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Abstract 01: Interventions to Improve Access to Cancer Care for Low-Income and Food-Insecure Adults: A Scoping Review

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Background: Low-income and food-insecure cancer patients experience substantial inequities in cancer care driven by economic, environmental, and social conditions. These barriers limit access to timely, high-quality care and contribute to poorer care experiences and outcomes. Evidence-informed interventions are needed to improve cancer care access. We aimed to identify interventions that improve cancer care access among low-income or food-insecure adults.

Methods: We performed a PRISMA-ScR scoping review of oncology interventions aimed at low-income and food-insecure adults. We searched Medline, EMBASE, and CINAHL using oncology, vulnerable population, and intervention search terms, with no limits on study design, setting, or date. Data extraction encompassed study characteristics, intervention elements, and outcomes. The Joanna Briggs Institute Critical Appraisal Tools (JBI CAT) were used to assess methodological quality of included studies. Results were synthesised narratively and analysed thematically.

Results: Of 21,242 records screened, 29 studies met the inclusion criteria. All but one were conducted in the US and were published between 2005 and 2024. Most of the studies were quantitative (n=24) and included 12 RCTs, examining low-income or socioeconomically disadvantaged adults with various cancer diagnoses. Interventions targeted food insecurity, navigation, financial aid, education, mental health, and multicomponent approaches. Food, navigation, and financial interventions enhanced access, treatment adherence, and quality of life, whereas educational and mental health interventions improved knowledge and emotional well-being. Fourteen interventions (48%) were statistically significant. Methodological quality assessed using JBI CAT was moderate to strong across included studies.

Conclusion: Interventions addressing structural and psychosocial barriers can enhance cancer care access, food security, patient experience, and quality of life for low-income and food-insecure populations. To reduce enduring inequities, policy and funding efforts should place greater emphasis on ensuring that oncology care includes food security, navigation, and financial support.

Abstract 02: Operationalisation of Community Engagement in Health Research Involving South Asian Communities in Canada: A Scoping Review

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Background: Health research about persons of South Asian (SA) ancestry has often used pathologising approaches that have failed to consider the diverse factors affecting SA health and have contributed to continued mistrust in health research. The objective of this scoping review is to critically examine how community engagement has been operationalised in health

research conducted in Canada involving SA communities. **Methods:** Harvard’s continuum of community engagement and Viswanathan et al.’s report for the Agency for Healthcare Research and Quality (AHRQ) were used to evaluate community engagement. **Results:** Community engagement most frequently involved intent to apply findings to policy and to remove barriers to participation. Sustainability and flexibility in responding to community needs were least frequently observed. Communities were most involved in recruitment and intervention design and least included in funding and priority-setting stages of research. **Conclusions:** The findings highlighted the ongoing imbalance in health research practices involving SA communities in Canada, wherein communities have often contributed more than they have benefited equitably. Findings will inform development of an ethical framework called PROCESS (PRinciples to Operationalize Community Engagement, Equity, and Sustainability in South Asian Health Research in Canada) for conducting health research with SA communities in Canada.

Abstract 03: Leveraging the Built Environment to promote physical activity in primary care settings

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Background: Equity-seeking ethnocultural communities face significant barriers in accessing healthcare services and receiving timely dementia diagnoses. These challenges are further exacerbated by the scarcity of culturally-responsive resources and awareness campaigns, as well as distrust in healthcare systems caused by historical and present discriminatory experiences. Systemic inequities underscore

the importance of co-designing culturally and linguistically adapted Knowledge Translation and Exchange (KTE) products that reflect communities’ nuanced experiences and address their needs. This project aimed to co-design a policy brief and disseminate findings to the Ministry of Health and Social Services to influence the implementation plan of the newly released ministerial policy, the Quebec Alzheimer’s Policy. **Methods:** Using a community-based participatory approach, we co-designed a KTE product with a community organisation serving the Black Anglophone community in Montreal. Through a series of deliberative dialogues, we engaged with community members to understand their experiences of systemic inequities and resilience in navigating these inequalities. We also collaborated with the Alzheimer’s Societies to incorporate additional perspectives. **Results:** The deliberative dialogues generated six community-identified and prioritised recommendations that informed the development of the policy brief. The recommendations highlighted the need for culturally adapted resources across all stages of the dementia care journey, and for linguistically and culturally tailored caseworkers to guide persons living with dementia and their care partners through the healthcare system. Subsequently, the policy brief was developed as an advocacy tool to promote equitable policy development and program implementation addressing the social determinants of health in dementia care. **Conclusions:** By prioritising community-defined objectives and direct engagement, this project aimed to bridge longstanding gaps between the unmet needs of equity-seeking populations and the broader healthcare system. This community-driven approach is intended to inform culturally relevant dementia care interventions and support the development of more equitable dementia care policies and services in Quebec.

Abstract 04: Social Isolation and All-Cause and Cause-Specific Mortality in the UK Biobank: The Modifying Role of Non-Commute Transportation Mode

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Background: Social isolation (SI) is an established risk factor for chronic disease and mortality. Daily transportation modes (e.g., active transport, public transport, and car use) may mitigate its harmful effects by facilitating social interaction.

This is the first study to assess transportation mode as an effect modifier in the association between SI and mortality. **Methods:** We analyzed UK Biobank cohort data (2006–2022) among participants aged 40–69 years. Baseline SI was derived from three items and dichotomised. Cox models were used to estimate associations between SI and mortality, adjusting for socioeconomic factors, health behaviours, and comorbidities. Effect modification by primary mode of non-commute transportation was assessed using interaction terms. **Results:** Among 489,677 participants, SI was associated with increased hazards of all-cause (Hazard Ratio [HR] = 1.34, 95% CI: 1.31–1.38) and cardiovascular mortality (HR = 1.49, 95% CI: 1.41–1.57). The association with cardiovascular mortality was stronger among those using only public transport compared with those who only used a car (interaction HR=1.17, CI: 1.00–1.38). Conversely, using a car alongside active or public transport, compared with car use alone, attenuated the association with all-cause mortality (interaction HR = 0.93, 95% CI: 0.87–0.99). **Conclusion:** Transportation mode may modify the health impacts of SI, supporting further exploration of its role in enhancing social connection while reducing motor vehicle dependence.

Abstract 05: Critical Reflection Through Virtual Reality: Advancing Equity-Oriented Learning About Homelessness in Health Professions Education

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Background: People experiencing homelessness (PEH) face significant health and social inequities, including higher hospitalisation rates, longer hospital stays, and stigma in health care settings. Despite this, homelessness remains underrepresented in health professions education (HPE), leaving learners underprepared to provide equitable care. Virtual reality (VR) simulation offers immersive engagement with complex social realities; however, its

potential to support critical reflection and social justice-oriented learning in HPE remains underexplored.

Methods: This study presents a critical qualitative case study examining health professions students' reflections on homelessness following an immersive VR simulation and a facilitated one-on-one debrief. Reflections from 20 master's-level nursing students were analysed. Debrief interviews, guided by the Promoting Excellence and Reflective Learning in Simulation (PEARLS) framework and informed by critical reflection and transformative learning theories, were audio-recorded, transcribed verbatim, and thematically analysed.

Results: Five interrelated themes were identified: seeing the person through story, challenging assumptions and stereotypes, gaining insights into vulnerability, barriers to accessing health care, and engaging in immersive learning.

Conclusions: VR, when paired with theory-informed debriefing, may support learners in questioning assumptions and engaging in critical reflection on the personal, interpersonal, and structural factors shaping health outcomes, particularly in the context of homelessness.

Abstract 06: Trends in Atrial Fibrillation Incidence and Oral Anticoagulants Prescribing Among Adults with Chronic Obstructive Pulmonary Disease in UK Primary Care, 2010-2022

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Background: Atrial fibrillation (AF) is common in patients with chronic obstructive pulmonary disease (COPD) and increases stroke risk. Understanding trends in AF incidence and oral anticoagulant (OAC) prescribing is important for stroke prevention in this high-risk population.

Methods: We conducted a cohort study using data from the Clinical Practice Research Datalink (CPRD), including patients with COPD aged ≥ 50 . We estimated annual rates of incident AF and OAC initiation from 2010 to 2022 using Poisson regression. We assessed predictors of OAC initiation using logistic regression.

Results: The incidence of AF increased from 13.8 per 1,000 person-years in 2010 to 19.3 in 2022, and was higher in males, White individuals, those aged over 80 years, and patients with severe COPD. Only 66% of patients were prescribed an OAC in the year following AF diagnosis, though OAC use increased 2.91-fold during this period (95% CI: 2.33–3.65). OAC initiation remained lowest among females aged

≥ 90, non-White individuals, and those with severe COPD. **Conclusion:** AF incidence and OAC initiation increased among patients with COPD in UK primary care over 2010–2022. However, OAC use remained suboptimal, especially among older patients, females, non-White individuals, and those with severe COPD, highlighting a potential treatment gap in this high-risk population.

Abstract 07: Modelling BMI Trend Projections Across Canada

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Background: Microsimulation modelling is a powerful tool for projecting health outcomes and informing policy and program development. The Population Health Model (POHEM), developed by Statistics Canada, is a continuous-time, Monte Carlo, microsimulation model used to project Canadian chronic disease trends. POHEM-BMI is a tailored module designed to estimate national Body Mass Index (BMI) trends. Innovative dissemination techniques are needed to increase accessibility and to support evidence-informed decision-making. **Methods:** Self-reported BMI projections were simulated using cross-sectional data from the 2001 Canadian Community Health Survey (CCHS) and longitudinal data from the National Population Health Survey (NPHS). Covariates included prior BMI, age, physical activity, and smoking status. Measured BMI was estimated using an algorithm derived from a 2004 CCHS subsample containing both self-reported and measured values, incorporating education level and age group. RStudio was used to analyse model outputs and for complex survey analysis. POHEM-BMI projections were validated against 2010–2023 CCHS data using 95% confidence intervals. **Results:** A beta version of an interactive web application was created in RShiny to visualise POHEM-BMI projections from 2010–2055. The application contains two pages with interactive graphs and one page with information on the methods used to develop the POHEM-BMI model. The data in the app can be disaggregated by province, age, sex, method of reporting, BMI category and time period. **Conclusion:** The RShiny app demonstrates the value of accessible dissemination tools, enabling broader engagement and supporting research and policy decisions without requiring programming expertise.

Abstract 08: Health Service Utilisation and Costs Associated with the ACCESS Open Minds Youth Mental Health Service Transformation in Ontario

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Background: Current services are often inadequate to meet the needs of adolescents and young adults struggling with mental illness, resulting in a substantial treatment gap. Enhanced primary mental healthcare centres are an emerging model aimed at addressing many of these challenges. We analysed the systems-level impacts of an enhanced primary mental healthcare center implemented in Ontario as part of the pan-Canadian ACCESS Open Minds network (AOM). We compared service use and associated costs between AOM Chatham-Kent and a similar, nearby jurisdiction, Sarnia-Lambton. **Methods:** We conducted a repeated cross-sectional study of youth residing in Sarnia-Lambton and Chatham-Kent regions between 2012 and 2020. We compared health service utilisation and health care costs among eligible youth in each region in the pre- and post-AOM intervention time periods using a difference-in-differences approach. **Results:** More individuals were brought into care following AOM implementation in Chatham-Kent compared with Sarnia-Lambton. The implementation of AOM services in Chatham-Kent was associated with a 94% increase (1.94;95% CI: 1.81,2.08) in the use of total CMHA services as well as 40%, and 21% increases in psychiatric visits (1.40;95% CI: 1.26,1.54), and outpatient non-psychiatry visits (1.21;95% CI: 1.13,1.28). Post-hoc analyses confirmed that this increase in service use reflected an increase in the number of unique users rather than an increase in the total number of service units used. Total costs did not differ significantly between Chatham-Kent and Sarnia-Lambton post-AOM implementation. **Conclusions:** Outreach that brings more young people into appropriate care can be cost-effective. This model can serve as a template for decision-makers interested in similar youth-centred mental healthcare programmes in Canada and beyond.

Abstract 09: Mapping Policies for Homelessness Prevention for Women with Disabilities and Experiences of Intimate Partner Violence

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Background: Fleeing intimate partner violence (IPV) is the leading cause of women's homelessness. Equity-deserving women, especially those with disabilities, face increased exposure to violence and disproportionate barriers in accessing safety, housing, and health services. Studies and reports from the community sector indicate that public policies and funding structures shape barriers to IPV shelters for women with disabilities, including siloed policy and funding landscape that separate IPV services from women's homelessness sectors.

Methods: Policies at four levels of governance (international, federal, provincial, and municipal) pertaining to IPV and gender-based violence, homelessness or housing instability, and disability in Montréal, Québec, Canada were identified. Relationships between different sectors and government levels were mapped using the most recent or most pertinent policy versions.

Results: The mapping revealed few connections between and within sectors, indicating a siloed governance structure.

Conclusion: An in-depth policy analysis on select policies and funding streams is necessary to further explore these relationships and silos. In addition, documenting direct and indirect effects on community organisations that serve women is essential for guiding further intersectoral policy development.

Abstract 10: Spatial Distribution of Zika Virus—Spatial Distribution of Zika Virus Ascertainment and Associated Microcephaly in Brazil, 2015–2023

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Background: Zika virus (ZIKV) is a mosquito-borne flavivirus that can be vertically transmitted during pregnancy. In utero infection may lead to severe congenital abnormalities including microcephaly, known collectively as Congenital Zika Syndrome (CZS). A decade after ZIKV

was declared a Public Health Emergency of International Concern (PHEIC), limitations in ZIKV ascertainment and diagnostics persist. Regional patterns of ZIKV-related microcephaly remain poorly characterized, particularly when alternative methods of ZIKV confirmation are considered. This study aimed to examine the distribution of ZIKV-related microcephaly across mesoregions in Brazil under multiple ZIKV confirmation definitions.

Methods: We analysed nationwide Brazilian microcephaly surveillance data from the Registro de Eventos em Saúde Pública (RESP) system, including all confirmed and probable livebirths from 2015–2023. ZIKV-related microcephaly was defined using three categories of evidence: dataset-specific classification, laboratory confirmation, and maternal symptoms during pregnancy. Bayesian hierarchical models with mesoregion-specific random effects were used to capture variation. Laboratory-based definitions (robust and robust/moderate) were evaluated using two-part binomial models that jointly estimated the probability of ZIKV testing among microcephaly cases and the probability of a positive result conditional on testing.

Results: A total of 4,535 microcephaly cases were included, of which nearly 41% were classified as ZIKV-related in the dataset. Testing coverage was low nationwide. The baseline probability of ZIKV testing (robust definition) was 12% (CrI: 10%–15%), while the probability of positivity given testing was 15% (95% CrI: 10%–21%), increasing to 35% (95% CrI: 25–45%) in the presence of maternal symptoms.

Conclusions: Estimated probabilities of ZIKV testing and positivity varied substantially by mesoregion and confirmation criteria, including within the Northeast. These findings highlight substantial heterogeneity in diagnostic access and the potential for misclassification of ZIKV exposure in microcephaly cases.

Abstract 11: Climate Change, Water Quality, and Cardiovascular Risk: Policy Implications of Salinity-Induced Hypertension

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Background: Climate change-induced salinity intrusion is an emerging environmental health concern, particularly in coastal regions where populations rely on groundwater for drinking and household use. This study examines the association between drinking water salinity and hypertension among women, highlighting important policy implications for climate adaptation and public health planning.

Methods: Water samples were collected and salinity levels were measured using the HI98319 digital salinity meter. Geographic Information System (GIS) software was used to

map spatial variation in salinity exposure. Blood pressure was measured using a calibrated digital blood pressure monitor following standardised procedures. Statistical analysis using the chi-square test identified a significant association between drinking water salinity and hypertension ($p < 0.05$).

Results: The findings suggest that women exposed to higher salinity levels in drinking water face increased risk of hypertension, likely due to elevated sodium intake through daily water consumption. These results underscore the need to address environmental determinants of hypertension within climate-vulnerable communities.

Conclusion: Policy responses such as improved water quality monitoring, investment in desalination technologies, and climate-resilient water management strategies are warranted to reduce health risks. This study highlights the need for integrating environmental exposure assessment into public health policy to better address environmentally-driven hypertension risk in climate-vulnerable populations.

Abstract 12: Safety of Tuberculosis Preventive Treatment Among People Receiving or About to Initiate Immunosuppressive Medications: A Systematic Review and Meta-Analysis

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Background: People receiving immunosuppressive medications are at increased risk of tuberculosis. Tuberculosis preventive treatment (TPT) can reduce risk; however its safety among these populations is uncertain. We conducted a systematic review and meta-analysis to evaluate adverse events (AE) associated with TPT among people receiving/about to initiate immunosuppressives.

Methods: We searched MEDLINE, Cochrane CENTRAL, HealthSTAR, and EMBASE (1952–May 1, 2025). Using a random-effects generalised linear mixed model, we estimated the pooled proportion of AE-related discontinuation by regimen.

Results: We included 24 studies (2,781 participants). TPT regimens included 6–12-month mono-isoniazid regimens (1,490 participants), 4-month mono-rifamycin regimens (228 participants), 3-month isoniazid-rifamycin-combination regimens (990 participants), and 6–9-month fluoroquinolone-based regimens (73 participants). Only mono-isoniazid regimens were administered to participants actively receiving immunosuppressives. Pooled AE-related discontinuation was 5.5% (95% CI: 3.3–9.3%; $I^2=66.9%$) for isoniazid, 4.4% (95% CI: 0.1–75.4%; $I^2=86.3%$) for rifampin, 2.0% (95% CI: 1.0–4.1%; $I^2=0.0%$) for isoniazid-rifamycin, and 6.9% (95% CI: 0–92.3%; $I^2=65.4%$) for fluoroquinolone.

Conclusion: AE-related discontinuation of TPT was lowest with isoniazid-rifamycin, but these regimens were only administered before immunosuppression started. Data in general were highly heterogeneous across studies. Safety data on non-isoniazid-based regimens among people actively receiving immunosuppressives are needed.

