

saturation was reached. We extracted information on geographical coverage and time periods. Quality assessment was carried out to rate and filter policies according to five criteria: 1. Potential for policy to affect maternal and child health outcomes; 2. Implementation variation across the UK; 3. Population reach and expected effect size; 4. Ability to identify exposed group in administrative data; 5. Potential to affect health inequalities. Finally, a consensus workshop was undertaken with experts to prioritise the included policies based upon existing knowledge.

Results The systematic search found 335 policies and 306 strategy documents. After filtering, 88 policies were found to vary across the 4 UK nations. Domains include: 32 welfare, 23 education, 20 health, 7 environment, 4 housing and 2 employment policies. Policies were mainly excluded due to criteria 2, 3 & 4. The consensus workshop identified three policies as suitable candidates for quasi-experimental evaluation using administrative data: Pregnancy grants (welfare), Early Years Childcare (education) and Universal Credit (welfare). These policies are broadly similar across countries but differ in timing of implementation and details of target populations, offering opportunities for evaluation of effectiveness. For example, pregnancy grants are given to first born children in all UK countries, but only to second and subsequent children in Scotland.

Conclusion Through applying systematic review methods to a policy search, we identified some valuable opportunities to evaluate upstream impacts on mother and child outcomes. However, many potentially impactful policies did not meet the criteria for quasi-experimental evaluation, which could lead to the inverse evidence law. This could be ameliorated by better access to administrative data (e.g. on eligibility criteria), staged implementation of future policies (affording greater cross-country variation) or alternative evaluation methods (e.g. simulations).

OP76 HOSPITAL-BASED PREVENTATIVE HEALTH SERVICES FOR PEOPLE EXPERIENCING HOMELESSNESS: SYSTEMATIC REVIEW AND NARRATIVE SYNTHESIS

¹Serena Luchenski*, ¹Joanna Dawes, ²Robert Aldridge, ³Shema Tariq, ¹Fiona Stevenson, ¹Andrew Hayward. ¹*Institute of Epidemiology and Healthcare, University College London, London, UK;* ²*Institute of Health Informatics, University College London, London, UK;* ³*Institute of Global Health, University College London, London, UK*

10.1136/jech-2021-SSMabstracts.76

Background Preventative health services, such as screening, vaccinations, and referrals to health and social services, improve health outcomes and reduce healthcare utilisation, costs, and inequities. People experiencing homelessness have significant unmet needs, but data are lacking on preventative health service provision. We aimed to review literature on hospital-based preventative health services for people experiencing homelessness.

Methods We systematically searched MEDLINE, Embase, PsycINFO, HMIC, CINAHL, Web of Science, and The Cochrane Library. We hand-searched the bibliographies and citing references of included studies. We included experimental and observational quantitative studies involving preventative health services in emergency departments or inpatient hospital settings from 1999–2019. The population included adults experiencing homelessness in high income countries. We included outcomes for health, social factors,

healthcare utilisation, and healthcare costs. We managed studies in Endnote and extracted data using a standardised spreadsheet. We assessed quality and bias using the ‘Quality Assessment Tool for Quantitative Studies’ and narratively synthesised findings.

Results We identified 7935 articles from searches and reviewed 149 full text articles. Thirty-two met our eligibility criteria and were conducted in the USA (n=15), UK (n=9), Canada (n=4), and Australia (n=4). Sixteen studies were undertaken in emergency departments, 13 in inpatient wards, and 3 were conducted in both settings. We identified eight intervention categories: 1) homelessness screening, 2) case management, 3) screening, treatment initiation and referrals, 4) vaccinations, 5) discharge planning, 6) assistance with social needs, 7) pharmacological treatment, and 8) psychosocial services. Most studies described multi-component interventions. Results showed improvements in housing status, mental health, quality of life, and uptake of vaccinations and screening. Some studies reported successful integration with follow-up services, while others reported poor rates of onward care. Studies tended to report reductions in unplanned healthcare utilisation and costs, though not consistently. None showed harms. The overall strength of the evidence was weak to moderate with few randomised controlled trials.

Discussion Hospital-based preventative health services can improve housing status and health and may reduce unplanned healthcare utilisation and costs for people experiencing homelessness. Definitive data are lacking for effective integration across healthcare systems. Policy-makers and practitioners should consider providing hospital-based preventative services to tackle unmet needs and health inequities. Our study is limited by the lack of qualitative, grey literature, and non-English studies. Future research should investigate barriers and levers for successful implementation of hospital-based preventative health services and the integration of hospitals with primary care and other services.

OP77 SOCIOECONOMIC DISADVANTAGE AND ETHNICITY ARE ASSOCIATED WITH LARGE DIFFERENCES IN COGNITIVE ABILITIES THAT UNDERLIE CHILDREN’S EDUCATIONAL OUTCOMES: ANALYSIS OF A PROSPECTIVE BIRTH COHORT STUDY

¹Kate E Mooney*, ¹Kate E Pickett, ^{2,3}Katy Shire, ⁴Richard J Allen, ^{3,4}Amanda H Waterman. ¹*Health Sciences, University of York, York, UK;* ²*Bradford Institute for Health Research, Bradford Teaching Hospitals Foundation Trust, Bradford, UK;* ³*Centre for Applied Education Research, Wolfson Centre for Applied Health Research, Bradford, UK;* ⁴*School of Psychology, University of Leeds, Leeds, UK*

10.1136/jech-2021-SSMabstracts.77

Background Working memory (WM) is the ability to store and process information over short time periods. WM is a strong predictor of educational attainment; which is important for health and wellbeing across the lifecourse. There is controversy about whether or not different aspects of WM are affected by socioeconomic position, and very little known about how ethnicity may shape these relationships. We studied these interrelationships in a longitudinal study of children in Bradford, a multi-ethnic city with high levels of deprivation.

Methods Born in Bradford (BiB) is a prospective birth cohort study following the lives of over 13,500 children and their

families. As part of BiB, children completed three tasks of WM when they were aged 7–10 years. Ethnicity data were collected through classroom records ($n=14,076$), and socioeconomic data were linked from BiB baseline (at birth) ($n=4916$). Linear regression was used for all analyses. WM was analysed by age to provide an interpretation of the magnitude of the effect between socioeconomic and ethnic groups. We next analysed WM by (1) a latent-class measure of socioeconomic position at birth (with least deprived as baseline) and (2) nine different ethnic groups (White British – ethnic majority - as baseline). Finally, WM scores were presented by ethnic-specific groups of socioeconomic position for the ethnic majority and largest ethnic minority group (White British and Pakistani).

Results The difference between the least and most deprived socioeconomic groups was equivalent to at least a 1-year age difference ($B=-6.02$ [95% CI -7.51 to -4.54]). In comparison to White British children, Gypsy/Irish Traveller children had the lowest WM scores ($B=-9.58$ [-11.93 to -7.23]) (equivalent to a two-year age difference). Most other ethnic minority children scored higher than White British children for ≥ 1 task(s), for example, Pakistani children had higher scores on the forwards digit recall task ($B= 3.12$ [2.53 to 3.71]) (equivalent to a 9-month age difference). Finally, there was a social gradient in WM for White British children, but not for Pakistani children.

Conclusion Given the strong associations between WM and learning ability and the potential consequences for lifelong trajectories of health and wellbeing, these large socioeconomic and ethnic group differences in children's WM are concerning. This study also found socioeconomic disadvantage was more detrimental for WM among ethnic majority children than for ethnic minority children; this may suggest that the negative effects of disadvantage are buffered by other factors for ethnic minorities, such as social support and own ethnic density.

OP78

COMMUNITY SEVERANCE AND HEALTH – A NOVEL APPROACH TO MEASURING COMMUNITY SEVERANCE AND EXAMINING ITS IMPACT ON THE HEALTH OF ADULTS IN GREAT BRITAIN

¹Melissa Higginson*, ¹Jemima Stockton, ²Paulo Ancaes, ¹Shaun Scholes, ¹Jennifer S Mindell. ¹*Epidemiology and Public Health, University College London, London, UK;* ²*Centre for Transport Studies, University College London, London, UK*

10.1136/jech-2021-SSMabstracts.78

Background Aspects of community severance (the separation of people from goods, services, and each other by busy roads or other transport infrastructure) have been linked to poor health and wellbeing, but few studies have examined the overall relationship between community severance and health. We created a novel index for community severance and estimated its association with the self-rated health of adults in Great Britain.

Methods Data were collected from a nationally-representative online panel survey of 4,111 participants, February–July 2016. To construct an index, polychoric factor analysis (suitable for ordinal variables), was conducted on four survey items related to the perceived impact of roads on ability to walk locally: 1) traffic volume, 2) traffic speed, 3) availability of crossing points, and 4) adequate crossing time. Community severance index scores were negatively skewed, and were thus

categorised into four groups (lowest 40%, second, third and highest). Logistic regression was used to examine the association of community severance with self-rated health ('good' (very good/good) vs. 'poor' (fair/bad/very bad)), adjusting for potential confounders (age, income, employment status). We also examined effect modification of the severance and self-rated health association by environment type (urban/not urban) and the presence of a car in the household.

Results Polychoric factor analysis confirmed that it was appropriate to combine the four survey items into a single index (Cronbach's Alpha=0.86; Keiser-Meyer-Olkin measure of sampling adequacy= 0.76, all factor loadings >0.74). After controlling for confounding factors, being in the highest community severance index group was associated with higher odds of reporting poor self-rated health (Odds Ratio: 1.79, 95% Confidence Interval: 1.48–2.17) compared with the lowest scoring group. There was a dose-response gradient, with those in the second and third highest groups having increased odds of reporting poor self-rated health, though of lower magnitude ((OR 1.21, 1.01–1.45) and (OR 1.41, 1.16–1.71) respectively).

Conclusion We found an inverse association between community severance index and self-rated health. This suggests that to improve health, local governments and road authorities should take steps to reduce community severance through traffic reduction and calming, pedestrian prioritisation, and the installation of well-designed crossing points.

Friday 17 September

Nutritional EPI & Data, 13.00 – 15.30

OP79

ENERGY AND NUTRIENT TRENDS OF MENU ITEMS SERVED BY LARGE UK CHAIN RESTAURANTS, 2018–2020

Yuru Huang*, Jean Adams, Thomas Burgoine. *MRC Epidemiology Unit, University of Cambridge, Cambridge, UK*

10.1136/jech-2021-SSMabstracts.79

Background Increased consumption of out-of-home food is one important contributor to rising obesity rates. Currently, little is known about trends in the nutritional content of restaurant foods in the UK. The objective of this study was to evaluate longitudinal trends in energy and nutrient (i.e., saturated fat, sugar, and salt) content of menu items served by large UK chain restaurants.

Methods Data on energy and nutrient content of menu items served by large UK restaurant chains– defined by either number of outlets or turnover - that provided nutritional information on their websites were collected annually (2018–2020). A total of 23,911 items from 29 large UK chain restaurants were included in the analysis. We used linear mixed models to estimate per-item energy and nutrient changes, in all items and common items (i.e., items that were available in all three years, $N=2,433$) over time. We also explored if the trends varied across different types of restaurants (e.g. cafés, full-service restaurants) and food categories (e.g. beverages, pizza).

Results The sugar content of menu items served by large UK chain restaurants declined (0.43g/year, 95% CI= -0.66, -0.21, $p<0.001$) from 2018 to 2020. This reduction was