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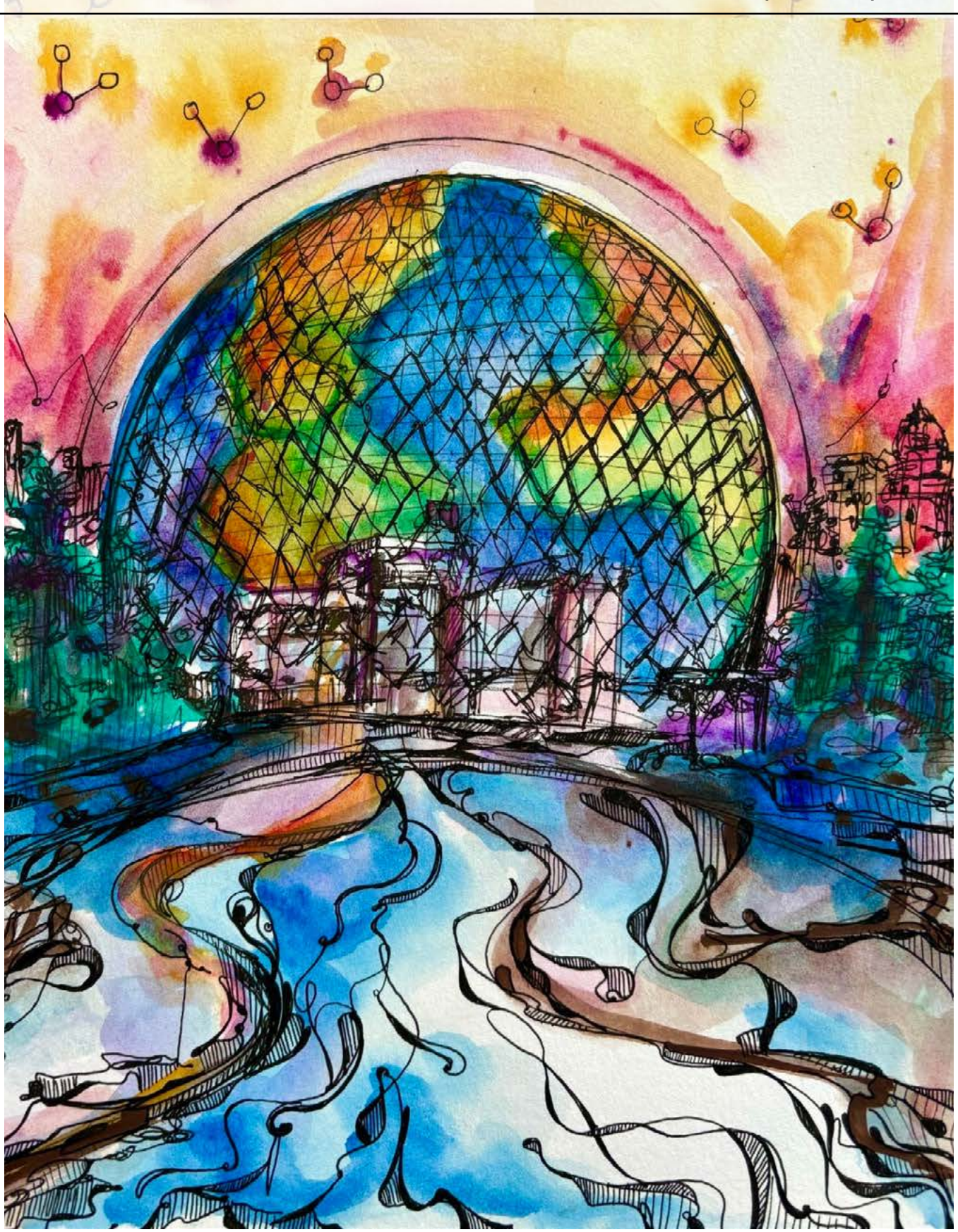

2nd Annual School of Population and Global Health (SPGH) Research & Public Health Day Symposium. McGill University

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Abstract 01: The Prospective Influence of Childhood Neighborhood Greenspace Exposure on Loneliness During Early Adolescence

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Background: Young people are experiencing a loneliness crisis, with one in four youth aged 15 to 25 reporting feeling "always" or "often" lonely, according to the 2021 Canadian Social Survey. Features of the built environment such as greenspace play a crucial role in shaping opportunities for social connection. While urban greenspaces have been shown to mitigate loneliness in adult populations, their long-term impact on youth remains unexplored in longitudinal studies. ***Methods:*** Analyzing data from the Quebec Longitudinal Study of Child Development (QLSCD), this study will investigate the association between neighborhood childhood greenspace exposure (5 months to 10 years of age) on loneliness during early adolescence (10, 12, and 13 years of age) in urban regions of Quebec (Montreal, Sherbrooke, Trois-Rivières, Gatineau, and Saguenay) while adjusting for key confounders. The study population is derived from the QLSCD cohort (n = 2120 infants at recruitment), which is a prospective cohort made up of singletons born in 1997/1998 in Quebec. Data linkage via postal codes with Canadian Urban Environmental Health Research Consortium (CANUE) data will provide normalized difference vegetation indices (NDVI) as a measure of greenspace exposure. A mixed-effects multiple linear regression will model how the average annual mean NDVI in childhood within buffer zones of 100m, 250m and 1000m radii in childhood predicts loneliness scores in early adolescence. ***Results:*** Analyses are currently ongoing. It is expected that greater childhood neighbourhood greenspace will be associated with lower risk of loneliness during early adolescence. ***Conclusions:*** The findings of this study will be useful in shaping public health policy and urban design. The hypothesized results highlight the importance of the built environment in which children grow up for fostering social well-being. Furthermore, the study aims to reveal how inequalities in greenspace access contribute to adolescent loneliness, providing evidence to guide equitable urban development.

Abstract 02: Exposure Assessment of Faculty of Fine Arts Undergrad Activities in Ceramics

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This study assessed exposure to respirable crystalline silica (RCS) during ceramics production tasks and evaluated the suitability of respiratory protection used in the ceramics department of a Canadian university. Based on an initial review of standard operating procedures (SOPs), raw materials, and supporting literature, tasks such as clay mixing, glaze mixing, kiln unloading, and forming were identified as likely to release RCS into the ambient air. Air sampling followed IRSST Method 206-2, with three area air samples collected during clay mixing, forming, and kiln unloading, and eight personal breathing zone samples collected during clay and glaze mixing. The highest personal RCS concentration was 0.3 mg/m³ during clay mixing, 12 times the permissible exposure limit (PEL) of 0.025 mg/m³. Other personal RCS levels during clay mixing were 0.056, 0.021, and 0.027 mg/m³. During glaze mixing, one sample slightly exceeded the PEL at 0.027 mg/m³. Area samples from kiln unloading and forming showed RCS levels below the detection limit, while the clay mixing room recorded an ambient RCS concentration of 0.016 mg/m³, below the PEL. The findings demonstrated that clay mixing posed a significantly higher RCS exposure risk compared to glaze mixing. Half-face masks with P100 filters were recommended during high-exposure tasks. Proper ventilation system maintenance, adherence to dust control practices, and student training on effective capture hood positioning were deemed essential to mitigate risks. Continued air monitoring was recommended to ensure exposure levels remained within safe limits, thereby reducing health risks such as silicosis and lung cancer associated with RCS exposure.

Abstract 03: Evaluating Causality Between Participation in Social Interactions and Suicide Attempt Using Two Sample Mendelian Randomization

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Background: Observational studies link participation in social interaction to suicidality, but it remains unclear whether this relationship is causal or correlational. Using two-sample Mendelian randomization, an instrumental variable approach to strengthen causal inference using observational data, we examined the contribution of several aspects of participation in social interaction to suicide attempt. ***Methods:*** We selected four aspects related to participation in social interaction, subjective loneliness, ability to confide, living alone, and participation in sports clubs, pubs, and religious groups as well as an overall trait of reduced social interactions including the four aspects. For each, single nucleotide polymorphisms (SNPs) were selected as instrumental variables from genome-

wide association studies from the UK Biobank. SNPs were included with p-value $<1\times10^{-6}$, minor allele frequency >1%, and LD clumping (100kb window). Suicide attempt summary statistics were sourced from the International Suicide Genetics Consortium. The analysis was restricted to participants of white European ancestry. Mendelian randomization analyses were performed using univariable and multivariable inverse variance weighted (IVW) as primary analysis, as well as with several sensitivity analysis methods (e.g., MR-Egger, weighted median, MR-PRESSO). ***Results:*** We found that reduced social interactions contributed to increased risk of suicide attempt (IVW: β=0.49, p=0.032; 34 SNPs). We found evidence of a potential causal contribution of subjective loneliness (IVW: β=1.48, p=0.026; 28 SNPs) and religious group participation (IVW: β= -1.81, p<0.001; 45 SNPs) to increase and decrease risk of suicide attempt, respectively, while no evidence was found for participation in sports clubs. Increased participation in pubs or social clubs contributed to an increased risk of suicide attempt (IVW: β=0.876, p=0.044; 30 SNPs). ***Conclusion:*** Participation in social interactions may contribute to suicide risk in complex ways. While loneliness was associated with increased risk, participation in religious activities showed the strongest protective association.

Abstract 04: Effect of Postnatal Steroids on Lung Ultrasound Scores in Premature Neonates with Bronchopulmonary Dysplasia

Joshua Hazan Mea[1], Phoenix Plessas-Azurduy[1], Thomas Sonea[2], Pasinee Kanaprach[1], Carolina Michel Macias[3], Shiran Sara Moore[4], Punnanee Wutthigate[5], Jessica Simoneau[6], Daniela Villegas Martinez[6], Andréanne Villeneuve[2], Anie Lapointe[2], Guilherme Sant'Anna[1], Gabriel Altit[1]. [1]McGill University, Montreal, QC, Canada; [2]Université de Montréal, Montreal, QC, Canada; [3]Universidad Autónoma de Querétaro, Querétaro, Mexico; [4]Dana Dwek Children's Hospital, Tel Aviv, Israel; [5]Mahidol University, Bangkok, Thailand; [6]Montreal Children's Hospital, Montréal, Qc, Canada

Background: Bronchopulmonary dysplasia (BPD) is a common complication in premature infants requiring prolonged mechanical ventilation. Dexamethasone (DEXA) is frequently administered to reduce pulmonary inflammation and facilitate the transition to non-invasive respiratory support in these neonates. Lung ultrasound (LUS) is a valuable tool for assessing lung parenchymal status, particularly by detecting changes in density associated with atelectasis or inflammation. The aim is to evaluate temporal trends of LUS scores following DEXA administration in preterm infants with evolving BPD. We hypothesize that DEXA reduces LUS scores, indicating improved lung aeration. ***Methods:*** Prospective observational study enrolling preterm infants born at <29 weeks gestational age (GA) receiving DEXA for evolving BPD. LUS was performed at baseline, days 3, 7 and 14 of treatment, 1 and 2 weeks post-treatment, and at 36 weeks corrected GA. LUS was scored by a blinded evaluator from 0-3 for each of the six lung regions, with higher scores indicating pulmonary consolidation. ***Results:*** From 2021-2024, 38 neonates were recruited (61% male, 79% inborn). Moderate-to-severe BPD developed in 81% and 3 (8%) died. Mean birth GA was 25.4 weeks (SD: 1.4) and mean birthweight was 757 g (SD: 192 g). Median Apgar scores were 6 (IQR: 5-7) and 8 (IQR: 6-8) at 5 and 10 minutes. The average duration of hospitalization was 134 days (SD: 47). A mixed-effects model demonstrated a significant decrease in average LUS score (β=-0.54, 95%CI: -0.67 to -0.40, p<0.001) and percentage score (β =-3.0, 95%CI: -3.7 to -2.2, p<0.00001) during DEXA course, with the decline continuing without rebound after cessation; the lowest values were observed at 36 weeks corrected GA. ***Conclusions:*** DEXA was associated with a significant reduction in LUS scores over time, suggesting improved aeration, potentially due to decreased inflammation and atelectasis. This reduction persisted after DEXA cessation, indicating a lasting benefit on lung health.

Abstract 05: Intersectional Effects of Gender and Socioeconomic Position on Admissions to Long-Term Care Facilities in Quebec

Clara Bolster-Foucault[1], Isabelle Vedel[1], Nadia Sourial[2], Claire Godard-Sebillotte[1], Amélie Quesnel-Vallée[1]. [1]McGill University, Montréal, QC, Canada; [2]Université de Montréal, Montréal, QC, Canada

Background: An overwhelming majority of older adults wish to remain in their homes and communities as they age. However, the social dimensions that influence health across the lifespan may create disparities in the capacity to age in place. Our objective was to examine socioeconomic and gender-based inequities in the age at long-term care (LTC) admissions in Quebec. ***Method:*** Using the TorSaDE Cohort, which contains data from Canadian Community Health Survey respondents from 2007-2016 linked to longitudinal provincial medico-administrative data (RAMQ) from 1996-2016, we created a representative sample of community-dwelling Quebec residents aged 65 and older (n=24,269). We used Cox proportional hazards models to measure disparities in the hazard of admission to LTC by gender (binary sex) and educational attainment (defined as having a high school diploma or not), modelling intersectional effects using statistical interaction. We adjusted for age, self-rated baseline health, time-varying comorbidity index score, as well as sociodemographic factors including racialization, rurality, marital status, and household size. We used the Fine-Gray subdistribution hazard approach to account for the competing risk of death. ***Results:*** A total of 1,228 (5.1%) participants were admitted to LTC during follow-up. Among older adults with higher educational attainment, women had an increased rate of admission to LTC compared to men (sHR=1.22, 95%CI: 1.02-1.46). Men with lower educational attainment have a higher rate of admission to LTC (sHR=1.34, 95%CI:

1.02-1.46). Men with lower educational attainment have a higher rate of admission to LTC (sHR=1.34, 95%C:I: 1.12-1.60) than their more highly educated counterparts. However, the effect of low educational attainment appears reversed among women, as women without a high school diploma appear to have a lower risk of admission to LTC (sHR=0.82, 95%CI: 0.65-1.04).***Conclusion:***Our results reveal meaningful socioeconomic and gender-based disparities in admissions to LTC among older adults in Quebec. The effect of education differs qualitatively among men and women, indicating important intersectional effects. These results can inform efforts to equitably support aging in place.

Abstract 06: Towards Building Community Resilience: Examining Disaster Literacy Levels of Residents in Communities Affected by Repeated Flooding in Trinidad and Tobago

Cheryl-Ann S. Boodram[1], Valeria Munoz[2], Sabrina Palloo[1]. [1]The University of the West Indies, St. Augustine Campus, St. Augustine, Trinidad and Tobago; [2]McGill University, Montréal, QC, Canada

The Caribbean region is rated as the second most disaster-prone region in the world. In recent times, several countries in the Caribbean, including Trinidad and Tobago, have experienced devastation and loss of lives caused by events associated with the effects of climate change such as hurricanes and flooding. It is therefore imperative that the resilience of communities be strengthened to prepare for and withstand the negative effects of natural disasters caused by climate change. One way of building community resilience is by increasing the disaster literacy levels of people within communities. Disaster literacy refers to an individual's capacity to access and use information to make informed decisions and take actions to mitigate, prepare, respond, and recover from a disaster. The purpose of the study was to examine the disaster literacy levels and the factors affecting these levels of residents in the community of Penal-Debe, a community affected by repeated flooding in Trinidad and Tobago. The study used a mixed methods research design, and data were collected using a cross-sectional survey and semi-structured interviews with residents. The findings show that the disaster literacy levels of residents were associated with age, education, access to technology, and having received disaster training. The study also revealed the traditional beliefs and structural barriers that impact disaster literacy and mitigation practices of members of the community. This study is significant because it highlights the need for comprehensive and culturally relevant disaster literacy education for residents in communities. The findings of this study can contribute to the development of a Caribbean framework for building the disaster literacy levels of people and strengthening the community resilience to mitigate the impact of disasters caused by climate change.

Abstract 07: Moral Convictions or Discrimination: The Illegitimacy of Conscientious Objection to Gender-Affirming Care

Jessica Baptista[1]. [1]McGill University, Montréal, QC, Canada

Background: Conscientious objection (CO) in healthcare refers to a medical professional's refusal to provide a service due to moral convictions. The protection of physicians' freedom of religious and otherwise moral conscience can conflict with their obligation to provide patients with entitled medical services. This is often seen in reproductive health (e.g., contraception, abortion) and in instances of Medical Assistance in Dying. Limits to this freedom include prohibitions against refusing care based on reasons forbidden by civil law (e.g., race, gender, age, or disability) or in emergency situations where patients require urgent care. ***Description:*** Transgender and gender-diverse individuals in Canada are entitled to gender-affirming care (GAC), recognized as legitimate medical services. However, this right is not consistently actualized. While family and walk-in clinic physicians can prescribe hormone replacement therapy, hormone blockers, or refer patients for surgeries, many refuse the provision of care and defer transgender and gender-diverse patients to specialized clinics with long wait-times, creating barriers to access. ***Recommendations:*** Using Nehushtan and Coyle's framework for illegitimate CO, I argue that objections to GAC are illegitimate and grounded in values that conflict with anti-discrimination laws and undermine liberal principles of autonomy and equality. Physicians refusing gender-affirming treatments routinely provided to cisgender patients demonstrate discriminatory practices. Additionally, employing Neal's notion of proper medical treatments, I defend the therapeutic value of GAC through a risk-benefit analysis. ***Challenges:*** Considering the challenges with enforcing existing effective referral policies (i.e. the referral of patients to a non-objecting provider with minimal burden), I argue that many barriers exist which prevent patients from both knowing and advocating for their rights. ***Conclusions:*** To ensure equitable access to GAC, CO policies must be reevaluated, and systemic barriers addressed. Strengthened enforcement mechanisms and increased patient awareness of their rights are essential for mitigating discriminatory practices.

Abstract 08: Did Abortion Decriminalization Impact Demand for Medical Abortion via Telemedicine in South Korea?

Kaya Van Roost[1], Hazal Atay[2,3], Jennifer Fishman[1,3] [1]McGill University, Montreal, QC, Canada; [2]Sciences Po, Paris, France; [3]Women on Web, Montréal, QC, Canada

Background: From 1953 until 2019, abortion was illegal in South Korea. In 2019, the Korean Constitutional Court ruled that the abortion ban was unconstitutional and gave lawmakers two years to amend the law and legalize the procedure. In 2021, the law that made abortion illegal officially became unenforceable. Women on Web (WoW), an online service that provides abortion pills in restrictive settings, has been active in South Korea since 2013. In this study, we evaluated how changes in abortion policies influenced 1) the demand

for abortion pills and 2) characteristics of abortion seekers who requested pills via WoW in South Korea. ***Methods:*** We used an Interrupted Time Series design using ARIMA models to evaluate the impact of the court decision on the monthly number of requests for abortion pills through WoW. The time series runs from 2015 to 2023; the interruption is the Constitutional Court ruling (April 2019). We compared characteristics of abortion seekers in three policy periods: while it was criminalized, after the constitutional court decision, and after the procedure was officially decriminalized. ***Results:*** From 2013-2023, there were 22,130 requests for abortion pills via WoW. Prior to the Constitutional Court decision, demand for abortion pills was increasing by approximately 13 requests per month. At the time of the Constitutional Court decision, there was a decrease of approximately 45 requests followed by a sustained reduction of approximately 17 requests per month. We found no difference between policy periods for most abortion seeker characteristics (age, gestational age, number of previous abortions/miscarriages, etc.). ***Conclusions:*** In South Korea, a Constitutional Court ruling on a long-standing abortion ban led to an immediate and sustained decline in the demand for abortion pills through WoW. The Court decision appears to have influenced demand more than the actual decriminalization of the procedure, which followed two years later.

Abstract 09: Is TRAP Law Enforcement Associated with an Excess Change in Abortion Providers?

Nichole Austin[1], Kaya Van Roost[2], Sam Harper[2]. [1]Dalhousie University, Halifax, NS, Canada; [2]McGill University, Montreal, QC, Canada

Background: The number of abortion-providing facilities in the US decreased over the last two decades. While some of the trend is due to a reduced need for abortion services, it is possible that abortion policies that target providers, or TRAP laws, also play a role in determining service availability. We quantified the relationship between these policies and clinic/provider availability from 2008 to 2020. ***Data and Methods:*** We merged data we compiled on the timing of TRAP law enforcement with publicly-available data on state-level counts of both abortion and non-specialized clinics ("clinics") and all abortion providers ("providers") in 2008, 2011, 2014, 2017, and 2020. We compared changes in the number of clinics and providers post-TRAP enforcement among treated states to the same changes in untreated states using a method designed for conducting a difference-in-differences analysis in contexts where there are variations in treatment timing. To do so, we fitted two-way fixed effects Poisson models saturated with group-time interaction terms and an offset term. ***Results:*** Among treated states, the mean number of clinics and providers was 16.4 and 25.1, respectively, in pre-treatment years. TRAP law enforcement was associated with an excess clinic decline of 18% (IRR: 0.82, 95% CI: 0.77, 0.87) and a smaller decline among providers (IRR: 0.97, 95% CI: 0.93, 1.00). In absolute terms, these findings suggest that TRAP laws resulted in 2.55 fewer clinics (95% CI: -3.78, -1.31) and 0.37 fewer providers (95% CI: -1.2, .51), conditional on state and year fixed effects. ***Conclusions:*** As abortion restrictions intensify following the Dobbs decision, it is important to understand how abortion policies impact service availability. We found that previous, less restrictive regulation through TRAP laws decreased the number of clinics, where the vast majority of abortions are performed. Additional research is warranted on provider availability post-Dobbs, particularly in states most affected by TRAP-related service reductions.

Abstract 10: Does past military service lead to resilience in older Veterans?

Jessica Dekker[1], Christina Wolfson[1]. [1]McGill University, Montréal, QC, Canada;

Background: Resilience is defined by the American Psychological Association as the process and outcome of adapting successfully to challenging experiences. While studies in the U.S. have suggested that the Veteran population coped better with the challenges of the pandemic than their peers, Canadian research on older Veterans' resilience is limited. The Canadian Longitudinal Study on Aging (CLSA), a national study with over 4,000 self-identified Veterans, provides an opportunity to investigate resilience in older Veterans. Previous cross-sectional analyses of baseline CLSA data showed similar physical health and slightly better mental health in Veterans compared to Non-Veterans, perhaps suggesting resilience. ***Methods:*** This study examines resilience in older Veterans at CLSA baseline (2011–2015) and across three follow-up waves (2015-2021), including the COVID-19 period. In the absence of validated resilience scales in all CLSA waves, resilience will be defined as the absence of negative mental health conditions (e.g. depression, anxiety and PTSD) along with positive measures including life satisfaction, social support, and positive self-rated health. A systematic literature review is underway to identify gaps in research on the mental health of Canadian Veterans and will inform the analyses to be conducted. CLSA analytic weights will adjust for sampling strategies and inclusion probabilities. Age- and sex-adjusted prevalence estimates of resilience at each wave of data collection, with confidence intervals, will be calculated for Veterans and compared to Non-Veterans. ***Results:*** Analyses are ongoing. Crude and adjusted prevalence estimates of resilience for Veterans and Non-Veterans across pre- and peri-pandemic periods using the different definitions of resilience, will be reported. ***Conclusion:*** This study aims to provide novel insights into the resilience of older Veterans in Canada, contributing to understanding how resilience influences aging and health outcomes in this unique population. Pending results will inform future research and interventions to support the well-being of older Veterans in Canada.

1.02-1.46). Men with lower educational attainment have a higher rate of admission to LTC (sHR=1.34, 95%C:I: 1.12-1.60) than their more highly educated counterparts. However, the effect of low educational attainment appears reversed among women, as women without a high school diploma appear to have a lower risk of admission to LTC (sHR=0.82, 95%CI: 0.65-1.04).***Conclusion:***Our results reveal meaningful socioeconomic and gender-based disparities in admissions to LTC among older adults in Quebec. The effect of education differs qualitatively among men and women, indicating important intersectional effects. These results can inform efforts to equitably support aging in place.

Abstract 11: The Ontology of Values in Dementia Staging

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Background: As of March 2023, 55 million people were estimated as suffering from dementia, with nearly 10 million new cases annually. Faced with the demands of an aging global population with unprecedentedly high life expectancies, dementia staging has become a crucial exercise, with purposes ranging from the optimization of patient care to determining the efficacy of clinical drug trials. ***Description:*** This paper investigates the role of subjectivity in the measurement of dementia progression, or "dementia staging". As part of a greater philosophical work rebutting conceptions of dementia as an objective and linearly progressive phenomenon, I argue that the measurement of dementia is infiltrated by the values of dementia staging tool creators. In demonstrating the dimensions of these values, I illustrate how they skew scientific perceptions of the phenomenology of dementia itself. ***Key Findings:*** I apply Douglas' analyses of value-guided scientific methodology to my proposed five-step framework of dementia staging: 1) motivation for the tool; 2) qualitative evidence gathering; 3) quantification of evidence; 4) quantifications informing treatment; and 5) perpetuation of instrument use. Drawing on the procedures of popular dementia staging instruments, I address each step in turn to indicate how the measurement of dementia is guided by ethical, social, and cognitive values. Because dementia staging scores are the baseline through which we communicate about the disease, these scores are treated as empirical, objective indications of a categorizable phenomenon. In response to this treatment, this paper reveals dementia staging as neither a static nor empirical process. ***Conclusion:*** The argument shows how dementia staging embodies the culture, values, and philosophies of tool creators, and thus establishes a foundation for further research on the metaphysics of dementia as a value-laden and culturally influenced phenomenon.

Abstract 12: Addressing Intersectionality in Disability Rights and Policy within the UNCRPD

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Background: The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) is the first treaty to fully promote Civil Society participation in the implementation and monitoring of the Convention. Its Article 33 mandates that States parties designate focal points for the implementation of the Convention and establish an independent National Monitoring Mechanism (NMM). ***Description:*** Despite the progress made, many individuals with disabilities face additional barriers to full inclusion due to intersecting identities, such as being women, girls, or members of ethnic minority groups. These intersectional challenges are often overlooked in both research and policy, creating a gap that can further entrench marginalization. This policy brief explores how intersectionality is represented in the NMM listed in Parallel Reports to the UNCRPD and in studies related to the employment of youth with disabilities. ***Key Findings/Recommendations:*** The academic research provided multiple recommendations to support women and girls in their transition to employment and to improve disability awareness and attitudes towards persons with disabilities. The Parallel Reports mentioned funding as necessary to engage different civil society groups, changes in systemic governing coalitions, fundamental cultural values, sources of evidence for monitoring, and challenges to recommendations. ***Conclusions:*** Research and policy should consider the unique experiences of girls and women with disabilities to inform policy and program directions that address systemic gaps and respect human rights frameworks. Research is needed on the design, process and evaluation of programs addressing the inclusion of women and girls with disabilities into the workforce and the society at large. Tools such as the Gender-Based Analysis+, trains participants on considering, identifying and understanding intersectional considerations to be able to develop inclusive policies, programs and initiatives. By addressing these gaps, policymakers can develop more inclusive, effective solutions that better reflect the needs of all individuals with disabilities, especially those from marginalized backgrounds.

Abstract 13: Preterm Birth and Risk of Psychiatric Disorders: A Register-Linkage Cohort Study

Jude Balit[1], Ophélie Collet[2], Seungmi Yang[1], Sylvana M. Côté[2], Anne Monique Nuyt[2], Thuy Mai Luu[2], Massimiliano Orri[1]. [1]McGill University, Montréal, Québec, Canada; [2]Université de Montréal, Montréal, Québec, Canada

Background: To quantify associations between preterm birth and adolescent-to-adult psychiatric disorders in the Quebec (Canada) population, and whether sex and socioeconomic status (SES) modified this relationship. ***Methods:*** This was an observational cohort study using administrative data from the province of Quebec, Canada. All children born preterm between 1976 and 1995 were identified (N=100,040) and

matched 1:2 with term born children. Individuals were followed from age 11 years until either incident diagnosis of a psychiatric disorder (attention-deficit/hyperactivity disorder [ADHD], psychosis, bipolar disorder, anxiety, and depression), death, or December 2019. Preterm birth was considered as a binary (<37 weeks gestational age) and categorical exposure (extreme, <28; very, 28-31; moderate-to-late, 32-36 weeks gestational age), and continuous gestational age in weeks was also considered. Cox proportional hazard models were applied. Effect modifying roles of sex and SES were investigated in interaction analyses. ***Results:*** Compared to those in the term group, those born preterm had a higher risk of experiencing all outcomes, with magnitudes ranging from HR 1.16 for ADHD (95% confidence interval 1.13,1.20) to 1.05 for anxiety (1.04,1.07). A dose-response relationship was observed, with increasing risks of ADHD, psychosis, and anxiety as the degree of preterm birth increased. There was no clinically significant evidence of effect modification by sex or SES. ***Conclusions:*** Children born preterm had increased risk of psychiatric disorders in adolescence-to-adulthood, with similar risks across sexes and socioeconomic strata of the population. Policies for early and continued mental health surveillance in this susceptible group is important to initiate appropriate interventions.

Abstract 14: Impact of Declines in HIV Testing Volumes on HIV Status Awareness and Time to Diagnosis in Africa

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Background: HIV testing services are the entry point to HIV diagnosis and treatment. In Africa, where 2 in 3 people living with HIV reside, annual numbers tested for HIV have declined since peaking in 2017. This study aims to assess the impact of these reductions on diagnosis coverage and time-to-diagnosis by gender in African countries. ***Methods:*** We collated information on total and antenatal care (ANC) testing volumes in all African countries with available data, as reported in their UNAIDS Spectrum files. To capture gender differences, we modified a previously validated mathematical model of HIV testing rates (Shiny90) and calibrated it to ANC testing. For each country, we constructed a counterfactual scenario in which peak pre-decline rates of HIV testing are maintained and compared knowledge of HIV status and time-to-diagnosis by gender. ***Results:*** Program data from 37 countries showed that HIV testing declined in 62% of countries over 2016-2023, mostly attributed to reduced HIV testing outside of ANC. Among countries with a decline, HIV testing volumes decreased by a median of 28% (interquartile range [IQR]: 24%-52%). Although awareness of status increased in most countries, it would have further increased by 1.2%-point to 88% (CrI: 88%-89%) in 2023 had there been no decline in HIV testing. In countries with an HIV testing decline, time-to-diagnosis increased by 0.5 years to 2.8 years among women, while it increased by 0.6 years to 3.1 years for men. ***Conclusion:*** Recent declines in HIV testing did not affect testing at ANC. Reductions in testing volumes have worsened HIV testing outcomes, especially for men. Longer time-to-diagnosis may lead to increased time spent infectious and a slower decline in incidence.

Abstract 15: Impact of a New Dressing Protocol for the Prevention of Central Line-Associated Bloodstream Infections in one Neonatal Intensive Care Unit (NICU)

Katarina Kowatsch[1], Audrey Larone Juneau[2], Justine Giroux[2], Marianne Lapointe[2], Alina Vlad[2], Laura Ocampo[2], Nathalie Audy[2], Sophie Gravel[2], Christian Lachance[2], David Buckeridge[1], Caroline Quach[2,3]. [1]McGill University, Montréal, QC, Canada; [2]CHU Sainte-Justine, Montréal, QC, Canada; [3]Université de Montréal, Montréal, QC, Canada

Background: Newborns in the neonatal intensive care unit (NICU) are vulnerable to infections due to their extremely fragile skin, underdeveloped immune systems, and usual long-term hospitalizations. These infants often require prolonged use of central venous catheters (CVCs). Bloodstream infections can arise from these CVCs and are a major cause of death in the NICU. Every CVC dressing change can damage their fragile skin, increasing infection risk, and potentially resulting in central line-associated bloodstream infections (CLABSIs). The Centre Hospitalier Universitaire Sainte-Justine (CHUSJ) introduced a new CVC dressing in its NICU: the 3M™ Tegaderm™ I.V. Advanced Securement Dressing, a dressing especially designed for long-term skin adhesion that should decrease the frequency of dressing changes. ***Methods:*** The CHUSJ NICU is a level III-IV NICU with 900 admissions a year. CLABSI surveillance is performed prospectively by the Infection Prevention and Control team. All CVCs installed in NICU patients are recorded daily. Inclusion criteria were all recorded NICU CVCs from January 1, 2017, to December 31, 2023. Segmented interrupted time-series analysis was conducted according to the three-stage intervention rollout (first for gestational age of 28 weeks or more, then large premature infants, then the entire unit), with a pre-intervention period of January 1, 2017, to April 23, 2021, modeling CLABSIs/1000 CVC days and adjusting for mean gestational age. ***Results:*** A total of 2837 CVCs, 1853 patients, and 76 CLABSIs were reported during the surveillance period. Pre-intervention rates were 1.85 CLABSIs/1000 CVC days. CLABSI rate ratios during initial intervention rollout were 0.60 (95% CI: 0.58, 0.63), during the second stage 0.95 (95% CI: 0.93, 0.97), and since complete implementation 0.85 (95% CI: 0.83, 0.87) that of pre-intervention period rates. ***Conclusions:*** These results suggest that the use of CVC dressings with long-term skin securement may be effective in decreasing the rate of CLABSIs in the NICU as an infection prevention method.

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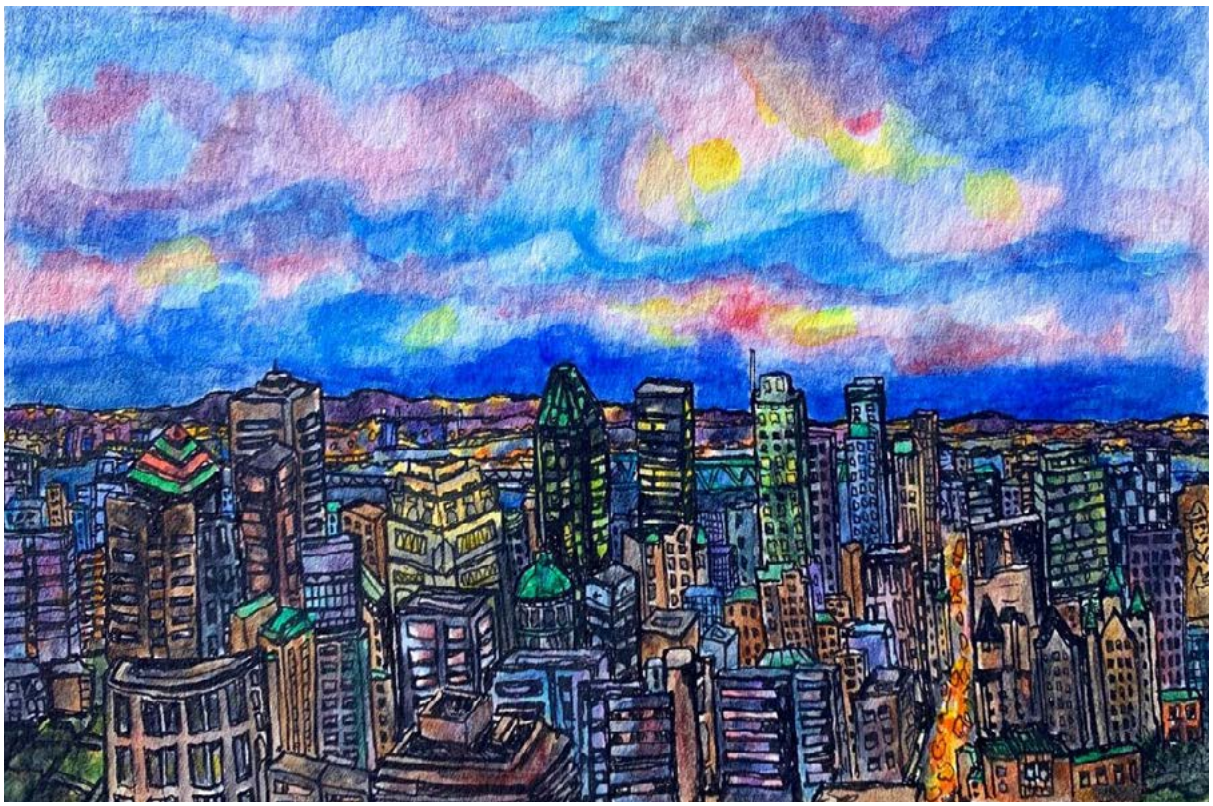

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