The highest correlations were observed for residential instability (r=0.44) and ethnic concentration (r=0.22). The estimated burden of disease rate for traffic noise in Toronto is among the highest for cities currently reported in the literature.

Exploring the impact of neighbourhood social fragmentation on early childhood developmental vulnerability. *Nasser Bagheri, University of Canberra; susan Hartono, University of Canberra; Antonia Kish, University of Canberra; and Rachel Davey, University of Canberra*

Background: The role of the neighbourhood social context in early childhood development is less understood despite the apparent disparities in early childhood developmental vulnerability in Australia. This research investigated the influence of neighbourhood social fragmentation on developmental vulnerability in young children.Method: Data were from the 2021 Australian Early Development Census. We applied logistic multilevel models to investigate the relationship between the area-level social fragmentation index and children's developmental vulnerability. The outcome variable was developmental vulnerability on one or more domains (physical health and wellbeing, social competence, emotional maturity, language and cognitive skills (school-based), and communication skills and general knowledge). The predictor was the Australian Neighbourhood Social Fragmentation Index, constructed using the principal component analysis.Results: The sample was 287,135 children in their first year of full-time schooling in 2330 Statistical Area Level 2 (SA2). Our analyses showed a 4% increased risk of developmental vulnerability on one or more domains (OR 1.04; 95% CI 1.00-1.08) if children lived in high compared with low socially fragmented neighbourhoods after adjusting for child, family, and neighbourhood characteristics.Conclusion: Maintaining social cohesion in the community decreases the chance of developmental vulnerability in children during their first year of full-time schooling. Social initiatives, such as horticulture classes, volunteering programs, and Neighbour Day events, may foster social cohesion in socially fragmented neighbourhoods, supporting children's development during their early years. Additionally, certain physical aspects of the neighbourhood (e.g., availability and walkability to public amenities and services) encourage accidental social interactions between neighbours.

Paper Session

Urban Food Environments

Food Environments and the Geography of Disadvantage: Examining Regional Differences in Canadian Retail Access. *Martin Holmes, University of Toronto; Rachel*

Murphy, University of British Columbia; Leia Minaker, University of Waterloo; Nancy Ross, Queen's University; Sharon Kirkpatrick, University of Waterloo; Jennifer Vena, Alberta's Tomorrow Project, Cancer Care Alberta; and Michael Widener, University of Toronto

Food environments shape dietary opportunities, yet little national evidence describes how neighbourhood-level deprivation intersects with food retail composition across Canada. This study examines how food-environment inequities vary across five regions and population-density gradients.The Canadian Index of Multiple Deprivation (CIMD) characterizes neighbourhood deprivation through four domains (residential instability, ethno-cultural composition, economic dependency, and situational vulnerability) specific to five macro-regions: Atlantic Canada, Québec, Ontario, the Prairies, and British Columbia. We linked CIMD scores at the dissemination-area level (n ≈ 56,000) to the 2024 Canadian Food Environment Database to assess associations with two food-environment indicators, the modified Retail Food Environment Index (share of health-supportive retailers; higher values reflect greater access) and restaurant retail-mix (balance of fast-food among restaurants; lower values indicate healthier mix). We estimated domain × macro-region and domain × population-density interaction models to explore heterogeneity across Canadian regions.Higher situational vulnerability was associated with less health-supportive food retail in British Columbia and Ontario, and greater fast-food share among restaurants across multiple regions. Areas with higher ethno-cultural composition showed more health-supportive retail in Ontario, Québec, and British Columbia, but divergent patterns in the Prairies. Population density substantially modified these relationships: the negative association between residential instability and health-supportive retail weakened in high-density settings, whereas the positive association between situational vulnerability and fast-food share strengthened.These findings reveal distinct regional and density-dependent food-environment inequities. Results suggest that health equity efforts must be geographically tailored to address how dimensions of deprivation intersect with local food retail composition to shape access.

Contextualized urban food environment research. *Chunjiang Li, University of Toronto; Michael Widener, University of Toronto; and Bochu Liu, Tongji University*

Anglo-Western-dominated food environment research faces transferability challenges when applied to improve dietary health in China and other non-Western countries. These challenges include data, measures, and theoretical pathways. This presentation proposes contextualized thinking and approaches that adapt these three dimensions of transferability to distinct spatial and socioctural contexts. Place-specific diet and health issues must be prioritized to advance both local and global food agendas.

Understanding historic changes in the number and geographic distribution of food outlets selling ultra-processed foods in Singapore, and implications for population diet and obesity. *Lucia Segovia de la Revilla, Cambridge CARES; Ronita Bardhan, University of Cambridge; Rudi Stouffs, National University of Singapore; and Thomas Burgoine, University of Cambridge*

In Singapore, the prevalence of obesity has been increasing in children and adolescent populations. The consumption of ultra-processed foods (UPFs), which are energy-dense, nutrient-poor and high in salt and sugars, could be contributing to obesity risk. Consumption of UPFs may be facilitated by the retail food environment. Our aim is to understand changes in the number and geographic distribution of food outlets selling UPFs between 2019 and 2026 across Singapore, and to understand their role in UPF consumption and obesity prevalence. We extracted number and location of food outlets selling UPFs (fast-food outlets, convenience stores, supermarkets) from government data. Participant data were from the SG100K cohort, including information on sociodemographic characteristics, UPF consumption, weight status, and residential address that will be used to calculate neighbourhood exposure to food retail. Across Singapore from 2019 to 2026, we observed a decrease in the number of fast-food outlets (729 vs 693) and an increase in numbers of convenience stores (402 vs 545) and supermarkets (526 vs 716), with geographic patterning observed only for fast-food outlets. A median 20% increase was seen in "younger" neighbourhoods (those built after 2006), whilst older neighbourhoods such as Orchard (40 vs 15) and Jurong West (47 vs 28) experienced declining numbers. The closure of fast-food outlets could be due to

COVID-19, which reduced the total size of Singapore's food service industry. Increases in numbers of convenience stores and supermarkets may reflect consumer demand for convenience. Associations between retail exposure, diet and health outcomes are not available currently.

A Geospatial Analysis of Clustering of Fast-Food Outlets around Schools in London (UK) and Associations with Childhood Obesity: A Longitudinal, Ecological Study.
Chiara Gericke, University College London (UCL); Adam Dennett, University College London (UCL); Clare Llewellyn, University College London (UCL); and Thomas Burgoine, University of Cambridge

Background: Childhood obesity may be influenced by not only the number of takeaway outlets near schools, but also by how strongly they are clustered. Clusters of outlets can make it quicker and easier to access multiple options. Yet the potential impacts of takeaway clustering have been poorly studied. We address this knowledge gap by using longitudinal data to investigate whether exposure to clustered takeaways precedes changes in childhood overweight and obesity.Methods: Longitudinal, ecological study using local government area data for Greater London from 2022/3 and 2023/4, in combination with data from the Ordnance Survey on takeaways, UK Government data on schools, 2019 Index of Multiple Deprivation data, and National Child Measurement Programme data on childhood overweight and obesity. Takeaway clustering was measured using point pattern analysis (multitype K-function), estimating the ratio of observed to expected K-function outlet density within 400 metres of schools. Associations with area-level prevalence of overweight and obesity (combined) were examined using cross-sectional ordinary least squares regression and multilevel linear models for the longitudinal analyses.Results: Takeaways were significantly clustered within 400 metres of schools across London. Stronger clustering was consistently associated with higher overweight and obesity prevalence, although the 2024 cross-sectional result did not reach statistical significance. The longitudinal analysis showed a significant positive association over time.Discussion: By moving beyond numbers of outlets, we identified takeaway clustering as a distinct exposure associated with childhood overweight and obesity. Our findings suggest that managing new takeaways in emerging or existing clusters may help address childhood obesity.

Paper Session

Urban Health Governance: Community Partnerships and Environmental Challenges

Are we working together or alone? An assessment of healthy city/community practice in Ontario, Canada.
Keely Stenberg, University of Waterloo; and Jennifer Dean, University of Waterloo

Healthy cities continually pursue improvements to their physical and social conditions with the aim of addressing inequalities and supporting human potential (World Health Organization [WHO], 2026). Now, four decades after inception, is the time to assess whether and to what extent the intentions behind the WHO's Healthy Cities movement are being realized through practice. As advocated, action on healthy city/community objectives requires multisectoral collaborations and good governance; however, support for value-based approaches is subject to decision-makers own experiences and beliefs (Linovski et al., 2025). Similarly, the co-development of initiatives can be stymied when common interests dissipate, policy windows close, and individual goals are addressed (Hensley et al., 2020). As such, understanding the motivations and capacities of those involved in creating healthy cities/communities is needed in order to ensure health-related goals are incorporated into decision-making (Pineo & Moore, 2021). Using the Province of Ontario, Canada as a case study, interview data from public health and planning practitioners, as well as documents guiding professional practice, are gathered to assess the rationales behind current healthy city/community initiatives. The results highlight that engagement with the healthy city/community ideal is subject to organizational and societal priorities, including client needs and pandemic responses, respectively. The findings suggest that collaborations on healthy city/community initiatives can be strengthened using the differing perspectives and skillsets of practitioners, while collaborations themselves can be reinforced through policy

directives. To conclude, the authors postulate on how current professional guidelines and practices limit the development of healthy city/community initiatives.

Residential odour impact and well-being in a steel manufacturing city. *Alexandra Auyeung, University of Toronto Mississauga; Joseph Munn, The Hospital for Sick Children, ICES, University of Toronto; Scarlett Rakowska, University of Toronto Mississauga; and Matthew Adams, University of Toronto Mississauga*

Malodours can be incredibly disruptive to daily life and can have severe negative effects on mental health. This is of particular concern in industrial cities, where facilities are often situated in marginalized communities, leading to disparities in burdens associated with environmental pollution and exposure, including odours. This study aimed to identify factors associated with odour reporting in Hamilton, Canada, colloquially known as “Steeltown”, and whether odours are affecting residents’ well-being. Odour and well-being questionnaires were administered to residents (n=18) living near the major industrial area, and air pollutant data was obtained from a central monitoring station. Generalized estimating equations were used to evaluate relationships among odours, factors influencing odour reporting, and well-being. The results showed that nitrogen dioxide and sulphur dioxide (OR=1.08 to 1.24) were associated with higher odds of reporting odours. Odours occurring 3-4 times per day (β=-2.69 to 1.06) and lasting an hour to most of the day (β=-1.94 to -1.25) were generally associated with lower well-being scores. Odour annoyance and the number of coping mechanisms implemented to reduce odours were associated with 0.517% and 0.820% changes in social and financial well-being scores, respectively. These results provide quantitative evidence of ongoing odour impacts in Hamilton, which can inform future urban planning strategies, public health policy development, and source control to reduce residential malodours and improve community health and well-being.

The CIHR Healthy Cities Research Initiative: Partnering for Active School Transportation in Hamilton, Ontario, Integrating Learnings from Helsinki, Finland. *Michelle Vine, Brock University; Kate Whalen, McMaster University; Heather Harvey, City of Hamilton; Peter Topalovic, City of Hamilton; Paul Shaker, Civicplan; Craig Cassar, City of Hamilton; Daniel Chong, Daily School Route; and Mark Chamberlain, Daily School Route*

Objective: To convene and strengthen cross-sector collaboration between City of Hamilton decision-makers, including public health personnel, city planners, health researchers, and local organizations to advance a model for scaling-up community-engaged active school transportation (AST) in Hamilton, Ontario.Methods: Our team was selected to participate in a five-day implementing healthy urban policy workshop in Helsinki, Finland in May 2025. This workshop was intersectoral and interdisciplinary, as we were composed of a population and public health researcher and four city-leaders - a senior elected official, a senior health policy official, a senior-level staff from public health, and staff from a community-based organization - Daily School Route (DSR). Drawing on learnings from Helsinki for the City of Hamilton, this collaboration focused on the issue of AST. We engaged in several team meetings to brainstorm, prioritize and discuss the challenges and opportunities associated with translating learnings to the Hamilton context.Results: We had a unique opportunity to form connections with each other, and with other teams in Helsinki, and were exposed to numerous topic areas, (governance, housing and homelessness, active transportation, child friendly cities, and suburban regeneration). Key challenges bringing learnings back to Hamilton related to cultural values (car-centric, individualism), lack of trust in government, jurisdictional challenges (funding, policies, priorities), and siloing. We learned about opportunities to build public trust through increased communication and engagement by incorporating community members' lived experience in planning decisions and integrating a more comprehensive approach to active school travel that includes community organizations, transit, place making, public health and transportation planning. A key focus of our engagement are several layers of engagement and involvement in AST in the City of Hamilton, Ontario.

Jurisdictions in Response to Public Health Emergencies from the Burlington Skyway Bridge: A Collaboration between the Hamilton-Oshawa Port Authority and Brock University. *Michelle Vine, Brock University; Meghan Robinson, Brock University; Patricia Hurst, Brock University; and Larissa Fenn, Hamilton-Oshawa Port Authority*

Background: The Burlington Skyway Bridge connects the southern edge of Burlington to the eastern edge of Hamilton, Ontario. The land near the bases of and under the bridge is currently used for commercial, industrial, and recreational purposes, with several piers, industrial offices, and pedestrian trails underneath. The unique location of the bridge means that its north end is in Burlington in the Halton Region, and the south end is in Hamilton. Hamilton, Halton, and Ontario authorities are, therefore, simultaneously and variously responsible for incidents on and maintenance of this bridge. The safety of individuals on and around the Bridge is of public health concern.Learning objectives: This presentation is on the jurisdictional issues associated with inter-agency involvement of response personnel on the Burlington Bridge, the intersections within and across their relationships, and how training may support these personnel through system navigation during a public health response. Methods: We conducted three qualitative interviews and two focus groups remotely with law enforcement and security officers. Transcripts were sent to participants to be reviewed for accuracy (member checking).Results: Results indicate how the location of the Bridge, its size, and the surrounding geography affect all aspects of public health emergency response. When discussing challenges, one participant described using the direction of travel to determine who responds to a call on the bridge, while another described that the location where the emergency takes place also influences the agency who responds.Conclusions: Findings indicate that this topic is a complex problem that requires investigation beyond rates of suicide and potential preventative measures. Prevention must be holistic, keeping in mind the various factors affecting suicide decisions and solutions are complicated by the geographic and architectural specificities of the bridge itself.

Paper Session

Urban Health: Community, Participatory, and Intervention-based Research

Design and Community Engagement in Spatial Web-Based Applications for Public Health: A Web Mapping Application Evaluation Framework. *Jose Alavez, University of Washington at Seattle; and Marynia Kolak, University of Illinois Urbana-Champaign*

The production of effective spatial visualizations in public health requires more than accurate analyses or geospatial expertise. Their success also depends on robust design frameworks and an in-depth engagement with potential users and stakeholders. However, the evaluation of design and community engagement in these visualizations is not an easy task due to the heterogeneity of spatial representations, technologies, collaborative practices, and spatial scales involved in the mapping process. To address this challenge, we propose a framework for exploring the roles of design and community engagement within web-based spatial visualizations in public health based on four elements: spatial data visualization approaches, technology utilization, design approaches, and community participation. To test this framework, we created two systematized reviews with academic articles retrieved from two databases: GEOBASE and PubMed. Although our results revealed differences in the data-visualization approaches and technologies employed by the articles retrieved from both databases, we found broad agreement regarding the lack of explicit design and community-engagement approaches within the publications. We consider our systematized review to be exploratory, and suggest that more extensive reviews are imperative for better understanding the true impact of our analytical framework.

The Built Environment in Obesity Prevention - A Map-Based Approach to Improve Health Equity. *Anne Kis, HafenCity University, Hamburg; Xingyue Wang, HafenCity University, Hamburg; Andre Landwehr, University of Hamburg; Han Zhou, Netherlands Organisation for Applied Scientific Research (TNO); Jeroen Pronk, Netherlands Organisation for Applied Scientific Research (TNO); Pepijn van Empelen, Netherlands Organisation for Applied Scientific Research (TNO); Luisa Schulz, HafenCity University, Hamburg; and Jörg Noennig, HafenCity University, Hamburg*

Obesity is a complex and multifactorial condition that must be understood not only at the individual and genetic levels but also within environmental and social contexts. Prevalence rates are particularly high in economically disadvantaged neighbourhoods

(social gradient). Despite numerous prevention strategies, vulnerable groups remain insufficiently reached. Structural preventive approaches - such as integrating health promotion into urban development and sensitising stakeholders and the local population to environmental health factors - are increasingly recognised as key elements for equitable obesity prevention. The overarching aim of this study is to promote health equity by enhancing environmental health literacy.Based on an extensive literature review, key indicators from two domains (facilities and design) were selected to develop an interactive map-based tool using open spatial datasets (e.g. OpenStreetMap). The tool enables dynamic modifications of urban scenarios to visualise built determinants of obesity. It has been implemented for six selected focus neighbourhoods, empowering decision-makers and local residents to access and explore spatial information related to health promotion.The tool visualises the results of a scoring process that evaluates the health-related attributes of streets segments within each neighbourhood in relation to physical activity, mental health, and healthy diet. Preliminary feedback from participatory workshops suggests the tool's potential to support equitable planning and community engagement, while also revealing challenges in data interpretation.The study IM-EQ was funded by the BMFTR (01EA2402), co-funded by the EU (ERA4Health). Authors on behalf of the IM-EQ consortium.

Power Dynamics in the Implementation of Street Rebalancing Initiatives: Implications for Urban Health Equity. *Veronique Gosselin, Université de Montréal; Sonia Daly, Université de Montréal; Elena Parnisari, Université de Montréal; Patricia Collins, Queen's University; and Katherine L. Frohlich, Université de Montréal*

BackgroundStreet rebalancing initiatives are urban interventions designed to contribute to healthier, more equitable cities. These interventions are inherently political, as they disrupt entrenched privileges and challenge automobile-centric urban development. Their implementation often reveals underlying power dynamics that can jeopardize efforts to advance urban health equity.ObjectiveThis study examines the mechanisms of power at play during the implementation of four School and Play Streets, part of the Levelling the Playing Fields research conducted in Montreal and Kingston, Canada (2021-2024). It aims to unpack how, why, by whom, and in which contexts power was used to constrain or enable these interventions.MethodsA critical realist evaluation methodology was used to document power mechanisms drawing on analyses of documents and key informant interviews. Avelino's (2021) framework of power contestations for research on social change was applied to better understand the power dynamics during implementation.ResultsMultiple forms of power were mobilized to resist interventions. "Power over" and "power to" manifested through law enforcement actions in socially marginalised neighborhoods, constraining children's use of public space. "Power to" was used by adult residents in non-socially marginalised neighborhoods to maintain street privileges. Fear of risk for children emerged as a form of "diffused power" shaping preferences and hindering implementation across contexts. Conversely, research teams and implementers leveraged "power with" and "knowledge as power" to constantly negotiate interventions.ConclusionAdvancing equitable urban environments requires greater attention to power dynamics shaping implementation processes. Understanding these dynamics is critical to addressing resistance and supporting inclusive, child-friendly cities.

How are public participation processes experienced in the context of urban regeneration initiatives? A descriptive interpretive qualitative study.. *Clara Blache-Pichette, Université de Sherbrooke; Magaly Brodeur, Univeristé de Sherbrooke; Mélanie Levasseur, Univeristé de Sherbrooke; and Martine Shareck, Université de Sherbrooke*

Urban regeneration projects increasingly involve public participation since it allows to better consider the social and health needs of local communities. However, common public participation practices have been criticized for perpetuating unequal power dynamics. Studying the perceptions and experiences of individuals involved in public participation processes in the context of urban regeneration initiatives can shed light on key aspects that are perceived as unequal and which could be improved. This interpretive descriptive qualitative study aimed to explore how individuals involved in a public participation process established for the Sherbrooke (QC) downtown regeneration initiative perceived their experiences and explained the factors that influenced them. We interviewed 13 members of an intersectoral committee created to

inform the regeneration initiative, and performed a reflective thematic analysis of interview transcripts. We found that although participants generally enjoyed working collectively, they reported tensions regarding: 1) the committee's composition, particularly its lack of citizen representatives; 2) difficulties balancing reflection and action, as well as individual and collective perspectives; and 3) participants' perceived (in)capacity to influence the decision-making process. Establishing equitable public participation processes remains complex. Our findings nevertheless highlight several dimensions of public participation processes upon which one could act to redress power imbalances and support more equitable processes.

Paper Session

Vaccines and Prophylaxis

HIV pre-exposure prophylaxis accessibility in the United States across scales: a geospatial analysis by different transportation modes. *Hui Luan, University of Texas Southwestern Medical Center; Yutian Zeng, UT Southwestern Medical Center; Chang Liu, Nanjing University; Shanqi Zhang, Nanjing University; Insang Song, Seoul National University; Wenwen Li, Arizona State University; Tamara Taggart, Rutgers University; and Yusuf Ransome, Yale University*

Pre-exposure prophylaxis (PrEP) is a biomedicine that has been proven effective in reducing HIV transmission if taken as prescribed. The distribution of PrEP providers, however, is not geographically even in the United States. States in the South have only 25 % of PrEP-providing clinics and the lowest PrEP uptake rates although they account for 49 % of new HIV diagnoses. Unsurprisingly, the Ending HIV Epidemic in the United States initiative (EHE) emphasizes improving PrEP accessibility as one of its major goals. This study quantifies spatial accessibility to PrEP providers by different transportation modes (driving, transit, walking, and cycling) for the entirety of the United States at the county level and for EHE prioritized jurisdictions at the Zip Code Tabulation Area level. We use the Gaussian Two-Step Floating Catchment Area (G2SFCA) approach for the measurement, accounting for variations in both demands (populations aged 13+) and supplies (i.e., provider opening hours) as well as distance decay effects. We also use Bayesian spatial statistical modeling to examine the association between PrEP accessibility and social determinants of health. Findings uncover notable disparities in HIV PrEP accessibility across space, by different transportation modes, by urbanity/rurality, and by socioeconomic and demographic characteristics. Our study fills the gap that driving is predominantly used to measure HIV PrEP accessibility at the national scale and has important implications for improving equity in PrEP accessibility.

Building consensus for future pandemic readiness through deliberative dialogues on trust in mRNA vaccines. *Rodrigo Curty Pereira, University of British Columbia Okanagan; Katrina Plamondon, University of British Columbia Okanagan; Amy Sanderson, University of British Columbia Okanagan; and Angeli Rawat, University of British Columbia Okanagan*

Public sentiments toward mRNA vaccines in Canada shifted dramatically during the COVID-19 pandemic. Public opinions moved from initial interest for solutions and alternatives to polarizing non-pharmacological interventions to fatigue and hesitancy. This shift became part of a broader change in narratives and general uptake of vaccines, with impacts extending beyond COVID-19. The loss of Canada's measles-free status in 2025, for example, signals collateral impacts as vaccination rates fell below the percentage needed for community immunity. The purpose of this research is to build consensus on the pandemic readiness pre-requisites for generating healthy trust among each other, in institutions, governments, and the scientific integrity of therapeutic innovations for public health. The study consists of a series of sequential deliberative dialogues (DDs) (Dec 2025-May 2026) involving diverse actors in vaccine promotion/acceptance. We have completed seven DDs (n=7) with researchers across disciplines, medical professionals, public health leaders, journalists, and industry representatives (n=64). While deliberative dialogues are still occurring, emerging threads of dialogue suggest that rebuilding trust requires recognizing vaccine sentiments in Canada as a sociopolitical issue that demands multisectoral and multiscalar efforts beyond those that can be led from within the health sector. Contributors differentiate vaccine acceptability from accessibility, focusing on sub-groups with lived experiences that justify skepticism towards government and medical

interventions. Potential pathways for action include cultivating community-based and citizen engagement in science and public health to address gaps in health and scientific literacy, and strengthening ties with local communities as responses to the impact of anti-vaccination and disinformation efforts online.

Spatial Optimization for Equitable PrEP Access: Comparing HIV Testing Site Adaptation and New Provider Siting in Atlanta. *Xin (Selena) Feng, University of Oklahoma; and Hui Luan, University of Texas Southwestern Medical Center*

Pre-exposure prophylaxis (PrEP) is highly effective in preventing HIV transmission, yet spatial inequities in access remain pronounced in the U.S. South, where HIV burden is disproportionately high. To inform HIV prevention planning, we developed a spatial optimization framework to identify underserved areas and evaluate practical strategies for improving PrEP access in Atlanta, Georgia. Using ZIP Code Tabulation Areas (ZCTAs) with new HIV diagnoses as demand locations and existing PrEP providers as supply, we assessed baseline coverage under a 5-mile service threshold and compared two intervention scenarios: adapting existing HIV testing sites to offer PrEP and constructing new PrEP provider locations using location-allocation modeling. Existing PrEP providers served 94 of 127 ZCTAs, leaving 33 ZCTAs with 1,529 new HIV diagnosis cases outside the 5-mile service radius. Adapting 20 existing HIV testing sites would extend coverage to 31 additional ZCTAs and reduce unmet demand to 127 cases (8% of demand). Constructing 16 new PrEP provider locations would fully cover all 33 previously unserved ZCTAs; notably, 10 new facilities would meet 92% of demand, comparable to the impact of adapting 20 existing HIV testing sites. These findings show that spatial optimization can move beyond identifying PrEP shortage areas to comparing feasible intervention pathways and supporting more efficient, equitable, and intervention-ready allocation of HIV prevention resources in high-burden urban settings. Future work will extend the framework by incorporating mode-specific travel times, feasible candidate facility space, and demand uncertainty through Monte Carlo simulation, while also examining impacts on PrEP accessibility, uptake, and racial disparities.

The changing geography of vaccination uptake in Calfornia, US. *Paul Delamater, University of North Carolina at Chapel Hill*

The 2025-26 measles outbreak in the United States is the result of years of declining rates of vaccine uptake in some regions, which has largely been driven by vaccine hesitancy and refusal. While vaccine hesitancy may seem to be a somewhat recent development, it is not; reports of hesitancy are as old as vaccines themselves. Modern vaccine hesitancy is largely fueled by misinformation disseminated via social and popular media platforms and can be traced to (now debunked) concerns regarding the measles, mumps, and rubella (MMR) vaccine in the late 1990s. In recent decades, multiple states have countered falling rates of vaccine uptake in the populations by implementing stricter vaccination-related policies. One such state is California, where, following a large measles outbreak at Disneyland, a series of laws restricting the availability of nonmedical and medical exemptions from school entry vaccination mandates were enacted in the mid-to-late 2010s. This research focuses on how and where vaccine uptake has changed in the years following the implementation of these new laws, focusing on geographic variation in the proportion of kindergarteners who are up-to-date on their MMR vaccination at school entry. A counterfactual model is built to estimate vaccination uptake (and refusal) in the absence of the new laws. This model is used to appraise the impact of the laws on the 2025-26 measles outbreak in California, which, despite having the largest population in the US, has had a relatively small number of reported measles cases.

Paper Session

Zoonosis

Ecology and Evolution of Swine Influenza in the United States. *Michael Emch, University of North Carolina- Chapel Hill; Varun Goel, University of South Carolina; Narmada Venkateswaran, University of North Carolina- Chapel Hill; Claudia Gaither, University of North Carolina- Chapel Hill; and Xiu-Feng Wan, University of Missouri*

Influenza A viruses are responsible for substantial human morbidity and mortality and have pandemic potential. This study combines medical geography, landscape genetics, and One Health approaches to examine the ecology and evolution swine influenza in the United States. Pigs are “mixing vessels” that can generate pandemic influenza strains through genetic reassortment among swine, avian, and human influenza viruses. We analyzed 1,909 swine influenza genomic sequences collected from 785 swine farms in 33 farming systems (companies) from 12 states in the Midwest from 2004 to 2023. Bayesian phylogeographic diffusion analysis was performed to identify transmission events within and between farm systems. Results show that transmission occurred both within and between systems and that viruses were more genetically similar at shorter distances. The transmission patterns aligned with expected pig movement across different stages of the farming system (different life stages of production) and that sow (female pigs that produce piglets) farms are central to transmission. High within system transmission was detected across farms located in the same region with less frequent virus spread to geographically distant farms. These findings show that swine farms are not closed systems and swine influenza viruses spread both within and between systems. The study highlights the important role of prevention and control for pandemic prevention and underscores the need for enhanced surveillance.

Trust and Zoonotic Disease Surveillance Among Nomadic Pastoralists in Sub-Sahara Africa: A Scoping Review. *Pascal Meho-Akakpo, Queen's University; Irenius Konkor, School of Public Health Sciences, University of Waterloo; and Elijah Bisung, The Queen's University*

Many emerging infectious diseases (EIDs) have their origin in livestock, with evidence suggesting 60% of human pathogens and 75% of EIDs originate from animals. In Sub-Saharan Africa, evidence suggests that nomadic pastoralists have comprehensive knowledge of their animals’ health, which uniquely positions them as potential surveillance partners in settings with weaker disease surveillance systems. Yet their willingness to participate in local disease surveillance programs depends on their trust in state institutions and the public health systems. We conducted a scoping review of primary literature on pastoralists' trust in public health systems in Africa to identify possible pathways through which such trust influences the detection and response to (re)emerging zoonotic diseases. The review identified four forms of trust, including interpersonal, institutional, affective, and cognitive trust, underpinning pastoralists' views and relationships with health and veterinary services. We contend that local disease surveillance systems built on principles of participatory disease surveillance with pastoral communities acting as partners could facilitate early disease detection and rapid response in resource-constrained settings.

Ecological drivers of swine influenza H3N2 transmission in the USA: a phylogeographic approach. *Narmada Venkateswaran, University of North Carolina- Chapel Hill; Claudia Gaither, University of North Carolina- Chapel Hill; Hossein Shadman, University of Missouri; Xiu-Feng Wan, University of Missouri; and Michael Emch, University of North Carolina- Chapel Hill*

Introduction Swine influenza has rapidly diffused across the US since 1998, when the H3N2 influenza epidemic increased genetic diversity of influenza viruses along with intensification of swine production systems. It is unclear the specific role ecological drivers play in H3N2 influenza transmission, particularly over large temporal and geographic scales. We aim to capture the transmission patterns of H3N2 in swine in the USA, and major ecological predictors driving these transmission events. Methods We source H3N2 state-level sequences for swine hosts from 2010 to 2026 (n=2677), and conduct phylogenetic and phylogeographic analyses in BEAST to calculate Bayes Factors (support for transmission events) between states. We then use a generalized linear model nested within BEAST with ecological predictors such as temperature, water area, geographic distance, and swine transportation to better capture drivers of these transmission patterns.Results With 82% of sequences being from Midwestern states, we observe strong clade clustering in these states and evidence of these being ecological sinks for influenza importation and persistence. We see that shorter geographic distance, lower temperatures, higher water area, and high rates of swine transportation are predictive of transmission events between states. Conclusion We provide support and evidence of the Midwest’s role as a complex hub in the transmission and persistence of swine influenza, and the role of ecological predictors in shaping these

transmission events. This can inform state-specific targeted intervention strategies for mitigating disease spread in swine herds.

Poster Session

Poster Session I

The Healing Home Project: Inclusive Therapeutic Design to Support Mental Health of South Asian Elders in GTA Retirement Homes. *Sindhuja Iyer, McMaster University*

As Canada's population ages and becomes increasingly diverse, retirement homes are emerging as long-term living environments for immigrant older adults, yet many are shaped by dominant Western assumptions about aging and care. This study examines retirement homes in the Greater Toronto Area as therapeutic landscapes for South Asian immigrant elders, focusing on how everyday spaces, routines, and cultural meanings shape mental health, wellbeing, and belonging.Grounded in therapeutic landscapes theory and environmental gerontology, the research adopts a qualitative, humanist case-study design across multiple retirement homes. Participatory and sensory methods including photovoice, informal interviews, sensory walk-along conversations, and participant observation are used to document residents' lived, embodied, and emotional experiences of place. Perspectives from family caregivers and frontline staff are incorporated to contextualize institutional practices and everyday care. Methodological triangulation is central to the design, integrating visual, narrative, spatial, and observational data to strengthen interpretive rigor and surface convergences and tensions across experiences.Data are analyzed using reflexive thematic analysis informed by place-based theory, attending to interactions between the built environment, social relations, and symbolic and spiritual practices. By centering first-generation South Asian older adults, the study addresses a gap in research on immigrant aging and residential care environments.The research contributes theoretically by extending therapeutic landscapes scholarship into underexamined retirement-home settings, methodologically by demonstrating the value of participatory and sensory triangulation in institutional care research, and practically by translating lived experiences into actionable, low-cost design and programming recommendations. These insights aim to support inclusive, culturally responsive, mentally supportive retirement-home environments across Canada.

Seeking Care Facing Doubt: Long COVID Experiences of Racialized Immigrants in the Region of Peel. *Kanupreet Arora, Department of Geography, Geomatics and Environment at UTM; Andrea Rishworth, University of Toronto; and Kathi Wilson, Department of Geography, Geomatics and Environment at UTM*

While long COVID is a growing concern in Canada, it continues to be neglected in research and policy, , especially among racialized and immigrant communities - two groups deemed to have higher rates of the condition. This poster presentation examines the symptoms and realities of managing long COVID among racialized immigrants in Peel Ontario. Drawing on data from focus groups, this study reveals that despite persistent and debilitating symptoms, participants often encounter systemic dismissal, disbelief, and barriers to diagnostic support and treatment. Despite advocating for themselves and their right to health care, patients' concerns were frequently minimized or disregarded by health providers. This neglect contributes to a cascade of adverse physical, mental, and social consequences, severely affecting participants' daily lives and overall wellbeing. The results highlight that culturally inclusive, equitable, anti-racist health policy and practices are needed to better support individuals managing the impacts of long COVID.

Caregiving as a Human Right. *Abbey Forbes, McMaster University; and Allison Williams, McMaster University*

As Canada's population ages and more working-age adults provide unpaid care for older adults and/or adults with disabilities, there is increasing reliance on legal frameworks to protect the rights and livelihoods of unpaid caregivers- specifically, workers' protection against discrimination based on Family Status and the employer's duty to provide Reasonable Accommodation.This study builds on Hirsh, Treleaven, and Fuller's (2020) analysis of Human Rights Tribunal (HRT) decisions from 1985-2016, using cases from

2016-2026 to conduct a qualitative content analysis of recent HRT decisions pertaining to unpaid caregiving. This study is an extension of Hirsh, Treleaven, and Fuller's (2020) research, with a specific focus on adult/elderly care recipients, as well as an explicit political-geographic lens. This lens will identify whether there are significant variations in case adjudication and/or outcomes across provinces.

Healthcare Access for Precarious Populations: A spatial analysis of Toronto, Canada.
Mishika Khurana, Toronto Metropolitan University; and Evan Cleave, Toronto Metropolitan University

Despite Canada's universal healthcare mandate, residents with precarious status, including refugees, asylum seekers, and undocumented migrants, face barriers that impede equitable access. Past research has highlighted that social and systemic barriers exist and limit to healthcare access, however, the spatial barriers to access for these groups has been under researched. This is particularly true for urban areas like the City of Toronto, Canada where precarious populations are geographically concentrated in areas typically characterized by lower service density and higher transit dependency.Given this context, this research presents a multi-method spatial analysis of healthcare access for precarious populations in the City of Toronto. First, a Two-Step Floating Catchment Area (2SFCA) measures census tract-level accessibility of precarious population (in this study represented by non-permanent residents, drawn from census data) to healthcare (emergency rooms, walk-in clinics, and community health centres, weighted by hours of operation) across different forms of travel (walking, driving, and public transit). Next, spatial regression models the healthcare access against census tract-level demographic socio-economic indicators, to explore how neighbourhood characteristics were associated with access.Preliminary findings indicate a spatial mismatch. While the downtown core of Toronto exhibits high provider density, precarious populations are increasingly pushed to the urban periphery where the 2SFCA scores identify diminished accessibility. Additionally, the spatial regression determined that areas with lower socio-economic status were associated with lower levels of healthcare accessibility.

Social Determinants of Health and MMR Vaccinations in School Children in Windsor-Essex: A Spatial Analysis.
Hamid Zarringhalam, Toronto Metropolitan University; and Evan Cleave, Toronto Metropolitan University

Measles remains a significant global public health concern, and has become increasingly urgent in Canada, where over 5,000 cases were reported in 2025. In response to rising measles incidence and declining vaccination coverage, Canada lost its measles elimination status in the fall of 2025. These national trends underscore the importance of monitoring and addressing measles vaccination coverage at the local level, including within Windsor-Essex County, Ontario. At the local level, spatial and demographic variability in vaccination uptake may create pockets of increased outbreak risk.Although measles vaccination has proven highly effective in reducing transmission and eliminating the disease in Canada, increasing vaccine hesitancy presents an ongoing challenge. Measles vaccination uptake is shaped by a complex interplay of factors—commonly described as social determinants of health (SDoH)—that influence access to healthcare services, trust in public health institutions, and vaccination decision-making.Given this context, the objectives of this research are: to investigate spatial patterns of measles vaccination (MMR) rates among school children in Windsor-Essex, Ontario, Canada; and identify neighbourhood-level social determinants of vaccination rates.Measles-mumps-rubella (MMR) vaccination coverage among approximately 15,000 students enrolled in elementary schools within Windsor-Essex County, collected under the Immunization of School Pupils Act (ISPA), serves as the primary dependent variable of this study. Spatial patterns of vaccination rates are analyzed through Global Moran's I, with clusters of high and low vaccination rates identified using Local Moran's I. Spatial and geographically weighted regression then model the MMR vaccination rates with neighbourhood-level SDoH characteristics.

Home as Therapeutic Landscape: The Role of Residential Environments in Healing.
Nicole Kreidler, West Virginia University

Cancer patients heal primarily at home, yet the capacity of residential environments to

support or constrain healing remains absent from survivorship frameworks and continuity of care models. The concept of therapeutic landscapes (Gesler, 1992) provides an interdisciplinary lens for examining this gap, framing health as produced through the interactions among place, social relations, culture, and lived experience rather than by medicine alone (Winchester & McGrath, 2017). Williams (2002) called for research on how shifting geographies of care were reshaping the meaning of home, but few took up this call. Established home care research examines palliative care and caregiver burden, but little is known about how patients actively manage recovery in their home environments. Disparities in breast cancer mortality associated with partner status indicate that the social, material, and environmental resources within the home are not solely related to quality of life but are also of clinical significance. The home's therapeutic capacity shifts across treatment and survivorship, reshaping the body's relationship to familiar space. Fatigue transforms distances, neuropathy destabilizes familiar ground, and cognitive depletion reduces attentional resources for daily tasks. For patients in resource-constrained Appalachian communities, home may be the only modifiable factor through which control can be reclaimed and possibilities for deeper healing established. Drawing on a pilot study with breast cancer patients in West Virginia, this poster presents a methodology integrating patient narratives, photo-elicitation, and participatory mapping to reveal how home environments support or constrain healing, laying methodological groundwork for positioning the home as an active participant in survivorship care.

Methods - Extracting historical National Weather Service warning, watch, and advisory data from the Iowa Environmental Mesonet for spatial analysis. *Kevin Boes, MPH, Creighton university School of Medicine, Omaha, Nebraska 68178; Matt Ogledzinski, MD, Creighton university School of Medicine, Omaha, Nebraska 68178; and Dhitinut Ratnapradipa, Creighton University School of Medicine, Omaha, NE 68178*

With the increases in frequency and severity of extreme weather, a research focus is risk prediction based on historical weather data. The Iowa Environmental Mesonet is maintained by Iowa State University and processes data from the National Weather Service into a database containing tabular and spatial formats. Natural hazards are classified as advisories, watches, and warnings depending on the immediacy and severity of threats. While this database is accessible, it may be difficult to conduct spatial analysis because it does not contain explicit geographic identifiers.This presentation discusses methods for consuming spatial data on flood warnings for visualization and spatial analysis, focusing on processing the data for use in a county-level netCDF format. The presentation will also explore other hazards available in this database and evaluate whether they may be processed effectively using the methods described.

Improving the health care landscape of early pregnancy emergency care: A qualitative GIS approach. *Selasi Dorkenoo, Toronto Metropolitan University*

Background: Early pregnancy assessment clinics (EPACs) provide quality and ongoing care to women experiencing early pregnancy complications. Available only as outpatient clinics in Toronto hospitals, women encounter barriers including limited hours of operation, a two-day wait for an appointment, and various referral criteria.Objective: Conduct site selection of community-based EPACs in a Toronto neighbourhood to improve women’s access to early pregnancy emergency care.Methods: This research will use a Feminist GIS conceptual framework to guide a multiphase mixed methods approach. In Phase 1, a quantitative analysis will reveal the historical travel patterns of women experiencing early pregnancy complications toward emergency departments in hospitals with and without EPACs. In Phase 2, observation during field visits to a selected neighbourhood will provide context on the social and environmental factors enabling and constraining women’s travel behaviour. In Phase 3, a qualitative GIS (QGIS) methodology will be developed to select ideal locations of new EPACs in the study area, conducive to women’s daily activity.Contributions: This research will contribute a QGIS methodology for the site selection of EPACs, promoting equitable access to women’s health services and informing health care planning. Health geographers, service providers, and leaders are invited for constructive engagement on how early pregnancy care can be made more accessible.

Interventions to improve health and the determinants of health among sex workers

living with HIV in Sub-Saharan Africa: a systematic review. *Kailey Ziehl, Queen's University; Miesha Polintan, Queen's University; and Elijah Bisung, The Queen's University*

Sex workers living with HIV (SWLH) experience significant health disparities, including higher rates of sexually transmitted infections, limited access to health services, and increased violence and discrimination. This systematic review examined the effectiveness of health and social interventions designed to improve HIV-related outcomes and address the broader social and structural determinants of health among SWLH. Following PRISMA guidelines, we searched nine electronic databases for peer-reviewed studies published between 2000 and 2025. Of 2,590 articles identified, 18 studies were included in the final review. Study screening, data extraction, and quality appraisal were conducted in Covidence using CASP tools. Findings were synthesized thematically, including interventions comprised of biomedical, behavioural, and structural domains. Biomedical approaches included ART delivery, differentiated treatment, and linkage to care; behavioural approaches included adherence counselling, peer support, and mobile health reminders; and structural approaches included stigma reduction, empowerment, and community-led models. Interventions integrating all three domains showed the strongest evidence of improved ART initiation, adherence, and retention in care. Peer- and community-led approaches were especially important for building trust and sustaining engagement. However, male and transgender SWLH were largely absent from existing interventions, and structural barriers such as stigma and criminalization continued to limit program reach and sustainability. Integrated, community-led, and stigma-sensitive interventions appear most effective for improving HIV outcomes among SWLH. Future interventions need to be more inclusive of male and transgender sex workers and address structural barriers to support equitable progress toward the UNAIDS 95-95-95 goals, while supporting the health and well-being of SWLH through holistic approaches that address both medical and socio-economic needs.

Examining place-based factors that facilitate immigrant settlement outside of gateway cities. *Emily Dang, University of Waterlooo; Jennifer Dean, University of Waterloo; and Keely Stenberg, University of Waterloo*

Immigration is a primary contributor of population growth in communities worldwide, with Canadian migration rates reaching historical levels. Recent immigrants in Canada often settle in large urban areas, particularly within traditional gateway cities. Increasingly, small and rural communities are turning to international migrants to support long term-viability, but face challenges providing sufficient resources, services, and infrastructure to aid immigrant settlement. This study examines how smaller communities can attract and retain diverse newcomers to support community well-being. Qualitative methods were used to explore the factors that shape immigrant settlement in smaller communities based on Zhuang's (2023) framework of Place-Based Factors for Immigrants' Integration and Retention. A total of 29 virtual semi-structured interviews were conducted with key informants working in 21 non-traditional gateway communities across Ontario, one the most diverse and populous provinces in Canada. Using The Framework Method, we analyse the interview data guided by the five factors presented in Zhuang's (2023) framework. Findings highlight the relevant importance of Zhuang's place-based factors for immigrant settlement in smaller communities: housing, employment and economic development, educational spaces, faith-based organizations, and community-based organizations and community spaces. More specifically, immigrant attraction and retention were influenced by access to affordable and appropriate housing, employment opportunities and skills, institutional and language supports, cultural and faith-based connections, and newcomer services and supports. The study sheds light on how smaller communities can prioritize physical and social infrastructure to foster an environment where immigrants not only settle but remain over the long-term. Limitations and future research directions are also discussed.

Lung Cancer Survival in Michigan: A Spatial Epidemiological Study. *Michelle Bullock, Michigan State University*

Lung cancer is the third most common cancer in the United States of America and it is the leading cause of cancer deaths today. Despite lung cancer screening recommendations, lung cancer is often diagnosed at an advanced stage, which is less

conducive to treatment and long-term survival. This study therefore, utilized data on lung cancer patients in Michigan (2000-2022) obtained from the Michigan Department of Health and Human Services to detect clusters of poor lung cancer survival. Non-small-cell lung cancer (NSCLC) cases were queried, including adenocarcinoma, squamous cell carcinoma and large cell undifferentiated. The stages of NSCLC included in situ (0), early/localized (I), regional (II, III) and distant (IV). Regional and distant were combined to define advanced stage lung cancer. Using this cohort, the residential addresses at time of diagnosis were geocoded and spatially joined to census tracts as the unit of analysis. The time from diagnosis at different stages to death, if occurred, was calculated in days. An exponential space-time model was estimated, controlling for potential individual-level confounders (age, sex, insurance coverage and smoking history) in SaTScan cluster detection software. The findings from this study were mapped to show areas in Michigan with low lung cancer survival. These areas were recommended for improved lung cancer screening accessibility and utilization in high-risk population groups.

Traffic noise impacts on elementary school standardized test scores in Toronto, Canada. *Sughra Syeda Rizvi, Department of Geography and Environmental Studies, Toronto Metropolitan University; and Tor Oiamo, Department of Geography and Environmental Studies, Toronto Metropolitan University*

This study examines the association between traffic noise levels at elementary schools in Toronto, Canada, and provincially standardized test scores for the assessment of reading, writing and mathematics at grade levels 3 and 6. Previous research shows that various sources of environmental noise can impact cognition and mental health, in addition to increasing the risk for chronic cardiovascular and metabolic diseases. Road traffic is the single most harmful source of noise on health and wellbeing in general, and studies have associated excessive exposures in schools and learning environments with impaired cognition and mental deficits across a number of indicators, including standardized test scores as well as individual assessments. This study utilized traffic noise propagation model estimates of exposure levels at school building facades, standardized test data from the Ontario Education Quality and Accountability Office, and data from the Toronto District School Board's Learning Opportunities Index (LOI) to examine traffic noise impacts on school-level test scores and potentially confounding or interacting effects of socioeconomic factors as measured by the LOI. The results show a significant and negative effect of traffic noise on standardized test performance, and potentially additive effects of social and material deprivation.

Flourishing Youth (FLY) Zones - A Population Health Framework for Identifying and Studying Place-Based Youth Well-being. *Jan Holtge, Resilience Research Centre, Dalhousie University*

Globally, youth well-being has declined for over a decade. This trend highlights the need for population health approaches that address multiple, interacting dimensions of youth well-being simultaneously and upstream of clinical intervention. Despite this need, there are no systematic guidelines to help identify and study environments in which youth well-being is consistently high, stable over time, and equitably distributed across social groups, or to determine how existing datasets can be used for this purpose.This project aims to develop a conceptual and methodological framework for identifying and studying Flourishing Youth (FLY) Zones in Canada—geographic areas characterized by disproportionately high, stable, and equitably distributed youth well-being—using the best available data within a given jurisdiction. The project establishes the methods, decision rules, and data strategies required for future empirical population health research. The objectives are to (1) define youth well-being and equity priorities, (2) assess the Canadian data feasibility across provinces, territories, and the country, (3) identify complementary determinants of youth well-being in open-access, place-based datasets, and (4) develop a cross-jurisdictional framework for identifying and studying FLY Zones.The project will deliver Canada's first transferable research framework for studying place-based youth well-being under heterogeneous data conditions. By shifting the attention to population-level environments that shape youth well-being, the framework strengthens the population health system's capacity to design everyday environments in which prevention and promotion of youth well-being are built into the

fabric of daily life, reducing reliance on individual self-management or crisis-driven responses.

Poster Session

Poster Session II

Cross-sectional correlations between county-level flooding and incidence of flood-related diagnoses. *Kevin Boes, MPH, Creighton university School of Medicine, Omaha, Nebraska 68178; Timothy Guetterman, PhD, University of Michigan, Ann Arbor, MI; and Dhitinut Ratnapradipa, Creighton University School of Medicine, Omaha, NE 68178*

Flooding is a potential risk factor for several negative health outcomes such as acute gastrointestinal illness, skin rashes, chemical poisoning, bacterial respiratory infection, zoonotic pathogen infection, and non-contagious respiratory issues, but results have been mixed. Therefore, we sought to analyze inland flood associations with selected medical diagnoses (acute gastrointestinal, acute respiratory, and COPD). County-level areal flood (FA), flash flood (FF), and flood (FL) warnings for 1 January 2018 to 1 April 2023 for Nebraska and bordering states (Iowa, Missouri, Kansas, Wyoming, Colorado, and South Dakota) were linked to inpatient and outpatient diagnosis data from Nebraska hospitals. Selected diagnoses were assessed for inpatient and outpatient encounters and calculated as rates per 1,000 population, examined as day of flood and separately for various lag-times. Substantial variability exists in the relationship between flooding and incidence of inpatient and outpatient gastrointestinal illness, respiratory infection, and COPD across both lag and county-level geography. Several Nebraska counties (Thomas, Perkins, Johnson, Deuel, Franklin, and Hayes) exhibited stronger correlations between flooding and incidence of specific diagnoses on days following the flood events. Some counties had decreased diagnoses (negative correlations) while others had increased diagnoses (positive correlations), suggesting that effects vary by locality and circumstances. Areas with positive correlations may need to plan for additional healthcare resources during times of flooding.

Spatial Clustering Patterns of Short-Stay Care Services in Designated Cities in Japan. *Tomona Ishimaru, University of Tsukuba, Graduate School of Comprehensive Human Sciences; and Miho Omura, University of Tsukuba, Institute of Human Sciences, Department of Disability Sciences*

Short-stay (respite) care services in Japan play an essential role in supporting people with disabilities who require temporary care due to circumstances such as caregiver illness and constitute a key institutional foundation for community-based living. However, the geographic distribution of these services has not been sufficiently examined from a quantitative spatial perspective. In particular, analyses that account for differences in operational structure and bed capacity remain limited.This study aims to examine population coverage and bed capacity within catchment areas per 10,000 population of short-stay care services in designated cities across Japan and to analyze their spatial clustering patterns. Short-stay services are distinguished into two types based on operational characteristics: those co-located with residential facility care or medical care services and those operating independently. Spatial data processing and visualization are conducted using a geographic information system (GIS). The unit of analysis is the administrative district, for which all indicators are calculated. Spatial autocorrelation is assessed using Global Moran's I, and local clustering patterns and spatial inequalities are identified using Local Moran's I (LISA).The findings and conclusions of this study will be presented at the conference. This study examines whether short-stay care services, as a key infrastructure supporting community living for people with disabilities, are appropriately distributed in areas where they are needed. By considering both accessibility and bed capacity, it clarifies the spatial structure of service provision within urban areas and contributes empirical evidence on spatial equity and service distribution in health and medical geography.

Reproductive Health across the Life Course: Linking Early Menarche to Disease. *Brianna Chan, University of California, Santa Barbara; Liz Ackert, University of California, Santa Barbara; and Fiona Hass, University of California, Santa Barbara*

The average age at menarche (i.e., age at first menstruation), an important indicator of

population health, is declining among women in the United States, giving rise to public health concerns. Of particular concern is the link between early menarche and the later development of poor health outcomes, such as metabolic disorders and inflammatory diseases. We use a geosocial framework to investigate the question, “Is earlier age at menarche associated with a higher likelihood of developing diabetes, high blood pressure, and high levels of systemic inflammation later in life, and how does one’s neighborhood context modify these relationships?” We approach this question by estimating a series of multilevel regression models to (1) investigate associations between early menarche and later development of diabetes, high blood pressure, and high levels of systemic inflammation while controlling for individual- and household-level predictors, and (2) explore the extent to which neighborhood-level characteristics across the life course moderate these associations. We use data from The National Longitudinal Study of Adolescent to Adult Health (Add Health), in which we analyze a nationally representative sample (when weighted) of females born from 1976 to 1982 in the United States. Preliminary results show a potential positive association between early menarche and the later development of diabetes, high blood pressure, and high levels of systemic inflammation.

Association Between Public Health Unit Finding and Deaths of Despair in Ontario Before and During COVID-19. *Jason Were, University of Alberta; Maria Wong, University of Alberta; Brendan Smith, Public Health Ontario; and Roman Pabayo, University of Alberta*

Background: Mortality from suicide, drugs, and alcohol related conditions, collectively known as deaths of despair (DoD), has increased in Canada, with further escalation observed during the COVID-19 period. The role of robust and equitable public health systems in preventing DOD is underexplored. We examined the association between public health unit (PHU) funding and DoD outcomes in Ontario, across the pre-COVID and COVID pandemic periods, and assessed the heterogeneity across gender, racialized status, household income and deprivation.Methods: Two cohort samples were derived from the 2016 census to represent the pre-COVID (April 2018-March 2020) and COVID (April 2020-March 2022) periods. The cohort data were linked to PHU-level per capita substance use and injury prevention (SUIP) funding. Multilevel Cox proportional hazards models were used to estimate the associations between SUIP funding and cause-specific mortality due to suicide, drug and alcohol.Results: In the pre-COVID period, one-dollar increase in SUIP funding was associated with an 18% decrease in hazards of drug deaths (HR=0.82; 95% CI 0.73-0.93). This decrease was particularly substantial in men, White people, low-income earners and residents of deprived neighborhoods. During the COVID period, one-dollar increase in SUIP funding was associated with a 20% increase in hazards of drug deaths (HR=1.20; 95% CI 1.01-1.43), specifically among women, White people, low-income earners and residents of deprived neighborhoods.Conclusion: Overall, our findings suggest that sustained and resilient public health investment is critical for preventing DoD, as gains observed prior to the pandemic were not preserved during COVID-19 disruptions.

“People of color, poor people is not as urgent as what they consider White people who are privileged 'cause our hurt is not like their hurt”: Utilizing a neighborhood political ecology framework to explore the impact of neighborhoods on residential health inequities. *Amanda Kong, Wake Forest University School of Medicine; Jennifer Richmond, Wake Forest University School of Medicine; Sandy Aguilar-Palma, Wake Forest University School of Medicine; Lilli Mann-Jackson, Wake Forest University School of Medicine; Ashley Strahley, Wake Forest University School of Medicine; Laura McDuffee, Wake Forest University School of Medicine; Tara Strigo, Wake Forest University School of Medicine; Carla Mena Arredondo, Wake Forest University School of Medicine; Shaniqua Lewis, Wake Forest University School of Medicine; Nadine Barrett, Wake Forest University School of Medicine; and Clarissa Diamantidis, Wake Forest University School of Medicine*

Introduction: Winston-Salem (WS) is a mid-sized city in North Carolina (USA) and home to RJ Reynolds, one of the largest tobacco companies in the USA, who recruited a large workforce of Black individuals to WS. Today, WS faces geographic and social stratification, divided by a major highway: East (higher proportion of Black and Hispanic/Latine communities; lower socioeconomic status [SES]) vs. West (predominantly White; higher SES). We use a neighborhood political ecology framework to explore how historical, political, and economic factors shape the production and

maintenance of health and illness among WS residents.Methods: We conducted six focus groups in English (2 East, 1 West) and Spanish (1 East, 2 West) with 72 adult WS residents (July-September 2025). Discussions explored participant perspectives about neighborhood resources and harms that affect health. We analyzed transcripts using an inductive-deductive thematic approach.Results: Participants, especially those from East WS, discussed how city officials influence the 'dividing' and 'cutting' of communities, driving resource allocation. Residents explained that racial identities and SES determine which neighborhoods are prioritized for resources (e.g., healthcare access, healthy food) and exposed to harms (e.g., tobacco/alcohol outlets). Participants cited neighborhood social cohesion as a strength for political advocacy. East WS residents described histories of residential displacement due to economic development, leading to decreased community connection and access to health-promoting resources.Discussion: The spatial stratification of WS residents has led to the inequitable distribution of health-promoting resources and harms, as well as decreased opportunities for collective organizing to promote community health and wellbeing.

Toxic Geographies: Mapping Lead Exposure in Chicago. *Laine Sullivan, University of Colorado Boulder*

Lead exposure remains one of the most persistent indicators of racialized health disparities in the United States. Emerging research links lead water service line (LSL) distribution to historical neighborhood disinvestment. The consequences of lead exposure accumulate across the life course, manifesting in impaired cellular energy metabolism, neurobehavioral disorders, and measurable reductions in cognitive performance. Reporters at WBEZ Chicago found that 85.7% of water service lines are suspected of containing lead, a corrosive elemental neurotoxin. One of the most consequential developments in Chicago's publicly available water data is the 2025 release of vector data on lead service line locations. Prior to this release, researchers studying lead contamination in Chicago were largely constrained to using water quality sampling and blood lead level surveillance data, typically reported as the proportion of children under six testing above reference values by Zip code or community area, as a proxy for understanding where lead exposure risk was most concentrated. I developed a web-based dashboard that integrates LSL location data, sociodemographic indicators, and spatialized structural racism data. . By employing kernel density estimation, hotspot analysis, Moran's I spatial autocorrelation, and bivariate choropleth mapping, this work provides novel insights into how LSLs reproduce existing spatial patterns of racial and socioeconomic inequality by operating as mechanisms through which structural inequality becomes embodied harm, materialized in essential water infrastructure. Paired with qualitative interviews with local political actors to understand the discursive and strategic framing of LSLs. This project has important implications for public health and policy in Chicago, and the US more broadly.

Compound Temperature-humidity Extremes Increase Acute Mental Health Outcomes: A 12-year Case-crossover Metropolitan Study. *Xin Huang, Southern University of Science and Technology*

Mental disorders (MDs) are a leading global disease burden, and compound temperature-humidity extremes may trigger acute mental health issues, with limited comprehensive evidence on their combined effects. This 12-year (2011.10-2023.06) time-stratified case-crossover study in Shenzhen analyzed 33,568 MDs-related EMS calls (ICD-10 F01-F99), using humidex/heat index as exposure indices (extremes = >90th percentile) and a conditional logistic model to assess nonlinear/lagged associations, adjusting for meteorological and air pollutant covariates. Subgroup effects by age, sex, location and season were examined, with sensitivity analyses verifying robustness. Elevated humidex/heat index significantly increased EMS call risk, with overall ORs of 1.10 (95% CI:1.05-1.15) for humidex extremes and 1.10 (95% CI:1.06-1.14) for heat index extremes. Risk peaked at lag day 1 and persisted over cumulative lag 0-7 days. Women, individuals ≤34 years, workplace callers and warm months (May-Oct) showed higher susceptibility; a U-shaped association emerged in non-warm months. High-risk thresholds were humidex >43.09 and heat index >88.36 (OR>1.15). Compound temperature-humidity extremes elevate acute mental health risk in Shenzhen, with population-specific vulnerabilities and clear lag effects. The identified thresholds support climate-related mental health early warning system.

Development and Validation of a Machine Learning based Site Selection Model for Primary Healthcare Facilities in Metropolitan China. *Xin Huang, Southern University of Science and Technology*

Background: Primary healthcare (PHC) facilities play a critical role in preventive care and general medical services. Current urban PHC site selection, typically a manual process at the community level, suffers from insufficient consideration of surrounding neighborhoods, resulting in poorly coordinated service networks and low operational efficiency in facility selection. Machine learning-based modeling approaches offer a promising solution by enabling multi-factor integration for site suitability assessment, thereby assisting governments in rapid decision-making. However, no comprehensive machine learning framework has yet been established specifically for spatial suitability evaluation of PHC facilities.Methods: A model framework was developed to evaluate site selection suitability for PHC facilities. We collected geographical data of PHC facilities in Beijing, Shanghai, Guangzhou, and Shenzhen, along with three categories of explanatory variables: physical geographical factors, socioeconomic factors, and urban built environment factors. All spatial data were converted or resampled into 100m×100m grid units as standardized analytical units. A machine learning model (Random Forest, RF) was subsequently constructed and trained, with SHapley Additive exPlanations (SHAP) and variable importance metrics applied to interpret factor contributions. The trained model was ultimately employed to generate predictive site suitability maps for PHC facility placement across the four metropolises.Finding: We developed a RF model to predict the suitability of urban PHC facility site selection, and employed SHAP for both variable importance assessment. The model has achieved area under the receiver operating characteristic curve values of more than 0.96 in all four metropolises: Beijing (0.9811), Shanghai (0.9674), Guangzhou (0.9679) and Shenzhen (0.9863), indicating its usability and applicability. The ranking of determinant importance reveals that socio-economic factors (population density and urban land use classification) consistently emerge as the most critical factors influencing the siting of PHC facilities. The relative importance of other factors varies across metropolises, reflecting local contextual differences; however, a general trend indicates that physical geographical factors hold greater significance than urban built environment factors in determining facility sites.Interpretation: Our study developed an evidence-based machine learning framework for the site selection of PHC facilities. The findings reveal that socio-economic factors are the core determinants influencing the siting of these facilities, followed by physical geographical factors, while urban built environment factors contribute minimally. This research provides evidence-based support for government agencies to scientifically and rationally plan and establish urban PHC facility networks.

Intergenerational Community in Multi-Unit Housing: A strategy to address ageism. *Ruth Tamari, McMaster University*

Background:Ageism and the marginalization of older persons hinders older individuals from participating in their community and society, and exacerbates age segregation and social isolation. Intergenerational practice brings together people of different ages in purposeful activities which often promote social connectedness; they can also surface intergenerational tensions and conflicts. Intergenerational practice can be cultivated with planned programs, and it can also happen informally and organically.Objectives:This study investigates the process, benefits, challenges and value of intergenerational community development in a multi-unit building.Methods:Qualitative study with a community-based participatory research approach, in collaboration with residents of a high-rise building in Toronto, Ontario. Methods included individual interviews, one focus group and one follow-up feedback session to discuss the identified themes.Results:A total of nine people participated including two youth, one middle-aged adult and six older adults. Data analysis revealed five main themes: 1. Structural Components;2. Growing and Cultivating IG Community;3. Benefits and Outcomes;4. Roles of Generational Cohorts;5. Who is MissingConclusion:This study focused on intergenerational community in multi-unit housing where residents provided age-inclusive programs, thereby promoting a sense of belonging and connectedness. Results emphasized the importance of reflecting on the process and practice of inclusion of residents across generations throughout the

planning and implementation of intergenerational initiatives in multi-unit housing, and will inform further practice and research.

Bounded Mobilities: Exploring Adolescents' Mobility Habits and Constraints in High-Rise Urban Environments. *Emma Cervinka, University of Toronto; Lindsey Smith, Department of Geography and Planning, University of Toronto; Adrian Buttazzoni, University of Waterloo; Alexander Wray, The University of Tennessee Knoxville; Ryan Lo, Urban Minds; Leia Minaker, University of Waterloo; and Jason Gilliland, The University of Western Ontario*

Active mobility is widely understood to support health and well-being. However, adolescents navigate urban environments under unique circumstances of limited financial resources and developing autonomy. As a result, their mobility patterns tend to rely more on self-propelled modes, with their choices shaped by the spatial realities of their everyday lives, not health considerations. Using a co-created research approach, this project examines how urban-dwelling adolescents think about "getting around" in their daily lives, and what constrains their mobility choices. Twenty-two adolescents (13-18) participated in participant-led go-along interviews in diverse neighbourhoods in Kitchener-Waterloo and Toronto. During these interviews, youth guided researchers to places they felt influenced their health. Routes and locations were recorded, while participants classified locations as "healthy" or "unhealthy." Interview transcripts were analyzed using inductive thematic analysis to generate themes about mobility choices, and explore the environmental, social, and temporal factors that shape movement. Preliminary analysis has identified a theme of "bounded mobilities," in which financial limitations, safety concerns, and weather constrain transport-related decisions. Gendered patterns have also emerged, with young women perceiving greater danger and self-imposing mobility restrictions, while young men describe larger spatial ranges despite encountering unsafe situations. Time pressures also shape mobility, with participants choosing modes and destinations based on travel time while balancing familial responsibilities, homework, and extracurriculars. These findings contribute to adolescent geographies by highlighting the importance of designing youth-friendly public spaces and active travel infrastructure that supports equitable mobility, reduces environmental and social constraints, and promotes healthy behaviours throughout adolescence and beyond.

Active Commuting and Air Pollution Risk Perception in a Changing Urban Environment: Evidence from Markham, Ontario. *Esther Martel, McMaster University; and Bruce Newbold, McMaster University*

Active transportation (AT) is widely promoted to improve population health and reduce greenhouse gas emissions; however, it also exposes commuters to traffic-related air pollution, creating a complex health trade-off. Existing research has largely focused on exposure and health outcomes in major urban centres, with less attention given to how active commuters perceive and respond to these risks in suburban contexts. This study examines how active commuters in Markham, Ontario-defined as individuals who regularly walk or cycle for transportation purposes-perceive and respond to air pollution during everyday mobility. It also contributes to comparative research on urban-suburban differences in Environmental Health Literacy (EHL).A cross-sectional survey of 159 active commuters assessed perceptions of air quality, awareness of exposure risks, and behavioural responses during AT. The survey incorporated individual characteristics, commuting patterns, and perceived built-environment conditions. Findings were interpreted using the Health Belief Model to understand how perceived susceptibility, severity, benefits, and barriers influence protective behaviours.Preliminary results indicate that greater concern about air pollution is significantly associated with perceiving air quality as a commute issue and with greater awareness and use of the Air Quality Health Index. Knowledge did not predict concern but did influence trade-off perceptions, with more knowledgeable respondents more likely to report that physical activity benefits outweigh pollution risks. Respondents supported increased air quality information and indicated willingness to adjust commuting behaviour based on health guidance.

The Diminishing Returns of Greenness: A Spatially Adjusted Temporal Analysis of Taxon-Specific Biodiversity and Community Mental Health. *Philip Home, University of Nottingham*

Background: While exposure to natural environments is consistently linked to improved mental health, the specific role of biological diversity, distinct from natural greenspace remains poorly understood. Methods: Utilising a repeated cross sectional dataset of over 33,000 Lower Layer Super Output Areas (LSOAs) in England, this study isolates the impact of taxon-specific biodiversity on community mental health needs, utlising the Small Area Mental Health Index (SAMHI). To rigorously account for unobserved geographic, temporal, and spatial confounding, we applied Two-Way Fixed Effects (TWFE) models with a 28.45 km spatial Conley standard error correction. Results: Spatial adjustment revealed ecological divergence. Only the species richness of stationary taxa (Plantae) maintained a significant, protective effect on mental health needs (estimate = -0.018, p = 0.042). Highly mobile taxa, including Aves (estimate = 0.014, p = 0.231), Mammalia (estimate = -0.014, p = 0.150), and Amphibia (estimate = -0.002, p = 0.800), were rendered non-significant, suggesting previous associations in the literature could be artifacts of regional spatial autocorrelation. Moderation analyses demonstrated that while socioeconomic deprivation strongly predicts poorer mental health (estimate = 0.268, p < 0.001), it does not significantly moderate the benefit of species richness (interaction = -0.010, p = 0.242), indicating a universal protective effect across wealth strata. Crucially, a highly significant positive interaction emerged between Plantae richness and total greenspace volume (interaction = 0.009, p < 0.001). Conclusion: Placed against the protective main effect, this positive interaction demonstrates diminishing returns: plant diversity proves most protective in environments with the lowest total green space.

Registration

Registration

Welcome and Opening Address

Welcome and Opening Remarks

Workshop

ESRI Mapping Workshop