2024

BAPH - Abstract Book

The building I U-Residence
Vrije Universiteit Brussels
(VUB), Brussels, Belgium

Symposium "Tackling inequities in Public Health"

6/14/2024

BAPH
Belgian Association of Public Health

TABLE OF CONTENT

BAPH
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ABOUT BAPH

The Belgian Association of Public Health is a scientific, not-for-profit organization. It aims to create links, interaction and synergy for better public health practice and research. Through its dissemination and discussion fora, researchers and practitioners are networked for mutual complementarity.

Members of the BAPH are professionals working on issues that affect the community and public health, be they public health practitioners or researchers and academics. Members have ties to all Francophone and Flemish universities, and membership is also open to public health students.

The BAPH develops a network that creates links and synergies and helps researchers and students find resources, internships, etc

For more details about the event, click here.

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VOLUNTEERS

Dagmar Annaert, Laura Bonacini, Hoa Duong, Amina Jirari, Flora Mbela Lusendi

WINNERS

BEST PRESENTATION

Arno Pauwels, Sciensano, Belgium

Arno holds a master's degree in geography from Vrije Universiteit Brussel and KU Leuven. Arno has been working as a scientist at Sciensano since 2022. He is involved in the Belgian National Burden of Disease Study

Presentation: *Local approach to attributable disease burden: a case study for air pollution and mortality in Belgium*

BEST POSTER

Katrien Danhieux, University of Antwerp, Belgium

Katrien is a general practitioner with experience in various types of primary care practices and multidisciplinary collaboration. She is also a researcher at University of Antwerp. As a researcher, she coordinates the European research project JACARDI (Joint Action on CARdiovascular diseases and DIabetes).

Poster : *Disparities in Diabetes Care: Model and Process and Outcome Indicators in a Longitudinal Study*

PROGRAM

DATE : JUNE 14, 2024

9h00	Registration and welcome coffee
9h30	Introduction of the day by the BAPH
09h45	Keynote 1: Wim Van Lancker (KU Leuven) (Child) poverty in Belgium as an accumulation of inequalities
10h15	Keynote 2: Patrick Deboosere (VUB) How did Equity become a Major Topic in Health Research and Public Health Policy in Belgium?
10h45	Coffee break
11h15	Keynote 3: Hanna Ballout (SSMG) When general practitioners address health inequities: between resilience and uncertainties
11h45	*Interaction with the audience*
12h00	Lunch
13h00	*Parallel sessions (oral presentations)*
15h00	Coffee break
15h30	Keynote 4: Minister Frank Vandenbroucke
15h45	*Discussion with keynote speakers*
16h15	Closing remarks

KEYNOTES SPEAKERS

Wim Van Lancker, KU Leuven, Belgium

He is an associate professor in social work and social policy at the Centre for Sociological Research, KU Leuven, where he heads the Research Institute for Social Policy, Social Work, Family and Population Dynamics (ReSPOND).

His research agenda is centered around the design and outcomes of social policy measures and social work interventions, with a particular focus on poverty, inequality, employment and well-being.

Patrick Deboosere, Université libre de Bruxelles and Vrije Universiteit Brussel, Belgium

He is Professor Emeritus in Demography at Université libre de Bruxelles and Vrije Universiteit Brussel.

Additionally, he holds the position of Chairman of the Higher Council for Statistics (Statbel (Directorate-general Statistics - Statistics Belgium) and regularly provides advice and collaboration to various government institutions, including the Superior Health Council of Belgium.

His research focuses on the links between demography, health, and social inequality, with additional work on household evolution, migration, and urban demography. Deboosere is recognized for advancing the use of administrative data in scientific research and promoting the harmonization of international statistics.

Hanna Ballout, SSMG, Belgium

She holds a medical degree from Université catholique de Louvain, obtained in 2018. She is a general practitioner in a group practice in Brussels. Hanna has been General Secretary of the SSMG asbl (Société Scientifique de Médecine Générale) since June 2021. She represents SSMG at the KCE - Federaal Kenniscentrum voor de Gezondheidszorg - Centre Fédéral d'Expertise des Soins de Santé (Covid guidelines for primary care) and the scientific and academic support unit of the Collège de Médecine Générale de Belgique francophone.

As a member of the "Violence" and "Health and Sexuality" divisions of SSMG, she has developed expertise in LGBTQIA+ health, domestic and family violence.

Frank Vandenbroucke, Federal governement, Belgium

He is an academic and a politician who has been serving as Deputy Prime Minister and Minister of Health and Social Affairs since 2020.

He holds a PhD from the Faculty of Social Studies at University of Oxford and has been a professor at the University of Amsterdam, University of Antwerp and KU Leuven. His academic interests focus on social systems and welfare policies.

EXECUTIVE SUMMARY

ORAL PRESENTATIONS

KEYNOTE 1 – Prof. Patrick Deboosere: Equity in Health Research and Policy in Belgium

Prof. Deboosere explored how equity became a key topic in Belgian health research and policy. Life expectancy trends showed stability until the mid-18th century, followed by growth during the Belle Époque. Historical events like the French and Industrial Revolutions highlighted the link between poverty, social upheaval, and health. Figures like Quetelet and Ducpetiaux connected life expectancy with social justice and socioeconomic status (SES), while modern researchers like Mackenbach emphasized health behaviors. Policy changes, including post-WWII social security and the rise of neoliberalism, further highlighted health inequities. Despite Belgium's small share of global health equity research, policy is crucial for addressing inequalities, as evidenced by international comparisons and the Black Report in the UK. The rise in data availability post-WWII, coupled with increased visibility of inequalities, has driven equity-focused research.

KEYNOTE 2 – Prof. Wim Van Lancker: Child Poverty in Belgium

Prof. Van Lancker discussed child poverty trends in Belgium, emphasizing the persistence of poverty and its intergenerational transmission. Despite equitable income distribution, poverty remains, with children facing severe deprivation in areas like health and housing. While child poverty has declined since 2018 due to stronger redistribution policies, poverty is still persistent. Policies must address not only income but also provide essential resources to combat deprivation. Belgium, despite its high social spending, can learn from countries like Denmark to improve its policies, emphasizing the need for research-based approaches to tackle child poverty effectively.

KEYNOTE 3 – Hanna Ballout: Addressing Health Inequities in General Practice

Hanna Ballout focused on the relationship between poverty and health, highlighting the cycle of illness and socioeconomic disparities, particularly in Brussels. Capitation-based medical centers struggle with patients facing chronic conditions, and disparities in housing and health outcomes are stark. Practical responses include hiring social workers and enhancing accessibility to healthcare. Dr. Ballout stressed the importance of community health initiatives and addressing unmet needs, particularly in vulnerable populations like the LGBTQIA+ community. Training GPs to address stigma and engage in preventive care is critical for reducing health inequities.

KEYNOTE 4 – former minister dr. Frank Vandenbroucke: Fighting Inequality in Health Care

Frank Vandenbroucke discussed the ongoing efforts to address health care inequalities at the BAPH symposium, focusing on affordability, access, and structural reforms. He

highlighted policies to strengthen progressive universalism in Belgium's healthcare system, such as freezing caps on out-of-pocket payments and increasing reimbursement for vulnerable groups, including free GP visits and mental health care for young people. Dr. Vandenbroucke also stressed the need for transparency in healthcare costs, particularly banning supplements for low-income patients by 2026. Lastly, he emphasized integrating prevention with care, tackling social determinants like tobacco and alcohol use, and rethinking the convention system to prioritize equity and health outcomes.

General Discussion and Key Takeaways
The fragmentation of political competences in Belgium hinders the implementation of comprehensive inequality policies. The fee-for-service model fails to incentivize prevention and poverty-related interventions. Engaging GPs politically requires policy-level support, and initiatives like mandating healthy school meals are crucial for child well-being. A coordinated, policy-driven approach is essential for tackling health and social inequalities in Belgium.

PARALLEL SESSION – VULNERABLE POPULATIONS

PRESENTER 1: Sarah Derveeuw – The Accumulation of Cultural Health Capital and Migrant-Background Inequalities in Cancer Screening
Sarah Derveeuw explored the role of cultural health capital in cancer screening disparities between migrants and non-migrants. While lower-income groups are more likely to develop and die from cancer, migrants initially face lower cancer risks, though this advantage declines over time. Cultural health capital, involving values, norms, and skills acquired socially, is crucial for navigating healthcare. The study used Health Information System (HIS) data, confirming disparities in cancer screening among migrants, though socioeconomic status (SES) was less significant than expected. The importance of cultural health capital in explaining these inequalities was emphasized, though limitations included focusing on those already integrated into the healthcare system.

PRESENTER 2: Pierre Hubin – Disparities in COVID-19 Vaccination in Belgium
Pierre Hubin presented findings from the LINK-VACC project, analyzing vaccination disparities across 5 million adults in Belgium. Lower vaccination rates were found among first-generation migrants, individuals with lower SES, and in specific regions. Disparities were linked to demographic and socio-economic factors, but the underlying causes were not fully understood. The need for systemic solutions addressing health literacy and cultural perspectives was emphasized, alongside policy recommendations that focus on why these disparities persist, not just their existence.

PRESENTER 3: Flore Vermijs – Medical Decision-Making Among Patients with Ethnic Minority Backgrounds
Flore Vermijs presented insights from the MEDIMEG project, focusing on medical decision-making among ethnic minority patients. Factors such as religious beliefs,

taboos, and low health literacy often led to non-adherence to medical advice. Family and community dynamics played a significant role, sometimes complicating healthcare decisions. Language barriers and trust issues between patients and healthcare providers were also highlighted. The need for cultural competence and better communication to improve healthcare outcomes was stressed.

PRESENTER 4: Sherihane Bensemmane – A Holistic Approach to Supporting Prostituted Persons

Sherihane Bensemmane discussed isala asbl's work supporting prostituted persons, particularly migrants and individuals from lower SES backgrounds. isala offers holistic support, addressing social determinants of health through eight pillars of assistance. The organization faces challenges in outreach due to the rise of online prostitution post-COVID. They emphasized the need for respectful, culturally sensitive approaches in their outreach and support efforts, highlighting the importance of diversity training for healthcare providers.

Conclusion

All presentations underscored the need for systemic approaches to addressing health inequalities, with an emphasis on cultural health capital, health literacy, and building trust between healthcare providers and vulnerable populations. Effective communication and cultural competence are critical to improving health outcomes in diverse communities.

PARALLEL SESSION – ACCESS, QUALITY, AND USE OF HEALTHCARE PANEL SESSION

PRESENTER 1: Houria Bounouch – Community Health Workers: Improving Access to Healthcare for Vulnerable Groups

Houria Bounouch discussed the deployment of Community Health Workers (CHWs) in Brussels in March 2019, aimed at reducing social inequities in healthcare access, particularly highlighted during the COVID-19 crisis. CHWs work directly within vulnerable communities, including the homeless, individuals with disabilities, and those with limited social networks, serving as a bridge to the healthcare system. By building trust through shared backgrounds, CHWs provide culturally tailored health information and help navigate barriers such as administration and language issues. The project, which runs until 2025, involves participation in research with the University of Antwerp to evaluate its impact.

PRESENTER 2: Marie-Lise Nédée – Community Health Workers and Health Equity

Marie-Lise Nédée explored the role of CHWs in promoting health equity, focusing on WHO guidelines aimed at the Global South. Her research used Carol Bacchi's post-structural framework to analyze these guidelines, revealing that they largely address inequities through workforce expansion and women's involvement in CHW programs. However, the guidelines overlook structural problems and tend to individualize responsibility. Nédée argued for a more comprehensive approach that goes beyond

workforce solutions, emphasizing empowerment and the broader structural factors contributing to health disparities.

PRESENTER 3: Jessica Martini – How the EU Supports Affordable Healthcare Access

Jessica Martini examined how the European Union (EU) supports Member States in achieving universal health coverage (UHC). Despite efforts like the European Pillar of Social Rights and Sustainable Development Goals, gaps in health coverage remain, particularly due to out-of-pocket payments and restrictive access criteria. The EU aids by providing data frameworks, economic coordination through the European Semester, and funding instruments like the Recovery and Resilience Facility. Martini suggested further strengthening EU policy coordination and data collection to enhance support for member states in ensuring affordable healthcare access.

PRESENTER 4: Xavier Rygaert – Concentration and Volume of Healthcare in Belgium

Xavier Rygaert presented an analysis of healthcare costs in Belgium using Lorenz curves and Gini coefficients to visualize healthcare expenditure distribution. Data from the Intermutualist Agency (IMA-AIM) showed that while health insurance covers the majority of healthcare costs (56.7%), patient expenses, particularly for dental care, still represent a significant burden. Hospitalization and medical devices account for the largest share of public insurance expenses. The analysis highlighted that healthcare spending is concentrated among a small portion of the population (5-15%), indicating inequalities in health expenditure distribution.

Conclusion

Healthcare spending in Belgium is highly concentrated among a small percentage of the population, revealing inequalities in how healthcare resources are distributed. Future policies should address these imbalances to ensure more equitable access to healthcare services.

PARALLEL SESSION – HEALTH DETERMINANTS AND LOCAL APPROACHES FOR PUBLIC HEALTH

PRESENTER 1: Nicolas Berger – Food Insecurity and Fruit and Vegetable Consumption in Belgium

Nicolas Berger presented data from the 3rd National Food Consumption Survey (March 2022), focusing on food insecurity (FI) using the USDA Household Food Security Survey Module. The survey included 4,420 participants aged 3 and older, including the German community in Belgium. FI was found to affect 18% of the population, with higher rates in Brussels and Wallonia compared to Flanders. FI was more prevalent among young women, single-parent families, and those with lower

education levels. A strong relationship between FI and lower fruit and vegetable consumption was noted.

PRESENTER 2: Wendy Van Lippevelde – Improving School Food Systems in Flanders

Wendy Van Lippevelde conducted a study assessing the content of pupils' lunchboxes in 25 elementary schools (N=1,051 children) in Flanders, based on the Flemish Institute's Food Triangle. The findings showed that while few pupils had empty lunchboxes, most contained unhealthy or environmentally unfriendly food. About 9% of children experienced food insecurity, relying on friends or school for supplementation. Only 35% of lunchboxes met health and environmental standards. Socio-economic background had minimal impact on lunchbox composition.

PRESENTER 3: Arno Pauwels – Local Approach to Attributable Disease Burden from Air Pollution

Arno Pauwels introduced a new method for calculating the burden of disease from air pollution at the local level, offering a more detailed approach than the national model. The method was validated by comparing local data with global results, showing that local bias can be mitigated with sufficient aggregation.

PRESENTER 4: Oberon De Deurwaerder – CITY-MOVE: Physical Activity Data in Antwerp

Oberon De Deurwaerder presented the CITY-MOVE project, funded by the EU Horizon 2020 Programme, aimed at creating healthier urban environments to reduce noncommunicable diseases (NCDs). The project focuses on 13 physical activity interventions across six global cities, including Antwerp. The project will improve data capacity and public health strategies, but challenges remain in assessing the availability of physical activity indicators, as seen in the Antwerp Data Bank example.

Conclusion:

The presentations collectively highlight the importance of addressing food insecurity, environmental health, and physical activity at both the individual and community levels. Key themes include the need for targeted, localized interventions and better data collection to tailor policies and programs effectively. By focusing on vulnerable populations, such as children, those affected by food insecurity, and areas with high pollution levels, these approaches aim to reduce health disparities and promote healthier living environments. Collaboration between various sectors and continuous evaluation are essential for sustaining long-term public health improvements.

ABSTRACTS

ORAL PRESENTATIONS

CHAPTER 1 : VULNERABLE POPULATION

ABSTRACT 1 : DISPARITIES IN COVID-19 VACCINATION IN BELGIUM: THE IMPACT OF DEMOGRAPHIC AND SOCIO-ECONOMIC FACTORS AT AREA AND INDIVIDUAL LEVELS

Author: Pierre Hubin (1), Laura Van den Borre (1,2), Toon Braeye (1), Lisa Cavillot (1,3), Matthieu Billuart (1), Veerle Stouten (1), Léonore Nasiadka (1), Elias Vermeiren (1), Izaak Van Evercooren (1), Brecht Devleesschauwer (1,4), Lucy Catteau (1), Joris A.F. van Loenhout (1)

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(3) Université catholique de Louvain
(4) Ghent University

Background: The COVID-19 pandemic highlighted the links between socio-economic disparities and health inequalities, notably with respect to vaccination. In this context, the present contribution investigated the association between COVID-19 vaccination and demographic and socio-economic factors in Belgium at area and individual levels.

Methods: In the framework of the LINK-VACC project, the Belgian vaccine register for the COVID-19 vaccination campaign (VACCINNET+) was linked at individual level with demographic and socio-economic variables from the DEMOBEL database. For all adult

individuals tested for SARS-CoV-2 (LINK-VACC sample), demographic and socio-economic indicators were derived and their impact on vaccination coverages at an aggregated geographical level (municipality) was quantified via the use of a composite factor. The same indicators were calculated for the full Belgian population for comparison purposes. In a second step, a multilevel approach was considered by fitting hierarchical logistic regression models to the individual level LINK-VACC data to disentangle the individual and municipality effects allowing to evaluate the added value of the availability of individual level data in this context.

Results: The composite factor built from income deciles, migration background, and household composition shows consistent results with earlier findings based on individual level data for similar indicators. Indeed, it was seen at the individual level that persons with lower household incomes, a migration background, and/or belonging to a household with only one adult were less likely to be vaccinated, and these inequalities translate into disparities observed at the municipality level. The hierarchical models show that taking into account municipality effects when analyzing individual level data does not dramatically change the estimates related to demographic and socio-economic indicators in this case. However, they provide a more accurate description by modelling explicitly part of the variability related to the neighborhood.

Conclusion: The most important effects observed at the individual level are reflected in the aggregated data at the municipality level. Multilevel analyses show that most of the demographic and socio-economic impacts on vaccination are captured at the individual level. Nevertheless, accounting for area level in individual level analyses improves the overall description.

Main messages:

- Disparities in COVID-19 vaccination are associated with various demographic and socio-economic indicators such as household income, migration background, and household composition.
- Thanks to data available at different levels of granularity, we show that the inequalities in vaccination can be observed at both individual and municipality levels.

Keywords: Multilevel analysis, COVID-19 vaccination, Social determinants of health

Acknowledgments : We are very grateful to Statistics Belgium (Statbel), healthdata.be platform for the technical support, and the Belgian regional health authorities. The LINK-VACC project is funded in the framework of COVID-19 surveillance by the FOD Public Health and the Belgian federated entities."

ABSTRACT 2 : EXPLORING THE ROLE OF CULTURAL HEALTH CAPITAL ACROSS MIGRANT BACKGROUNDS, IN SHAPING PREVENTIVE HEALTHCARE ENGAGEMENT.

Author: Derveeuw Sarah (1), Vanthomme Katrien (1), Toma Sorana (1)

Affiliations: (1) University of Ghent, Belgium

Background: Cervical cancer screening programs have been pivotal in early detection and prevention efforts globally. However, despite their implementation, disparities in screening uptake persist, particularly among women from migrant backgrounds. This paper explores the role of cultural health capital (CHC) in shaping these disparities. CHC, an extension of Pierre Bourdieu's cultural capital concept, encompasses individuals' cultural resources and practices influencing health and well-being. While previous studies have indicated links between aspects of CHC and cancer screening participation, there remains a need to examine its interaction with migrant background characteristics. This paper considers the role of CHC in cervical cancer screening uptake among migrant populations .

Methods: We conducted a secondary quantitative analysis of Belgian Health Interview Survey (HIS) data from 2013 and 2018, focusing on ~6,700 women aged 25-64. Logistic regression models were applied to assess the relationship between cancer screening uptake and migrant background together with CHC. CHC was measured through primary preventive lifestyle (diet and physical activity), engagement in secondary health screenings (blood pressure, blood sugar and blood cholesterol measures), and healthcare practitioner interactions (visiting a dentist, GP or non-conventional therapist in the past year). Migrant background was categorized by generation, region of origin, and duration of stay.

Results: Inequalities in cancer screening uptake were observed across migrant backgrounds, with first generation migrants as well as Non-European second generations less likely to uptake screening compared to Belgians without a migration background. While CHC variables significantly shape cervical screening uptake, they do not appear to account for migrant-related inequalities and only partly for education-related disparities.

Conclusion: Preliminary findings suggest that cancer-screening-specific preventive healthcare engagement may not be influenced by patterns in other preventive health behaviours or engagement with other forms of preventive healthcare. Although CHC remains challenging to operationalize, it sheds light on compounding mechanisms underlying social inequalities in healthcare uptake. This study underscores the need

for culturally responsive healthcare services to address disparities in cervical cancer screening among diverse migrant populations.

Main messages:

- This research underscores the nuanced role of cultural health capital in shaping cervical cancer screening uptake among migrant populations, highlighting the need for culturally sensitive healthcare interventions to address disparities in preventive healthcare access.
- By revealing the persistence of inequalities in cancer screening uptake across migrant backgrounds, this study emphasizes the urgency of implementing targeted strategies that account for cultural factors to promote equitable access to cervical cancer screening and mitigate public health inequities.

Keywords: Migrant inequalities, Cancer screening, Cultural Health Capital, Social Inequalities

Acknowledgments : Health Interview Survey - Sciensano

ABSTRACT 3 : MEDICAL DECISION-MAKING CHALLENGES AMONG MIGRANT POPULATIONS IN BELGIUM: A FOCUS GROUP STUDY

Author: Vermijs Flore (1), Yakhlaf Amina (2), van Olmen Josefien (1), Van Royen Paul (1), Bombeke Katrien (1), Van de Velde Sarah (2), Wouters Edwin (2), Buffel Veerle (3), Van Eekert Nina (2),

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(3) Brussels Institute for Social and Population Studies, Department of Sociology, Vrije Universiteit Brussel

Background: In Europe, persons with a migration background may face significant challenges when they seek medical care. Previous research indicates that they are more likely than the native population to encounter barriers when accessing primary care and to report a negative interaction with their general practitioner (GP). A crucial phase in this interaction is medical decision-making (MDM), as it affects the quality of care, particularly its person-centredness. Cultural differences between GP and patient can influence the MDM process in various ways. In order to get insight in this issue in the context of Belgian healthcare, this study explores the challenges related to MDM involving patients with a migration background, from the perspectives of both patients and GPs.

Methods: Five focus group discussions (FGD) were conducted in November-December 2023, of which three with patients (or their representatives) with a migration background from Turkey (n = 6), Morocco (n = 6) and sub-Saharan Africa (n = 7), and two with GPs (n = 13). Thematic analysis was performed on the FGD transcripts.

Results: Preliminary findings from the patient FGDs indicate that challenges arise from, among others, differences in conceptions about certain diseases, a perceived lack of respect from healthcare providers to their cultural preferences regarding treatment, and the involvement of family in their everyday lives, including MDM. Preliminary findings from the FGDs with GPs suggest that challenges are not only related to time restrictions and language barriers, but also to discordant expectations between providers and patients regarding diagnostic and therapeutic options, as well as patient involvement in their health and MDM. Overall, decisions about prevention, non-communicable diseases, mental health, sexual and reproductive health, and end-of-life care were experienced as most challenging. However, it is important to recognize the intersection with other potentially influential factors, such as language proficiency, socio-economic status, length of residence in Belgium, gender dynamics, and religious affiliations.

Conclusion: The analyzed patient and healthcare provider perspectives enrich our understanding of the complex dynamics surrounding MDM in the multicultural landscape of Belgium's healthcare system. They highlight the importance of working towards culturally sensitive healthcare practices that accommodate the diverse needs and preferences of migrant populations in the process of MDM. However, further research is required to map the needs and preferences regarding MDM of migrant patients in Belgium in a representative manner.

Main messages:

- Adequate medical decision-making is essential for delivering quality, person-centred care. The process of medical decision-making can be challenging when cultural differences exist between patient and physician. This focus group study explores the nature of these challenges and the context in which they arise from the perspectives of both patients with a migration background and GPs in Belgian healthcare.
- As stated in the International Covenant on Economic, Social and Cultural Rights, everyone is entitled to culturally appropriate healthcare. This means that healthcare should be respectful of the culture of individuals, minorities, peoples and communities. This study contributes to our understanding of culturally sensitive healthcare by zooming in on the practice of medical decision-making. As such, this research aims to facilitate an inclusive transition towards person-

centred care by ensuring that Belgian healthcare services can be adapted to the needs of patients with diverse cultural backgrounds.

Keywords: medical decision-making, culturally sensitive healthcare, primary care, focus group discussions

Acknowledgments : /

ABSTRACT 4 : A HOLISTIC APPROACH TO SUPPORTING PROSTITUTED PERSONS TACKLE SOCIAL DETERMINANTS OF HEALTH : THE CASE OF ISALA ASBL

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Affiliations:

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Background: Prostitution is both a taboo and a growing societal topic. People in prostitution constitute a population at high risk of violence, HIV and face structural vulnerabilities. According to police reports, there are about 23000 prostituted persons in Belgium, of which 4000 to 5000 are in Brussels. Among these, 85% are said to be victims of human trafficking for the purpose of sexual exploitation.

Description fieldwork: Since 2015, isala supports people who are in prostitution or had prior experience of prostitution. On average, 400 to 700 contacts are made yearly. Prostituted persons are met either during outreach or drop-in services. Support is provided on an individual basis during drop-in sessions and follow-up appointments. A participative, holistic and individualised approach is used, based on eight pillars: health, housing, legal status (e.g. city hall registration, citizenship), economic independence (e.g. education, employment), parenthood/family, justice, social rights, community participation and social integration.

Observations: The majority of persons are migrant women, mainly from Eastern Europe Eastern Europe, Sub-Saharan Africa, North Africa, Central/South America and Southeast Asia. Prostituted persons were often in poor health and had a high morbidity rate, partly attributed to the lack of or delayed access to healthcare services. The most frequently asked health questions concerned fatigue, access to treatment, abortion, neonatal care, gynaecological check-up, mental health, , oral health, drug use, infectious diseases, chronic pain, injuries and malnutrition due to food insecurity.

Using the eight-pillar framework allowed the identification of unmet (health) needs and revealed social determinants of health. Indeed, inappropriate healthcare seeking

behaviours, mainly delayed care, were often reported in association with lack of knowledge regarding the healthcare system, financial insecurity, access to health insurance, legal status, language, (digital) literacy, abusive relationships (control), homelessness and prior experience with discrimination by healthcare providers.

Beneficiaries of isala services were supported in their administrative procedures to access care. If they were Belgian or European nationals, access was possible via regular medical insurance or Caisse Auxiliaire d'Assurance Maladie- Invalidité (CAAMI). In addition, a higher reimbursement status could be requested (BIM/OMNIO). For undocumented persons, an application for an urgent medical card was made at CPAS/ OCMW. Furthermore, the association helps people to address other barriers and issues, such as housing.

Conclusion: Prostituted persons have complex health needs and face various types of barriers. A holistic approach addressing social determinants of health is needed to support people in prostitution or with a history of prostitution and address inequities.

Main messages:

- Prostituted persons are a vulnerable population with specific health needs, who face obstacles in accessing health care.
- A person-centred approach is needed to address health needs and barriers to reduce health inequities.

Keywords: social support services, prostitution, barriers to healthcare access, health status

Acknowledgments : The authors would like to thank all the individuals who participated in National Food Consumption Survey

CHAPTER 2: ACCESS, QUALITY AND USE OF HEALTHCARE

ABSTRACT 1 : COMMUNITY HEALTH WORKERS: IMPROVING ACCESS TO HEALTHCARE FOR SOCIO-ECONOMIC VULNERABLE GROUPS

Author: Houria Bounouch (1), Apers Hanne (2), Cossaert Theo (2), Mullie Karen (3), Neelen Mathias (4), Masquillier Caroline (2)

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Background: Integrating community health workers (CHWs) into national healthcare systems has shown promise to improve access to services, address health inequalities and improving health outcomes (Mupara et al. 2022; Scott et al. 2018). CHWs are trusted community members who bridge the gap between the healthcare system and underserved populations (Capotescu et al. 2022; Mupara et al. 2022). During the Covid-19 pandemic, the National Institute for Sickness and Disability Insurance (NIHDI) and the National InterMutualist College (Intermut) installed a CHW-program in Belgium to overcome barriers in access to the healthcare system, commissioned by the Belgian Federal government. The project helps people living in socio-economically vulnerable situations in their access to primary care through collaborations with individual care providers, services and institutions.

Methods: Qualitative research during the first year of this project was conducted through a photovoice study in collaboration with 15 CHWs. In addition, thirteen people who receive support from a CHW took part in an individual in-depth interview. Furthermore, nine CHW coaches participated in two focus group discussions. The research conducted in the second project year aimed to identify the success factors and potential barriers of collaborations with local organisations and healthcare providers, in bridging the health inequality gap. We applied a mixed-methods approach: we conducted in-depth interviews with CHWs and local partner organisations, we mapped the collaborations on the local, regional, and federal level of the project, and analysed data registered through the project's registration system. Both studies were submitted to the Social and Human Sciences Ethics Advisory Committee of the University of Antwerp, where ethical approval was received.

Results and conclusion: Qualitative research during the first year of this project shows that CHWs can play a valuable bridging role between the Belgian healthcare system

and people living in socially vulnerable circumstances who have little or no access to healthcare. Access to health care was, is and will remain a major challenge for Belgium in the future. Addressing these challenges is necessary to maintain productive collaborations and ensuring access and appropriate care for people in vulnerable positions. Results from the second year show that collaborations depend on the local context and the organisation of the primary care provider. Successful factors in a collaboration include: clear and easy communication; prioritising patient-centred care in a humane way; mutual trust and respect for each other's skills and knowledge. Barriers found in this study are: challenges in establishing clear roles; unclarity about the implementation of the CHW-project; and temporality of the CHW-program.

Main messages:

- CHWs contribute to improving health care access and to optimizing health care efficiency for vulnerable communities. They also act as community 'change agents' who have the potential to impact health behaviors and empower communities to make joint decisions about health care.
- CHWs are trusted members of the communities they work in. Thanks to their knowledge of both the cultural background of the people and the knowledge or the healthcare system, they are the missing link to make cultural sensitive care possible in reality.

Keywords: Community Health Work, Healthcare access, Vulnerability, Barriers, Patient-centered

Acknowledgments : Funding by the NATIONAL INSTITUTE FOR HEALTH AND DISABILITY INSURANCE (NIHDI)

ABSTRACT 2 : HOW CAN THE EUROPEAN UNION SUPPORT MEMBER STATES TO ENSURE AFFORDABLE ACCESS TO HEALTH CARE FOR EVERYONE?

Author: Jessica Martini (1), Giorgia Fleischmann (1,2), Sebastiano Sabato (1)

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(1) European Social Observatory (OSE)
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Background: European Union (EU) member states committed to progress towards universal health coverage (UHC), so to ensure that everyone can access quality health care without experiencing financial hardship. This is notably reflected in goal 3 of the United Nations' 2030 Agenda for Sustainable Development (2015) and in principle 16 of the European Pillar of Social Rights (2017). Yet, significant gaps remain, and inequalities in affordable access to health care have increased both within and between

Member States. We explore how the European Union has used its socio-economic governance and funding instruments to address the issue of affordable access to health care in national health care reforms. We then suggest ways in which the EU can further support national progress towards UHC.

Methods: We collected EU official documents related to the European Semester and EU funding programs and triangulated this information with a literature review assessing the EU influence on national health care reforms. A thematic analysis was conducted with Nvivo14 to explore how the EU instruments have addressed the issue of access to health care, and what their strengths and limitations are.

Results: The European Semester has focused on health care reforms from its outset in 2011. The attention for access to health care, however, only gained traction since 2015. Indicators have been included to monitor progress towards the European Pillar of Social Rights and the Sustainable Development Goals. With the COVID-19 pandemic, the country-specific recommendations focused on the resilience of the health systems, including the issue of access to health care. Moreover, access-related health care reforms are covered by the various funding instruments supporting country reforms and investments in the health sector, such as the Recovery and Resilience Facility and the Cohesion policy. Despite this positive trend, limitations remain. The European Semester continues to focus disproportionately on economic and fiscal priorities. The indicators used for monitoring do not provide a comprehensive understanding of health care affordability. The funding instruments are not sufficiently coordinated, and their monitoring does not focus on access to health care.

Conclusion: The EU should further support Member States to progress towards universal health coverage. Two main areas of actions can contribute to this respect: i) strengthening the EU policy coordination and data collection; and ii) recognizing principle 16 of the European Pillar of Social Rights as a key priority for the EU agenda in the years to come**.**

Main messages:

- The European Union has played an increasing role in shaping national health care reforms, including coverage policy, through its socio-economic governance and funding instruments
- Despite an increased attention for access to health care, an imbalance persists leaning towards economic and fiscal priorities, and the indicators used for monitoring do not provide a sufficiently comprehensive understanding of health care affordability

Keywords: Affordable access to health care, Universal health coverage, European Semester, European Pillar of Social Rights, European funding

Acknowledgments : This work was supported by the Belgian National Institute for Health and Disability Insurance (NIHDI) and was conducted for the preparation of the Belgian Presidency of the Council of the European Union. In this framework, other researchers were also involved: Sarah Thomson and Jonathan Cylus, from WHO Barcelona Office for Health System Financing, as well as Carine van de Voorde and Nicolas Bouckaert, from the Belgian Health Care Knowledge Centre (KCE). They notably analysed the gaps in affordable access to health care that remain in the European Union and contributed to the development of the final recommendations.

ABSTRACT 3 : CONCENTRATION AND VOLUME OF HEALTHCARE IN BELGIUM

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Introduction: The aim of this study is to measure the concentration and volume of health care expenditure for the Belgian population. We use Lorenz curves for this purpose. Lorenz curves can be used to determine whether a particular variable, in this case health expenditure, is evenly distributed within a population. This is done by plotting cumulative population (% - X-axis) against cumulative expenditure (% - Y-axis). If the distribution is uniform across the population, the graph shows a 45° diagonal.

Methods: The population studied consists of all persons who lived in Belgium and were affiliated with one of the seven Belgian health insurance funds, approximately 11.5 million people. The numbers are based on invoicing data from the health insurance funds and include expenditures by the National Institute for Health and Disability Insurance (NIHDI) and co-payments. In total, they amount to more than €30 billion. However, they do not take into account expenditure not covered by the mandatory health insurance. The curves distinguished between spending on general practitioners, dentists, specialists, medicines and hospitals.

Results and discussion : The Lorenz curve shows, in general but also by type of health provider, what impact compulsory health insurance has on financial accessibility. It shows, for example, that there are not many individuals with hospitalisation expenses, but the costs are huge for those who are hospitalised. In the case of expenditure on general practitioners, this expenditure is more evenly distributed. Overall, 60% of compulsory health insurance expenditure accounts for 5% of the population. Health care is concentrated within a very small and vulnerable part of the population. It

highlights the importance of a social model: universal coverage, no risk selection, and selective protection measures for the most vulnerable.

Conclusions : Health cares are concentrated on a small part of the population, which is very fragile. This shows the importance of non-selective, non-risk-based protection for an effective social protection model.

Main messages:

- This shows the importance of non-selective, non-risk-based protection for an effective social protection model.

Keywords: Expenditure, volume, sectors, concentration, Lorenz

Acknowledgments : The authors would like to thank all the individuals who participated in National Food Consumption Survey

CHAPTER 3 : HEATLH DETERMINANTS AND LOCAL APPROACHES FOR PUBLIC HEALTH

ABSTRACT 1 : IMPROVING SCHOOL FOOD SYSTEMS TO SUPPORT CHILDREN EXPERIENCING FOOD INSECURITY IN FLANDERS

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Background: Developing healthy dietary habits is even more vital for children due to its importance for growth, development, and health. Unfortunately, optimal diets and home environments conducive for healthy eating are less common in families with a lower socioeconomic status (SES). Further, growing rates of poverty means a higher number of families in Flanders are now experiencing food insecurity. Experiencing food insecurity whilst growing up makes it harder for children of low-SES to reach their potential. This presentation will focus on a recently funded Foundation Against Cancer research project that aims to investigate which school-based actions best support children and families experiencing food insecurity.

Methods: This project will apply a participatory systems approach to develop and test systemic actions at different levels of the school system to address the complex problem of food insecurity among children via schools including 1) school system mapping of the drivers of food insecurity among children; 2) identification of leverage points within the school food system for actions; 3) existing school action mapping to support food insecure children; 4) co-development of systemic school actions; and 5) modelling the impact of potential systemic solutions using agent-based modelling.

Results: Expected outcomes of this research include: 1) a systems map/causal loop diagram including drivers and underlying mechanisms regarding food insecurity among children, and an overview of leverage points for change; 2) an overview of existing school actions, and its facilitators and barriers; and 3) an overview of effective systemic actions to support food insecure children and families via the school, co-developed by both school actors and food insecure children and families and tested in simulation models.

Conclusion: This project will lead to newly developed school-based actions designed to support children and families experiencing food insecurity. Given the rise of this societal problem that impacts vulnerable populations, this project is both timely and necessary.

Main messages:

- This project is one of the first to take a participatory systems approach to investigate and support children and families experiencing food insecurity, this will help to ensure that the proposed school actions can have a positive impact for these vulnerable families and avoid further widening of dietary inequalities.
- Poverty has been rising, which means a higher number of families in Flanders are now experiencing food insecurity. Experiencing food insecurity whilst growing up makes it harder for children of low-SES to reach their full potential. This project will take a broader environmental perspective including schools, community, instead of a sole focus on the microenvironment (i.e. household) when seeking solutions for food insecurity among children and their families.

Keywords: children, school, food insecurity, health promotion

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ABSTRACT 2 : LOCAL APPROACH TO ATTRIBUTABLE DISEASE BURDEN: A CASE STUDY FOR AIR POLLUTION AND MORTALITY IN BELGIUM

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Background: The calculation of burden of disease and its attribution to risk factors is usually conducted at the national or regional level. This research proposes a novel approach to comparative risk assessment, where attributable disease burden is derived locally, and compares the estimates with those obtained under a wide-scale approach.

Methods: Mortality from all causes in Belgium due to long-term exposure to particulate matter with a diameter <2.5 µm (PM2.5) and nitrogen dioxide (NO2) is derived for the year 2019. In the local method, the attributable burden is calculated at the level of census tracts. Area-level exposure is translated into the fraction of attributable deaths using a concentration-response function derived for the general population, which suggests potential bias in the local results. Therefore, the local method is validated by comparing the results, summed to national and province totals, to estimates derived with a wide-scale 'global' approach.

Results: The local method estimates 12,050 (95% CI: 6340, 17,350) deaths from PM2.5 and 7770 (95% CI: 4590, 11,070) deaths from NO2 in Belgium. For both pollutants, these national estimates never deviate more than 2% from those obtained with the global method, and never more than 4% in the individual provinces. These discrepancies are limited compared to the confidence interval, where the deviation from the central estimate is in the range of 40 to 50% for the national as well as the provincial results.

Conclusion: Aggregated local burden estimates prove to be accurate when compared to results obtained with a wide-scale approach. This means the local method shows potential for comparing geographical areas at sub-national level, that can be defined in a flexible manner depending on policy needs. Another benefit that merits further research is the possibility to confine the aggregation to population strata, which allows to focus on vulnerable groups and examine socioeconomic inequalities.

Main messages:

- Aggregated local burden estimates prove to be accurate when compared to results obtained with a global approach.
- The local approach to attributable burden of disease shows promise to extend the scope of comparative risk assessment and answer additional research questions.

Keywords: environmental health, air pollution, burden of disease, local approach, policy

Acknowledgments : /

ABSTRACT 3 : CITY-MOVE: ASSESSING DATA COLLECTION & AVAILABILITY ON PHYSICAL ACTIVITY IN THE CITY OF ANTWERP

Author: De Deurwaerder Oberon, Thornton Lukar, the work is undertaken on behalf of the City-Move consortium.

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Background: As part of a recent Horizon Europe-funded consortium (CITY-MOVE), Antwerp stands as one of the six cities selected across three continents to implement and adapt the WHO Global Action Plan on Physical Activity (GAPPA). With physical activity (PA) being a critical determinant in reducing the prevalence of non-communicable diseases (NCDs), Antwerp, like many cities worldwide, faces unique

challenges in promoting PA due to its diverse socio-economic and cultural context. Despite the existence of evidence-based interventions, their implementation and evaluation remain suboptimal, particularly in targeting the least active or vulnerable groups.

Methods: In Work Package 4 (WP4) of CITY-MOVE, the focus lies on improving the utilization of routinely collected data to support successful intervention development, implementation, and evaluation of PA initiatives in an urban context. Starting with Antwerp, we will map the existing data system, assess city processes, and conduct retrospective analyses to enhance the city's capacity in utilizing routine data for evidence-based decision-making. This work will be undertaken in partnership with representatives from the City of Antwerp.

Results: Through the efforts of WP4, CITY-MOVE aims to identify the strengths and weaknesses in data collection, management, and analysis specific to Antwerp. We will present the data- template created for CITY-MOVE, using the Antwerp data as a blueprint. By mapping existing data sources and assessing city processes, the initiative seeks to guide improvement, thereby bridging the gap between data availability and effective decision-making. The assessment of the available PA and environmental data in Antwerp offers insights in socio-economic disparities between its neighborhoods and efforts to improve PA. The results contribute to the sustainability of city-GAPPA implementation in Antwerp and serve as a model for the partner cities in the project.

Conclusion: The assessment of data collection and data availability on physical activity in Antwerp creates a system-wide view of all relevant PA data. Through the collaborative efforts of CITY-MOVE, Antwerp and other participating cities can strengthen their capacity to implement evidence-based interventions effectively, fostering long-term sustainability and impact in the promotion of PA and reduction of NCD burden.

Main messages:

- This Horizon Europe project presents possibilities for cross-context comparisons: CITY-MOVE's multi-continental approach enables comparative analysis across diverse urban settings, including Antwerp, facilitating the identification of context-specific solutions.
- Opportunities provided through working partnerships with the city: by actively engaging with local stakeholders and enhancing Antwerp's capacity in data utilization, CITY-MOVE aims to foster meaningful partnerships and sustainable interventions beyond the project duration.

Keywords: Physical activity, data systems, built environment, non-communicable diseases

Acknowledgments : This project is funded by the European Union (Horizon Europe Research and Innovation Programme, Grant agreement no. 101136358).

ABSTRACT 4 : FOOD INSECURITY AND FRUIT AND VEGETABLE CONSUMPTION IN A REPRESENTATIVE SAMPLE OF THE BELGIAN POPULATION

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Background: Food insecurity is a substantial and growing concern in many high-income countries. Yet, representative data on the extent of the issue in the general Belgian population is lacking. This study aims to assess the extent of food insecurity in Belgium, identify those at risk of food insecurity, and explore the relationship between food insecurity and fruit and vegetable consumption.

Methods: We used data from the Belgian National Food Consumption Survey 2022-2023, a representative sample of the Belgian population aged 3 years and older (n=2,800). Food insecurity at the household level was assessed using the 3 screening questions derived from the USDA Household Food Security Survey Module. Frequencies of fruit and vegetable consumption were obtained from a self-completed food propensity questionnaire. Prevalence of food insecurity was estimated using post-stratification weights. Logistic regression models were used to determine the association between frequency of fruit and vegetable consumption and food insecurity, adjusting for gender, household composition, educational attainment, and income.

Results: Preliminary results indicate that 12.6% of population experienced some form of food insecurity. Those who experienced food insecurity consumed fruit and vegetables less frequently than others, after adjustment for other socio-economic variables (ORs>4.00, p-values>0.05). Final analyses will further identify the key socio-demographic characteristics associated with food insecurity.

Conclusion: Based on a representative sample of the population, this study confirms that food insecurity is a substantial concern in Belgium. Food insecurity should be routinely monitored at the national level. Experiencing food insecurity appears to be associated with the consumption of healthy foods such as fruits and vegetables and thus with the overall quality of the diet. Further research should be supported to identify effective strategies to reduce food insecurity in Belgium. Policy attention

should be given to ensure financial accessibility to healthy foods and their attractiveness, especially for people experiencing food insecurity.

Main messages:

- Food insecurity is an major driver of public health inequalities in Belgium and should be routinely monitored
- Policy attention should be given to ensuring financial accessibility to healthy foods and their attractiveness, especially for people experiencing food insecurity.

Keywords: Food insecurity, Social determinant, Diet, nutrition

Acknowledgments : The authors would like to thank all the individuals who participated in National Food Consumption Survey

POSTERS PRESENTATIONS

ABSTRACT 1 : WHAT PROBLEMS ARE COMMUNITY HEALTH WORKERS SUPPOSED TO ADDRESS?

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Background: Over the last decades, the role of Community Health Workers (CHWs) in strengthening Primary Health Care (PHC) systems has progressively emerged from the

global health shadows. Serving both as frontline public health workers and trusted representatives of a community, CHWs possess a unique position between health services and individuals at the intersection of vulnerabilities. Therein, they not only significantly facilitate access to primary health care, yet also contribute to individual and community capacity building.

Methods: Despite the increasing professionalization of CHWs and their development in national health systems in line with the philosophy of Primary Health Care (see Alma Ata Declaration of 1978), the World Health Organization (WHO) only recently (2018) launched a guideline to optimize CHW programs in national health systems. Remarkable in this guideline is that recommendations seem to target mostly workforce challenges in health systems of Low- and Middle-Income Countries (LMICs). They barely address the specifics of health systems in High-Income WHO member states(HICs), as f.i. Belgium, and poorly respond to inequities caused by factors beyond the lack of human resources. The generalizability of the guideline seems therefore at stake.

Results: C. Bacchi (2009) reasons that policies and guidelines play a major role in constructing, reproducing and reifying problems they are supposed to address. Applying Bacchi's post-structural (2009) lens 'What is the problem represented to be' (WPR), this study aims to critically examine (1) discourses in the WHO's guideline for Community Health Workers and (2) the impact of these discourses on power dynamics within global health. They are considered in relation to WPR questions 1, 2 (and 3) and 4 (C. L. Bacchi, 2009). 1. What global health problems are CHWs presented to address? 2. What are taken-for-granted notions in the problem formulation? 3. And what factors are not considered in this problem formulation?

Conclusion: Our study highlights the WHO's assumption that health (in)equity is largely an issue of human resources in health, certainly in LMICs. The WHO further presumes that CHWs is a strategy to tackle (female) unemployment rates, presumed to be located in LMICs. The position taken in the WHO guideline reveals discourses of differentiation – among others between LMICs and HICs, economic gain and individual responsibility. Concluding, the recommendations of the WHO on the installation of CHWs are formulated around discourses that uphold global health inequities.

Main messages:

- Community Health Workers (CHWs) have been part of health systems in LMIC for several decades, certainly in the aftermath of the Alma-Ata declaration on Primary Health Care (PHC). They are seen as important actors in improving equitable access to health care in a context of scarce qualified Human Resources for Health (HRH).

- There is currently an increasing interest in Belgium to learn from this experience and to "test" the implementation of CHWs in our own health system (an learn from it). It remains to be seen whether CHWs implemented in a radically different context than the one prevailing in LMIC (certainly when it comes to HRH) would be an effective and efficient instrument to improve equity in health.

Keywords: Community Health Workers, Belgium, WHO, Discourse Analysis, Equity in the access to health care

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ABSTRACT 2 : JOINING FORCES: DEVELOPING A SMOKING PREVENTION INTERVENTION IN SOCIAL WORK ORGANISATIONS THROUGH CO-CREATION WITH ADOLESCENTS AND YOUTH WORKERS

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Background: Adolescents experiencing societal vulnerability are at an increased risk of smoking initiation, contributing to ongoing health disparities. To develop a smoking prevention intervention tailored to these adolescents, employing a participatory approach like co-creation involving adolescents and key stakeholders can ensure alignment with their needs. Navigating a co-creation process, especially concerning a sensitive topic like smoking, presents unexplored terrain in existing literature, particularly when engaging with hard-to-reach youth. This presentation aims to describe the co-creative process underpinning the KickAsh!-intervention, a smoking prevention program involving youth workers and 10-16-year-olds experiencing societal vulnerability.

Methods: Four youth workers (Mage = 23.75 ± 0.96) and nine adolescents (Mage = 13.56 ± 0.73) from two social work organisations in Ghent, Belgium,

participated in a co-creation trajectory of eight months, together with two academic researchers and one design thinking specialist. The Double Diamond Model and the Intervention Mapping Protocol facilitated this trajectory.

Results: The lived experiences and unique perspectives of youth workers and adolescents (revealed through the co-creative process) have shaped the development of the KickAsh!-intervention – a comprehensive website consisting of materials developed in collaboration with youth workers and adolescents.

Conclusion: This study emphasises the value of prioritising participatory designs structured by an evidence-based framework. This approach enables us to devise intervention strategies grounded in the lived experiences of adolescents and youth workers, ensuring practicality within the given context. The developed KickAsh!-intervention closely aligns with the preferences of both adolescents and youth workers. It prioritises creative elements informed by evidence-based theories with the expectation of achieving impactful and effective outcomes. However, further research is needed to evaluate the effectiveness of the KickAsh!- intervention.

Main messages:

- Integrating diverse perspectives and expertise in developing health promotion interventions is pivotal, fostering contextually adapted and potentially more effective outcomes. This inclusive approach can potentially mitigate health inequities significantly.
- Establishing trust with adolescents experiencing societal vulnerability before initiating a co-creation trajectory enhances the development of smoking prevention materials, thereby contributing to the broader goal of addressing public health inequities.

Keywords: Youngsters, Tobacco, Participatory research, Intervention development, Smoking prevention

Acknowledgments : The research that produced these results was financially supported by Kom op tegen Kanker (Stand up to Cancer), the Flemish Cancer Society, under project ID No[12339]. The authors express gratitude to the social work organisations (KAA Gent Foundation and VZW Habbekrats), the adolescents in the co-creation group, and the youth workers who participated in this study.

ABSTRACT 3 : WOMEN AND HEALTHCARE IN BELGIUM: WHAT ARE THE GENDER BIASES IN HEALTHCARE AND HOW CAN THEY BE ADDRESSED?

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Background: The scientific evidence is clear: women face more health problems throughout their lives than men. The reasons are not purely biological. Research shows that population-level differences in health are influenced by social factors, particularly the way the health system perceives and responds to people's needs. People are diagnosed, treated and monitored differently by health professionals depending on their gender, with women often at a disadvantage**.** What is the situation in Belgium? Do the prevention, diagnosis and treatment provided by the Belgian health system help to reduce health inequalities or, on the contrary, risk exacerbating them?

Methods: We analysed the accessibility of Belgian health care in its four dimensions: responsiveness to health problems, availability of care, affordability and acceptability based on the data (available in open access and also available for internal use by mutualities) of the healthcare use.

Results: Women in Belgium can encounter many difficulties in solving their health problems. A few examples from the fields of prevention (breast cancer screening), diagnosis and treatment (cardiovascular diseases) and the organisation of care (inequalities within the health professions) illustrate these difficulties.

Conclusion: Without claiming to be exhaustive, this study provides, for the first time, an analysis of the Belgian health system from a gender perspective and makes a number of recommendations to policy-makers and health system managers in order to reduce health inequalities between women and men.

Main messages:

- There are large differences in health between men and women in Belgium. Our analysis of the accessibility of Belgian health care shows how this risks perpetuating or even exacerbating these health inequalities
- A combination of measures at different levels is needed to achieve the ultimate goal of not only eliminating gender discrimination in terms of opportunities, resource allocation and access to services, but also achieving equity in the distribution of power, resources and responsibilities, taking into account the different needs of people, especially men and women, and the imbalances that characterise contemporary society.

Keywords: gender inequalities, women's health, access to health care, gender bias, policy recommendations

Acknowledgments : /

ABSTRACT 4 : ADDRESSING DISPARITIES IN DIABETES CARE: EXAMINING THE RELATIONSHIP BETWEEN THE STRUCTURAL INDICATORS OF THE CHRONIC CARE MODEL AND PROCESS AND OUTCOME INDICATORS IN A LONGITUDINAL STUDY

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Background: Diabetes is one of the fastest growing global health issues, with current health systems inadequately meeting the needs of those affected. Also in Belgium, a notable contrast in unmet medical needs emerges surpassing the averages of all Western EU countries. Donabedian's landmark model describes three dimensions of quality of care: structure, process and outcome, which can be measured using specific indicators. The Chronic Care Model (CCM) aims to enhance quality of care. However, limited observational research exists that assesses the impact of the CCM and its elements on both process and outcome indicators, overlooking considerations of health inequities.

Methods: A unique hierarchically structured longitudinal database, consisting of self-collected data on structural indicators of T2D care at the level of primary care practices, measured by Assessment of Chronic Illness Care (ACIC), individual-level health insurance and medical lab data on the process and outcome indicators was used. A series of hierarchical mixed-effects models was estimated.

Results: The sample comprises 58 primary care practices, with 7593 patients linked at the health insurance level and 4549 at the lab level, measured from 2017 to 2019. There was a significant positive association between the total ACIC score and both process indicators. A higher score for community linkages and clinical information system was significantly associated with higher odds having your HbA1c tested twice a year. Socio-economic vulnerable patients exhibit lower likelihoods of HbA1c follow-up in practices with low total ACIC scores, but this difference disappeared in practices with high total ACIC scores. The variation in both outcomes is attributed almost entirely to changes within individuals over time and between individuals and subsequently, no association was found with the total ACIC score.

Conclusion: The observational design of the study allowed studying the association between process and outcome indicators. Our findings support the social capital

pathway by demonstrating that better CCM implementation is associated with reductions the healthcare equity gap for patients with T2D. This could support managers and policymakers to promote CCM implementation in regions where the disparity between individuals of high and low socioeconomic status is significant, or where there is a concentration of people in poverty or deprivation.

Main messages:

- In Belgium, individuals with diabetes and a lower socio-economic status exhibit poorer adherence to recommended HbA1c measurements (2 every year) in comparison to their more socioeconomically advantaged counterparts.
- This equity gap diminishes and eventually vanishes when primary care practices adhere to the chronic care model. These exemplary practices exhibit enhanced organizational efficiency in care delivery, better support for self-management, optimal utilization of clinical information systems, advanced decision support, and strengthened community linkages.

Keywords: Diabetes Care, Chronic Care Model, Primary Care, Quality of Care.

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ABSTRACT 5 : COMPLEX CARE NEEDS FROM A MENTAL HEALTH PERSPECTIVE - A SCOPING REVIEW

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Background: A well-known statistic is that one in four people will suffer from a mental health issue at one point in their lives. A group behind this statistic that is hard to define, to characterize and seemingly even harder to care for are those with so-called complex care needs. For many people with complex mental health care needs (CCN) there is a mental health care gap, resulting in unmet care needs, fragmented care, poor continuity and quality of care and health outcomes, service overuse, underuse or misuse.The issue of unmet needs in people with CCN is multifactorial and multisectoral and solutions will have to be addressed in the same way. To do this properly, it is first necessary to get a clear understanding of the concept of complex care needs. This scoping review aims to validate the concept of complex care needs from a mental health (care) perspective by mapping key characteristics described in literature.

Methods: The scoping review will be conducted following the steps described in the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis. Databases PubMed, Ovid, Cochrane and Social Services Abstracts will be searched. Grey literature will be searched for through Google Scholar. The scoping review is planned to be submitted in March 2024.

Results: Data will be reported descriptively. There will be a frequency count of characteristics mentioned in the literature, which will be reported in a table, complemented by a narrative description of the results. Preliminary results identify amongst others substance (ab)use, mental or physical disability, socio-economic vulnerability including poverty and housing insecurity and involvement with the criminal justice system as some of the complicating factors experienced by people with severe mental illness.

Conclusion: The findings of the scoping review will lead to a working definition of complex care needs from a mental health perspective and the development of a measurement tool. This will be used to study the care use (including overuse, underuse, misuse, interruptions in care use, ...) and to develop improved care programs for this population. Intersectionality and complexity science could provide a framework for this.

Main messages:

- Substance (ab)use, mental or physical disability, socio-economic vulnerability including poverty and housing insecurity and involvement with the criminal justice system are some of the main complicating factors experienced by people with severe mental illness.
- It is clear that complexity arises more from the interplay between difficulties experienced, than from the simple sum of it. Intersectionality and complexity

science could provide a framework for further interpretation of these results and for further research and practice development.

Keywords: Complex care needs, mental health, intersectionality, severe mental illness

Acknowledgments : /

ABSTRACT 6 : INCOME-RELATED DIETARY INEQUALITIES IN BELGIUM: AN ANALYSIS OF THE HOUSEHOLD BUDGET SURVEY

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Background: Income-related inequalities are considered a key determinant of dietary inequalities. Evidence suggests low-income groups tend to have a diet of a lower nutritional quality, especially low in fruit and vegetables. However, inconsistencies in findings exist. Income-related dietary inequalities can vary due to numerous factors, including contextual differences across time and areas. Limited research has explored differences in dietary patterns across income groups in Belgium. We aim to explore time trends in income-related dietary inequalities in Belgium, using the Household Budget Survey (HBS).

Methods: We use data from the 2016, 2018, 2020, and 2022 Belgian HBS. The HBS is a nationally representative survey, capturing household consumption expenditure. We are currently engaging in complex statistical analysis to examine, first, the level of inequality and, second, whether these inequalities have widened or reduced over time.

Results: The first set of results will be available by May 2024.

Conclusion: This study will provide a better understanding of income-related dietary inequalities in Belgium and how they have changed over time. It will also help inform public health strategies targeted at improving diet quality and narrowing income-related inequalities.

Main messages:

- Despite the potential insights it offers, the Belgian Household Budget Survey (HBS) is rarely used for time-series analysis, resulting in missed opportunities to explore food expenditure patterns across income groups. Using the Belgian HBS, our study will explore trends in income-related inequalities and household food expenditure, shedding light on the potential widening of disparities over time in Belgium.

- The Household Budget Survey provides an opportunity to analyse pre-, during and post-COVID-19 expenditure on food and how expenditure patterns have changed across income groups over time.

Keywords: Food expenditure, Household Budget Survey, Income inequality, Time trends

Acknowledgments : Data are sourced from Statbel.

ABSTRACT 7 : DISPLACEMENT OF PLACE OF DEATH AND EXCESS MORTALITY FOR NEOPLASMS DURING THE COVID-19 EPIDEMIC IN 2020 AND 2021 IN BELGIUM

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Background: From March 2020, COVID-19 and two national lockdowns disrupted access to care and treatment, affecting causes of death trends.

Methods: We analyzed excess mortality for neoplasms (ICD-10 codes: C00-D48) in 2020, in 2021 and during lockdown periods (18 March to 3 May 2020 and 2 November to 1 December 2020) by place of death (hospital and at home) in Belgium, using the Belgian Mortality Monitoring (Be-MOMO) model. The data come from Statistics Belgium's causes of death database. The Be-MOMO model is a modification of the overdispersed Poisson model suggested by Farrington. A linear trend and sine-cosine wave are fitted to the last 5-years of data to estimate expected mortality.

Results: For 2020, we observed an excess mortality of +31.3% (+2,254 additional deaths) in neoplasm deaths occurring at home (n=9,447), and a significant under-mortality of -11.7% (1,785 fewer deaths) in neoplasm deaths occurring in hospital (n=13,466). In 2020, neoplasms were the main cause of death: 21.4% of deaths (n=27,209). The shift in the place of death started from the first lockdown and it remained until the end of 2021. However, its intensity diminishes from 27 June 2021 (end of the 2nd deconfinement measures period). For both lockdown periods, there was a statistically significant under-mortality in neoplasm deaths in hospitals (-25.3%

and -25.8%) and excess mortality at home (+44.1% and +54.5%). While neoplasms were still the main cause of death in 2021: 24.2% of deaths (n=27,205 deaths), we observed an excess mortality of +29.3% (+2,187 additional deaths) in neoplasm deaths occurring at home (n=9,656), and an important under-mortality of -10,0% (1,453 fewer deaths) in neoplasm deaths occurring in hospital (n=13,008). In addition to the displacement, excess mortality for neoplasm (all places of death combined) rose in 2021 to 693 additional deaths (+2.6%), surpassing estimations from 2020 (257 additional deaths, +0.9%) and 2018 (70 additional deaths, +0.3%), but aligning with 2019 (693 additional deaths, +2.6%).

Conclusion: We observed a huge shift in the place of death for neoplasm deaths between the first lockdown in 2020 and the end of 2021, from hospital to home, with under-mortality in hospital, and excess mortality at home. This shift reflects an indirect consequence of the COVID-19 epidemic on healthcare, highlighting the need for further research on care quality and end-of-life support.

Main messages:

- COVID-19 with two lockdowns disrupted access to care and treatment, with consequences for neoplasm mortality trends.
- There was a huge shift in the place of death for neoplasm deaths between the first lockdown in 2020 and the end of 2021, with under-mortality in hospital (-11.7% with -1,785 deaths in 2020, -10.0% with - 1,453 deaths in 2021), and excess mortality at home (+31.3% with +2,254 additional deaths in 2020, +29.3% with +2,187 additional deaths in 2021). This shift reflects an indirect consequence of the COVID-19 epidemic on healthcare, highlighting the need for further research on care quality and end-of-life support.

Keywords: neoplasms, excess mortality, COVID-19, places of death

Acknowledgments : /

ABSTRACT 8 : THE CONCEPTUALISATION AND MEASUREMENT OF ACCESS TO READY-TO-EAT MEALS THROUGH ONLINE DELIVERY SERVICES

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Background: Online platforms such as Uber Eats are part of the digital food environment and facilitate the purchase and delivery of ready-to-eat meals from a range of local restaurants and takeaway food outlets. As these meals are prepared out-of-home, it is likely that customers purchase items with higher than recommended amounts of calories, salt and fat. The recent growth in online delivery services has contributed to an increased public health and research focus on how access to them and the meals they sell may influence food purchasing practices and diet and health. Despite this, there remains no consensus on how best to conceptualise or measure access to ready-to-eat meals through online delivery services. This motivates three objectives for this study. First, to systematically review existing conceptualisations, definitions, and measures of access, including how and from where online delivery service data were sourced. Second, to develop a system to automate data collection. Third, to test the impact of different access measures and make best practice recommendations for future digital food environment research. This study contributes to an FWO Senior Research Project that is investigating the ready-to-eat-meal delivery system in Belgium.

Methods: A systematic review protocol is currently being finalised with data extraction to follow. Data sourcing procedures, the type of access measures used and the rationale for these will be investigated. For the second study objective, development and testing of automated data collection via web-scraping is underway to determine the accuracy and comprehensiveness of this data sourcing technique. Data from across Flanders, Belgium, will be used to replicate access measures identified in the systematic review and, where limitations are identified, new measures will be developed. These new measures will contribute to a more nuanced understanding of access to ready-to-eat meals through online delivery services.

Results: We will present a preliminary assessment of existing conceptualisations and measures of access used in previous research. We will also discuss how newly developed web-scraping methods have allowed rapid data collection from more than 3000 ready-to-eat meal retailers located in Flanders.

Conclusion: In research investigating relationships between the environment and health, outcome measures are repeatedly the focus with little thought attributed to preceding exposures. Using a health geography perspective, this study will demonstrate why differences in conceptualisations and measures of access to ready-to-eat meals through online delivery services matters for developing knowledge about if and how these services influence health.

Main messages:

- Online delivery services such as Uber Eats have become the focus of public health professionals and policy makers, which reflects the energy-dense and nutrient-poor food they typically sell. However, the way that these services have been investigated has varied across research conducted to date. This variation could contribute to an equivocal evidence base that promotes public health policy inaction. Our systematic review will provide evidence to inform future research and complement ambitions to prevent the widening of population-level dietary and health inequities in Belgium.
- Appropriate conceptualizations and measurement of relationships between the environment and health matters. However, in existing research investigating the impact of meal delivery services on public health, these fundamental aspects of health geography have not always been fully considered. As a result, there is an incomplete and inconsistent understanding about the spatial and socioeconomic distribution of these services and how they might influence dietary practices and health. Our novel, automated data-collection provides data that can be used to bridge this knowledge gap and inform best-practice guidelines for future research into inequities in online food delivery service access in Belgium and internationally.

Keywords: Digital food environment, Food accessibility, Health geography, Online food delivery, Ready-to-eat meals

Acknowledgments : /

ABSTRACT 9 : TRACKING THE GROWTH AND IMPACT OF THE READY-TO-EAT MEAL DELIVERY SYSTEM IN BELGIUM

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Background: Over the last decade, the food market has shifted with ready-to-eat meal delivery services infiltrating many major cities although the widespread proliferation in Belgium is relatively recent. There is a real risk that the current meal delivery system may increase many dietary (and subsequently health) risk factors, have negative consequences for local retailers, and lead to a widening of inequalities (e.g. for

consumers through dietary outcomes and for neighbourhoods through local food supply). This presentation will focus on a recently funded FWO research project that aims to investigate the Belgian ready-to-eat meal delivery system focusing on both consumers and local food retailers.

Methods: This proposed study has three key areas of focus. First, we will investigate consumers with a focus on the determinants and implications of using ready-to-eat meal delivery services. Both quantitative and qualitative studies are planned using a sequential mixed methods design. Second, we will investigate implications for the brick-and-mortar food retailers via semi-structured interviews with store managers. Finally, we aim to develop co-designed solutions with an emphasis on creating a healthy and equitable ready-to-eat meal delivery system. The potential impact of these solutions will be modelled using agent-based modelling.

Results: Expected outcomes of this research include: 1) an understanding of determinants associated with using ready-to-eat meal delivery services and the implications of regular use amongst Belgian consumers; 2) a currently undocumented understanding of the impact on brick-and-mortar retailers which will help inform proactive policy and industry responses; 3a) the generation of a systems map that is co-created with stakeholders accompanied by the identification of leverage points and proposed solutions and 3b) the modelling of the meal delivery system based on the systems-mapping work which will allow us to understand the processes and structures involved and evaluate the proposed solutions that can be difficult to test in a real-world setting.

Conclusion: Recognizing that meal delivery services will become ever present in the future, the knowledge generated will be used to develop solutions to ensure positive changes such as ease of ordering healthy meals and profitable business opportunities for local retailers.

Main messages:

- Smartphones' adoption and the growth of meal delivery platforms means ready-to-eat meal access is now at an all-time high and meal delivery companies now operate in many Flemish cities. At present, we do not know the (negative and/or positive) impact this has had and will continue to have on consumers and local food retailers.
- This project will be underpinned by a systems perspective to help ensure that proposed interventions to the ready-to-eat meal delivery system do not lead to a further widening of dietary inequalities.

Keywords: food environment, meal delivery, dietary inequalities, systems science

Acknowledgments : This work is supported by the Research Foundation – Flanders (FWO), grant number G080823N.

ABSTRACT 10 : MEAL BOXES AS AN INNOVATIVE INTERVENTION STRATEGY TO ENABLE HEALTHY FOOD CHOICES AND A HEALTHIER HOME FOOD ENVIRONMENT AMONG LOW-INCOME FAMILIES

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Background: Parents have been identified as the most important actors in affecting children's dietary behaviours, especially via structure-based food parenting practices: food availability, role modelling, and family meal routines. Families with a lower socio-economic status (SES) have higher obesity prevalence rates, less optimal diets and less supportive home environments for healthy eating compared to higher-SES counterparts. Therefore, it is important to find effective ways to improve structure-based food parenting practices among low-income families to change children's dietary patterns and thus prevent non-communicable diseases early in life. This presentation will focus on a recently funded FWO research project that aims to investigate meal box provision as an innovative intervention to promote and enable healthier food choices among low-income parents.

Methods: This proposed study has three key areas of focus. First, we will conduct a needs assessment among low-income families on how meal boxes can become more accessible and acceptable for them. Second, we will map the food system around meal boxes and investigate systemic solutions to make meal boxes more accessible, acceptable and affordable for low-income families. Finally, we will evaluate the effect and process of meal box use on the drivers of food choices among low-SES families.

Results: Expected outcomes of this research include: 1) an understanding of pathways and interactions between relevant drivers of healthy food choices as well as how meal boxes can become more acceptable and accessible for low-income families; 2) insight into opportunities for change in our food supply system that enable more affordable, available, and accessible meal boxes for low-SES parents; and 3) insight into the process and effectiveness of the provision of healthy meal boxes to low-SES parents on food choices, and its drivers.

Conclusion: This project will yield crucial information on the potential of meal boxes as health promoting tool and will support the further upscaling of meal box provision for low-income families.

Main messages:

- Meal boxes are getting more and more established as a way of food purchasing but are currently not affordable and accessible for low-income families. Meal boxes have much potential to overcome existing barriers for healthier food choices among low-income families but, so far, there is only limited knowledge on their impact for this specific group.
- This project will be underpinned by a participatory systems approach to help ensure that meal boxes become more affordable and accessible and thus help avoid further widening of dietary inequalities.

Keywords: meal box, food choices, low-income, families

Acknowledgments : This work was supported by the Research Foundation – Flanders (FWO) grant number G013824N.

ABSTRACT 11 : HYPERTENSION AS AN EFFECT MODIFIER FOR PRETERM AND SGA BIRTHS IN MIGRANT WOMEN IN BELGIUM: A NATIONWIDE REGISTRY STUDY

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Background: A well-known association between migration and pregnancy outcomes has been described. Socioeconomic status (SES) explains some differences, but its influence may vary according to the women's underlying health conditions. Our objective was to analyse how comorbidities modify the relationship between maternal nationality and preterm birth (PTB) or small for gestational age (SGA) in Belgium.

Methods: This population-based study used the data of birth certificates from the Belgian civil registration system. Data are related to all singleton births to mothers living in Belgium between 2010 and 2019 (n=1 200 417). Maternal nationalities were grouped as Belgium, EU, North Africa, Sub-Saharan Africa and Middle east. We used logistic regression to estimate the odds ratio for the associations between perinatal outcomes (PTB and SGA) and maternal nationality according to SES and maternal comorbidities (hypertension (HT), obesity, and diabetes). We tested the interaction effect between maternal nationality and comorbidities**.**

Results: Migrant women were more socio-economically disadvantaged than Belgian women but have lower risk of PTB and SGA ($p<0.001$) except for Sub-Saharan African and middle east women for SGA. However, HT has a modifier effect. All migrant women without HT had a significantly lower Odds Ratio of PTB than Belgian ($p<0.001$). In contrast, women with HT had higher Odds Ratio than Belgian, even after adjustment for SES and other comorbidities. This difference was more marked among Sub Saharan Africa and Middle east mother: respectively, aORs 1.45 (95%CI 1.30-1.62) and 1.24 (95%CI 1.01-1.54) for PTB and, aORs 1.17 (95%CI 1.03-1.17) and 1.28 (95%CI 1.02-1.60) for SGA .

Conclusions: This study shows that HT modifies the association between migration and unfavorable pregnancy outcomes. Although migrant women have a lower risk of PTB and SGA than Belgian women, in the presence of HT, their risk is significantly higher than Belgian women. Further research is needed to analyze the complex relationships between migration, social status, maternal conditions and perinatal outcomes.

Main messages:

- Hypertension modifies the association between migration and unfavorable pregnancy outcomes as preterm birth and small for gestational age.

Keywords: Perinatal health, health inequalities, migrants, hypertension, preterm birth, SGA

Acknowledgments : We thank STATBEL for providing the data

ABSTRACT 12 : PARTICIPANT EXPERIENCES ON DEVELOPING A SMOKING PREVENTION INTERVENTION USING A CO-CREATIVE APPROACH

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Background: Tobacco smoking remains a persistent public health challenge, with smoking initiation disproportionately affecting certain population groups such as socially vulnerable adolescents. Co-creation might be an innovative methodology to tackle these disparities and create tailored interventions which could lead to higher impact and effectiveness. As socially vulnerable adolescents often feel less connected and inspired by a school context, we decided to create our intervention through collaboration with two youth social work organisations that offer sport and recreational activities (SR-settings). Both youth workers and adolescents from these SR-settings were involved in the project. The primary objective of this study was to analyse their experiences and perspectives regarding the co-creation process.

Methods: The participants in this study included five youth workers and nine socially vulnerable adolescents. The co-creation process included five sessions with youth workers, a three-day co-creation camp and two additional sessions with adolescents. Data were collected through individual interviews with youth workers and two focus group discussions with the adolescents. A thematic analysis was conducted to uncover key patterns and themes within the gathered information.

Results: During analysis two main categories arose: preconditions for co-creation and dynamics and outcomes of co-creation. Under preconditions, factors such as securing and sustaining accessibility for participation, fostering a foundation of trust, taking into account the context, recognizing motivational aspects, and ensuring shared decision-making were identified. The discussed dynamics and outcomes were the formation of

a suitable co-creation group and the impact of group dynamics, perceptions on the level of participation, key outcomes specific to co-creation (e.g., empowerment, ownership, capacity building) and experiences concerning the used co-creation methods (e.g., gamification, drawing your opinion, group discussions).

Conclusion: This study provides valuable insights into the collaborative dynamics and processes that unfolded during our co-creation initiative. By delving into these aspects, we were able to refine co-creation methodologies, adding to the broader knowledge base on effective participatory practices. Furthermore, our findings emphasize the crucial role of inclusive methods in addressing health disparities. This research contributes not only to the understanding of co-creation in this specific context, but also holds broader implications for enhancing inclusive approaches when tackling other health disparities.

Main messages:

- This study contributes to exploring co-creation initiatives on tackling smoking inequalities.
- Through this study it becomes possible to unravel how adolescents living in socially vulnerable conditions experienced their participation in a co-creation project. The insights from this study might inspire future researchers when elaborating similar projects and help them in their collaboration with this target group, consequently addressing health inequites of any kind.

Keywords: smoking inequalities, co-creation, adolescents, youth work

Acknowledgments : /

ABSTRACT 13 : INVESTIGATING FOOD-RELATED ASPECTS OF APARTMENT BUILDING DESIGN GUIDELINES: AN INTERNATIONAL COMPARISON

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Background: Globally, a rise in apartment living has been observed in urban areas. A key challenge resulting from this continued growth in cities is ensuring that apartments

and new residential buildings are designed to support residents' health. This issue is highly relevant in Belgian cities where access to quality housing is poorest, and health inequities are most prevalent. Living in apartments with limited space for food practices (i.e. the act of procuring, preparing, storing, and consuming food) promotes tendencies for less healthy alternatives, e.g. preference for out-of-home meals and convenience foods requiring minimal storage and preparation. Further, families with young children residing in such restrictive dwellings may miss out on health promotion opportunities through shared family meals and children's involvement with meal preparation. Whilst existing evidence suggests that the design of residential kitchens and spaces is a key determinant of food practices, this link remains currently overlooked by public health research and housing policy. To address this gap, this study aims to explore whether apartment building and kitchen design guidelines foster opportunities for at-home food practices and to systematically compare these design guidelines across different national and international contexts.

Methods: A sample of policy documents was sourced from international geographical regions. Documents intended for institutional housing, published before 2010, were superseded by a newer version or did not contain guidelines for kitchen and domestic space design were excluded. The policy text was coded and analysed using the Framework Method to define housing characteristics directly influencing food practices. Geographical settings were compared in terms of the number of housing characteristic themes covered, their level of detail, and whether they were evidence-based.

Results: A total of 18 international policy documents were analysed from 10 geographical settings, including Brussels, Belgium. Whilst the Brussels GoodLiving policy covered a number of the identified themes, these design guidelines contained less detailed guidance in comparison to other geographical areas. A clear difference in methodologies used to justify design recommendations was observed depending on geographical context (e.g. the Brussels Capital Region utilised expert consultations, whilst the New South Wales Government in Australia employed case studies as the basis for guidelines).

Conclusion: Our preliminary results suggest that housing design policies may be leveraged to ensure new apartments are designed to provide opportunities for at-home food practices. These also identify an urgent need for consideration among planning agencies in addressing dietary inequalities in the context of urban development

Main messages:

- The design of residential kitchens and living spaces potentially influences food practices or the manner in which individuals purchase, store, prepare, and consume food at home. However, this link remains currently overlooked by housing policy and, hence, merits further investigation.
- Generating knowledge on how residential building design guidelines provide opportunities for at-home food practices presents opportunities to inform structural and built environment strategies aiming to improve nutrition and reduce dietary inequalities amidst the context of urbanisation.

Keywords: housing conditions, food practices, apartment living, policy analysis

Acknowledgments : /

ABSTRACT 14 : STUDY DESIGN AND PROTOCOL OF 'PROJECT CHWXBC', A STEPPED WEDGE CLUSTER RANDOMISED TRIAL USING COMMUNITY HEALTH WORKERS AS A STRATEGY TO REDUCE THE INEQUALITY IN BREAST CANCER SCREENING PARTICIPATION IN FLANDERS

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Background: In 2021, 11.319 women in Belgium were diagnosed with breast cancer. Despite the Breast Cancer Screening Program a significant inequality in participation in breast cancer screening persists in Belgium. Limited health literacy appears to be one of the major causes of this inequality. To address this issue and disseminate information effectively to the target group, the utilization of a community health worker (CHW) becomes a viable strategy. CHWs have been actively engaged for numerous years in low and middle-income countries, providing an integrated approach to breast cancer screening. To our knowledge, little is known about the preventive role of CHW in Belgium and its potential impact on breast cancer screening. This study will describe the protocol for a CHW-based intervention within breast cancer screening, using a stepped wedge cluster randomized trial (SW-CRT) design to evaluate the effectiveness of the CHW-based intervention regarding participation in the population-based breast cancer screening program in Flanders, Belgium.

Methods: In partnership with the Centre for Cancer Detection, municipalities, community organizations and GP practices, project CHWxBC will take place in 3 municipalities and aims to reach an average of 400 under screened woman per municipality. Each municipality will be randomly assigned to a sequence in the wedge

to determine the experimental period. Using a SW-CRT design, the municipalities sequentially crossover from the population-based breast cancer screening program invitation (standard care) to the population-based breast cancer screening program invitation enriched with a customized brochure (optimized care) to the CHW-based intervention (experimental condition). During the experimental period, under screened woman will receive standard care plus the CHW intervention.

Discussion: Given the need for community based interventions to tackle the inequality in breast cancer screening participation, project CHWxBC could be a useful approach to reach underscreened woman in Flanders and provide opportunities for integrating CHW-based interventions within the breast cancer screening program in Flanders.

Main messages:

- Enhanced accessibility to Breast Cancer Screening: by collaborating with community health workers, we aim to address inequalities in breast cancer screening participation arising from limited health literacy. The primary objective is to reduce educational barriers for access to screening services, enabling more under screened women from diverse communities to make informed choices regarding participation in breast cancer screening programs.
- Empowerment via local health facilitators: our research uses the influence of community health workers to increase awareness and overcome barriers among unscreened women, with a particular focus on obstacles stemming from limited health literacy, which often hinders participation in breast cancer screening. By engaging local communities and organizations, our goal is to promote empowerment, thereby reducing health inequities and promoting equal access to screening opportunities.

Keywords: Community Health Workers, breast cancer screening, Early Detection of Cancer, Stepped Wedge Cluster Randomized Trial

Acknowledgments : /

ABSTRACT 15 : NUTRITION HABITS AND HEALTH INEQUITIES AMONG TEENAGERS IN HAINAUT PROVINCE

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Background: Hainaut province has a low socioeconomic background and poor health indicators. Since 1997, the Observatoire de la Santé du Hainaut has monitored health

behaviours and health status of teenagers (10 to 17 years) of its province. The subject of the 2018-2020 study was nutrition and nutrition habits.

Methods: Three samples of 500 pupils from 6th primary, 2nd and 4th secondary classes in Hainaut are selected through a stratified cluster random sampling method. At school medical examination, students fill a self-questionnaire about health status, representation and behaviour. The nurse staff measures their weight, height, waist circumference and arterial pressure. The surveys include specific indicators on physical activity / sedentary lifestyle, nutrition, tobacco/e-cigarettes and alcohol consumption. Links between socioeconomic status and these indicators are analysed by logistic regression. The survey applies the Family Affluence Scale (FAS) developed for the Health Behaviour in School-Aged Children (HBSC) study to examine the socioeconomic status of children and adolescents.

Results : Between 1997 and 2020, surveys demonstrated changes in health behaviours. For example, daily consumption of fruits and vegetables increased from 15.9% in 2003 to 20.8% in 2009 then decreased until 2020 (17.3%). Daily water consumption raised from 63.2% in 2003 to 80.5% in 2020. Obesity doubled from 5.4% in 1997 to 11.5% in 2020. Teenagers living in less affluent family reported less favourable eating behaviours (OR=2.11; $p<0.001$) and less fruits and vegetables daily consumption (OR=1,60 ; $p<0.01$). Obesity was also more prevalent in this group (OR=2,54 ;$p<0.01$). For girls only, we observed a decrease in the prevalence of unbalanced diet as body mass index increases: 20.7% % of girls with obesity had unbalanced diet whereas the proportion reached 31.7% for those with normal nutritional status. The self-estimation of unbalanced diet did not follow the same pattern, 21.1% of young people with normal nutritional status believed they had an unbalanced diet compared to 23.6% of overweight teenagers and 33.4% of obese ones.

Conclusion: Monitoring of eating behaviours showed a slight improvement of some indicators but prevalence of obesity showed a net increase between 1997 and 2020. The ongoing survey (2022-2024) will show the situation after the Covid-19 pandemic. Several indicators showed a clear link with socioeconomic status. This indicates the need to dedicate more resources for health promotion toward underprivileged young people.

Main messages:

- Regular surveys of young people showed some small improvements for a few eating behaviours not sufficient to prevent an increase in the prevalence of obesity.

- The clear links between socioeconomic status and food habits or nutritional status indicates the need to tailor health promotion programmes in order to better reach underprivileged groups.

Keywords: teenagers, nutrition behaviours, obesity, social inequities, survey

Acknowledgments : Surveys were conducted in partnership with school health promotion services (SPSE and CPMS of the Wallonia-Brussels Federation).

ABSTRACT 16 : ETHICAL AND METHODOLOGICAL CHALLENGES CONDUCTING PARTICIPATIVE RESEARCH WITH TRANSGENDER AND GENDER-DIVERSE YOUNG PEOPLE: A SYSTEMATIC REVIEW

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Background: Understanding the experiences of transgender and gender-diverse (TGD) young people is crucial for tailoring services to meet their needs effectively. However, research outside clinical settings focusing on the current experiences and requirements of TGD youth under 18 is scarce, impeding the development of informed support practices. Obtaining parental consent for participatory research poses ethical and logistical dilemmas, potentially compromising the safety, well-being, and confidentiality of adolescent participants. This tension between the autonomy, privacy, and freedom rights of adolescents and the parental imperative to protect their children underscores the complexity of consent processes. Thus, this review aims to elucidate the methodological and ethical challenges inherent in participatory research with transgender and gender-diverse young people.

Methods: We systematically searched bibliometric databases for studies published between 2006 and 2022 and included 4 main conceptual groups: transgender and gender non-conforming, adolescence, qualitative research (including participatory research) and consent. This review was registered in PROSPERO (CRD42022368360) in November 2022.

Results: Of the 3,794 articles initially identified, 291 met the inclusion criteria and 48 were examined. Research with TGD young people involves navigating intricate ethical

terrain. Parental consent requirements may deter participation and skew samples, challenging justice principles advocating for equitable research opportunities. Some argue for waiving consent, prioritizing research benefits in line with beneficence. Respect for autonomy demands informed consent procedures empowering TGD young people. Upholding their rights, including those under the UNCRC, underscores the need for comprehensive information and additional safeguards. Privacy breaches, even unintended, raise ethical concerns, necessitating emergency protocols to safeguard confidentiality and TGD youth well-being during research.

Conclusion & implications: The existing literature of participatory research involving young transgender and gender-diverse individuals underscores the intricate and conflicting aspects, especially concerning consent procedures, power dynamics, and the researcher's role. The relevance of these findings extends across various legal frameworks and is applicable to multiple contexts and countries.

Main messages:

- Research involving minors generally requires parental consent before the young person can take part. However, such consent may oblige young people to disclose their lived gender identity to their parents or relatives, which may put them at risk. Yet justice, as a key principles of ethics, focuses the attention on equality of opportunity, including the opportunity to take part in research. Ethics committees' decisions that hinder research aimed at improving the well-being and support of transgender and gender-diverse young people contradict this principle of justice.
- Since the adoption of the United Nations Convention on the Rights of the Child, young people have been acknowledged as individuals with their own rights, including freedom of expression, competence in decision-making, the right to privacy, and the ability to access to relevant information. To enable young people to authentically share their lived experiences as genuine experts, they must have the capacity to freely express their feelings, perceptions, and experiences or do so with the assistance of a trusted individual.

Keywords: ethics, participatory research, transgender, gender-diverse, youth; systematic review

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ABSTRACT 17 : FACTORS ASSOCIATED WITH COVID-19 MORTALITY IN WALLONIA: A TERRITORIAL APPROACH.

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Background: Sociodemographic and economic characteristics of a population are related to all-cause mortality, which, in Belgium, is usually mainly due to non-communicable diseases though the health care system is supposed to be the same for everybody. Preexisting chronic conditions like diabetes e.g. have been identified as aggravating factors of Covid-19. Through a territorial approach, this study aims to determine if the same factors that influence all-cause prepandemic mortality are also linked to Covid-19 specific mortality within Wallonia. It also analyzes the association between Covid-19 mortality with prepandemic all-cause mortality at municipal level.

Methods: In order to compare small territories independently of age structure of the population, it was decided to use Standard Mortality Ratio (SMR) as mortality indicator. All-cause SMR of the 2015-2019 period and Covid-19 SMR of 2020 have been calculated at a municipal level with Statbel population and death data. Wallonia was chosen as reference population. Association of SMRs with population density, median incomes, proportion of foreigners and diabetes prevalence for the corresponding periods were analyzed by bivariate regressions. Association between Covid-19 SMR and all-cause prepandemic SMR was also analyzed.

Results: All-cause prepandemic SMR were negatively associated with median income ($p<0,001$) and positively associated with diabetes prevalence ($p<0,001$) and population density ($p=0,024$). Covid-19 SMR were also associated with those three factors ($p<0,001$). No association was found between mortality and the proportion of foreigners in the population, neither for all-cause prepandemic SMR ($p=0,233$), nor Covid-19 SMR ($p=0,451$). The association between Covid-19 SMR and all-cause prepandemic SMR was statistically significant ($p<0,001$) with a β coefficient of 1,34 (IC95 0,96-1,72) and $R^2=0,16$.

Conclusion: Covid-19 mortality was more important in municipalities which previously had a higher all-cause mortality. In a territorial approach, diabetes prevalence and median income are associated with all-cause prepandemic mortality and also with specific Covid-19 mortality. Further analyzes should explore the mechanisms that could mediate the association between sociodemographic and economic characteristics and infectious mortality as Covid-19 mortality within the Walloon territory.

Main messages:

- Covid-19 mortality was more important in municipalities who previously had a higher all-cause mortality.
- Both Covid-19 mortality of the Walloon municipalities and prepandemic all-cause mortality are associated with median income.

Keywords: mortality, Covid-19, social health inequities, territorial inequities

Acknowledgments : /

ABSTRACT 18 : SOCIAL DETERMINANTS OF HEALTH-RELATED QUALITY OF LIFE AMONG PEOPLE WITH CHRONIC DISEASES: A SYSTEMATIC REVIEW

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Background: Chronic diseases globally impact individuals' overall well-being and Health-Related Quality of Life (HRQoL). Understanding the impact of social determinants (SD) on the HRQoL of individuals living with chronic diseases is a crucial aspect of public health research, enabling targeted interventions to address the root causes of health inequalities. SD encompass conditions in which people are born, grow, live, work, and age, that can shape health outcomes. This systematic literature review aims to identify and explore current research on SD' role in shaping HRQoL among individuals with chronic diseases.

Methods: We conducted a comprehensive search across Pubmed, Web of Science, and Embase yielding over 4000 results. To be included, studies had to be original research papers that investigate the association between SD and HRQoL among chronic disease patients using quantitative methods. We focused on both, significant and non-significant findings about the relationship between SD and HRQoL. This included types of SD studied, the methods to assess HRQoL, the specific outcomes observed (including HRQoL subscales), chronic diseases studied, and analytical approaches.

Results: The final selection included 38 unique research articles encompassing 23 different chronic diseases. Women with chronic diseases consistently report lower

HRQoL scores than men. Lower education correlates with significantly lower HRQoL scores. While younger age typically indicates higher HRQoL, conflicting results show that older age is sometimes associated with higher HRQoL. Having low social support, being unemployed, or being unmarried or widowed also impact negatively on HRQoL. Furthermore, SD' influence on HRQoL varies across chronic diseases and different HRQoL subscales.

Conclusion: Preliminary findings underscore the apparent relationship between SD and HRQoL across different chronic disease contexts. Consistent adverse HRQoL associations among several chronic disease sub-populations highlight the need for tailored public health interventions to address health inequalities. Understanding disease-specific factors and considering various HRQoL outcomes is crucial for designing effective interventions for individuals living with chronic diseases, especially those groups experiencing a more adverse relationship between SD and HRQoL.

Main messages:

- The findings highlight the negative associations with HRQoL among vulnerable groups (e.g., having low social support or being unemployed), emphasising the need for tailored public health interventions to address health inequalities.
- The impact of SD on HRQoL varies across chronic disease contexts, underscoring the importance of disease-specific considerations in public health interventions.

Keywords: Social determinants, Health-Related Quality of Life, Chronic diseases, Health inequality

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ABSTRACT 19 : INDIVIDUAL DETERMINANTS OF DAILY SUGAR-SWEETENED BEVERAGE CONSUMPTION: SOCIOECONOMIC DISPARITIES IN 8-TO-11-YEAR-OLD CHILDREN

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Background: Children from less affluent families drink more often sugar-sweetened beverages (SSB) daily than those who live in a more affluent family context. Better understand the determinants of regular SSB consumption will help tackle this important issue due to its potential serious repercussions on health. Our objective was to describe various individual determinants of daily SSB consumption across socioeconomic categories in 8-to-11-year-old children in French-speaking Belgium.

Methods: Forty-six primary schools were sampled in 2021 to be included in the DRINK trial, which the main objective was to reduce children's sugar-sweetened beverage consumption. At baseline, 3,303 children from 3rd to 5th grades self-completed a 4-day beverage booklet and/or a questionnaire measuring various characteristics and behaviour. Socioeconomic level was estimated using the family affluence scale (FAS) grouped into "low", "intermediate" and "high" categories. SSB consumption determinants included: food and beverage advertisement susceptibility; peer influence on beverage choice; self-efficacy; and permissiveness regarding the consumption of SSB at home. Daily SSB consumption was estimated here using a short Food Frequency Questionnaire. Pearson chi-squared tests were undertaken to preliminarily determine the difference between FAS groups in such determinants of SSB consumption.

Results: Among the 1,963 children eligible for this analysis, children with low FAS were more likely to report consuming SSB daily (37.5% vs. 29.2% among high FAS). Furthermore, children with low FAS were more often highly influenced by peers on their beverage choice (49.7% vs. 43.5% among high FAS) and by food and beverage advertisement (29.9% vs. 18.5% among high FAS). In addition, children with low FAS were more likely to consume SSB at home when they wanted to, i.e. they had a high level of permissiveness (84.2% vs. 75.3% among high FAS). (All p-values < 0.01). However, there was no significant difference in self-efficacy between children with low FAS (50.1%) and children with high FAS (52.2%) (p=0.36).

Conclusion: Children from low FAS tended to consume more SSB daily and were more influenced by peers and advertising, confirming the importance of socioeconomic factors on mediators of dietary habits. By completing such explorative investigations by the assessment of interactions between FAS and determinants in the daily SSB consumption, and using the estimations from the 4-day booklet, the DRINK study will

contribute to informing targeted interventions, policies and health promotion initiatives aimed at reducing socioeconomic disparities in children's dietary habits and promoting healthier beverage choices.

Main messages:

- Children from less affluent families consume more sugary beverages daily, and more likely influenced by peers and advertising. It's important to understand these factors in order to tackle the health risks associated with excessive consumption.
- By analyzing the interaction between socio-economic status and the determinants of sugar-sweetened beverage consumption, the DRINK study aims to inform targeted interventions and policies to reduce socio-economic disparities in children's eating habits.

Keywords: children, sweetened beverage, socioeconomic disparities, health promotion

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