these behaviours within individual groups. Indian (OR: 1.76; 1.14, 2.71) and Chinese (OR: 3.65; 1.37, 9.78) groups were more likely to be obese in the second generation than the first after adjusting for age and sex, with no significant differences observed in all other groups. Adjusting for health behaviours in each ethnic minority group had a negligible impact on the risk of second generation obesity. However, the risk of obesity increased in all groups after adjusting for the better socioeconomic circumstances of the second generation.

Conclusions Socioeconomic shifts determine generational differences in obesity risk to a greater extent than acculturative changes in behaviours. Findings suggest that generational variation in obesity rates for ethnic minorities may be more effectively controlled through reductions in wider socioeconomic inequalities rather than targeting individual health related behaviours.

P45 REGIONAL COMPARISON OF SOCIOECONOMIC AND ENVIRONMENTAL PROFILES OF FAMILIES WITH PREGNANT WOMEN IN THE ALL IRELAND TRAVELLER HEALTH STUDY

doi:10.1136/jech.2010.120477.45

N A Hamid, S Abdalla, J Turner, B Quirke, R Niccharthaigh, C Kelleher, P Fitzpatrick, for the All Ireland Traveller Health Study group. *School of Public Health, Physiotherapy and Population Science, University College Dublin, Ireland*

Objective Travellers have been documented as a distinct group in Irish society for centuries. They experience significant socio-economic and health disadvantage particularly pertinent to pregnancy and early childhood development. This analysis contrasts the socio-economic and environmental profiles of "families with a resident pregnant woman" (FRPW) to other Traveller families and according to two distinct geopolitical regions.

Setting Census survey of the All Ireland Traveller Health Status Study of 10 618 Traveller families in the Republic of Ireland (ROI) and Northern Ireland (NI).

Methodology Cross-sectional descriptive analysis of all FRPW in recruitment stage of prospective birth cohort study.

Results General comparison of socio-economic indicators showed marked differences between regions. There were 42 FRPW in NI (2.7% of all census families), 670 (7.4%) in ROI. FRPW family size was smaller in NI (mean 2.7, median 2, SD 1.9) compared to ROI (mean 4.1, median 4, SD 2.6) ($p=0.001$). Literacy rate was better in FRPW compared to non-FRPW in ROI but not in NI. However, there were no differences in literacy and numeracy rates for FRPW between regions. More FRPW in NI than ROI live in caravan/mobile home/trailer (40.5% NI vs 20% ROI, $p<0.001$); stayed for shorter period in their current accommodation (47.6% NI vs 33.5% ROI, $p=0.002$) and were forced to move by local community (12.2% NI vs 2.6% ROI, $p<0.001$). FRPW in NI have better private transport ownership (83.3% vs 79.6% ROI, $p<0.001$). There was a greater lack of general public facilities for example, working public lighting and fire hydrants, and more problems with living environment for example, lodged water (22.9% ROI vs 10% NI) and living near a road side (48.4% ROI vs 35% NI) (all $p<0.001$) in ROI compared to NI. These varied across the type of accommodation and may be associated with poor quality living accommodation. There was a significant difference in the reporting of perceived "very unhealthy/unhealthy" (40.5% NI vs 25.3% ROI; $p<0.001$) and "very unsafe/unsafe" (40.5% NI vs 27.3% ROI) living environment.

Conclusion FRPW suffer from different socioeconomic and environmental amenity disadvantages in the regions; such differences may reflect overall regional differences rather than be related specifically to pregnancy. In both jurisdictions health needs are considerable with significant policy indications.

P46 ETHNIC DIFFERENCES IN PACE OF GROWTH BETWEEN BIRTH AND 5 YEARS: RESULTS FROM THE MILLENNIUM COHORT STUDY

doi:10.1136/jech.2010.120477.46

E Lenguerrand, S Harding. *Medical Research Council, Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK*

Objective Size at birth and accelerated postnatal growth are linked to obesity and cardiovascular disease (CVD) in adulthood. CVD is more common in Black African and South Asian origin populations in the UK. Little is known about growth trajectories of ethnic minority children in the UK. Overweight is more common in some ethnic minority groups in adolescence. We examined ethnic differences in growth between birth and 5 years (y).

Design Millennium Cohort Study, a UK population-based cohort study.

Setting England.

Participants White (6361), Black Caribbean (152), Black African (250), Indian (328), Pakistani (645) and Bangladeshi (265) infants born in 2000–2001, ≥2500 g, ≥36 weeks gestation, with no physical disability.

Main Outcome Measures Weight, height, body mass index (BMI) and age-standardised Z-scores (based on the British 1990 growth reference). Weight was measured at birth, 9 months, 3 y and 5 y and linear mixed models were used to estimate differences in the weight trajectories and to identify potential differential effects from maternal characteristics (age and smoking status at delivery, education, psychological well-being, diabetic status), household socio-economic circumstances (SEC) (employment, poverty level), and feeding practices (duration of breastfeeding, age at first solid food).

Results Compared with White infants, mean birth weights of Indian, Pakistani Bangladeshi and Black Caribbean infants were lower by 180–410 g while that of Black African infants were similar. Relative to the standard, all ethnic groups experienced faster weight gain notably between 0–3 y. Average weight gains between 0–5 y were greater for Black Caribbeans (boys +0.88 sd/year, girls +0.37 sd/year) and Black Africans (+0.78/year, +0.30/year) than for Whites (+0.45/year, +0.17/year). The increase was non-linear with slowest weight gain as age increased especially for Black Caribbeans and Africans boys (−0.18 sd/y^2, 95% CI −0.23 to −0.14). By age 5 y, these groups were the heaviest but also the tallest. Larger BMIs were observed for Black Caribbean boys (1.32, 0.71 to 1.94) and Black African girls (0.97, 0.72 to 1.22) than their White peers. At this age, Black Caribbean boys (56.2 cm, 53.9 to 58.6) and Black African girls (55.8 cm, 54.7 to 56.8) also had larger waist circumference than Whites (boys 53.7 cm, girls 53.5 cm). There were no ethnic specific effects from maternal factors, household SEC or feedings practices.

Conclusions A pattern of lighter birth weights and rapid growth was observed for Black Africans origin children compared with White children. The growth patterns observed here may be pertinent to the development of ethnic differences in CVD.

P47 COUNTRY OF BIRTH OF MOTHER AND RATES OF PRETERM BIRTHS AND LOW BIRTH WEIGHT IN ENGLAND AND WALES OF BABIES OF AFRICAN AND CARIBBEAN ETHNICITY

doi:10.1136/jech.2010.120477.47

P Datta-Nemdharry, A Macfarlane, N Dattani. *City University London, London, UK*

Introduction Preterm birth and low birth weight are associated with high rates of perinatal and neonatal morbidity and mortality. Some studies have shown associations between ethnic origin or country of

birth and risk of preterm birth, But there are few analyses in which outcomes of birth, within a specific country, are classified by both mother's country of birth and ethnicity.

Setting Live singleton births in England and Wales of babies whose ethnicity was recorded as being Black African or Black Caribbean in 2005 and 2006.

Aim To compare rates of preterm birth and low birth weight in this group of babies born to mothers born in African and Caribbean countries or England and Wales.

Method In England and Wales birth weight and mother's country of birth are recorded at birth registration whereas ethnic group of baby and gestational age are recorded in the data set generated when the NHS number, a national unique patient identifier, is issued. Linking these two data sets has made it possible to assess the association between mother's country of birth, baby's ethnicity and birth outcomes. Data from the linked data set were used for the analysis. Countries were grouped according to UN geographical regions.

Results Mothers of babies of African ethnicity, born in Eastern or Northern Africa had significantly lower odds than those born in England and Wales of having a preterm baby. This remained significant after adjusting for mother's age at birth and sex of baby. In terms of low birth weight, after adjusting for gender, mother's age at birth and gestational age, mothers of babies of African ethnicity born in Middle and Western Africa had significantly lower odds of having a low birth weight baby compared with those born in England and Wales. Similarly, after adjusting for the available confounders, mothers of babies of Caribbean ethnicity, born in the Caribbean countries had lower odds of having a low birth weight baby compared with mothers born in England and Wales.

Conclusion Generally, preterm birth and low birth weight rates of babies of African or Caribbean migrant women born in England and Wales seems to be higher than those who migrated to England and Wales having themselves been born in African or Caribbean countries. Further research is needed about the possible causes of this difference in birth outcomes.

P48 MODIFYING HEALTH PROMOTION INTERVENTIONS FOR ETHNIC MINORITY GROUPS: SYSTEMATIC OVERVIEW OF GUIDELINES AND REVIEWS

doi:10.1136/jech.2010.120477.48

[1]E Davidson, [1]J J Liu, [2]U Yousuf, [3]R Bhopal, [4]M Johnson, [5]M White, [6]G Netto, [7]M Deverill, [1]A Sheikh. *[1]General Practice section, Centre for Population Health Sciences, The University of Edinburgh, Medical School, Edinburgh, UK; [2]Aberdeen Royal Infirmary, Aberdeen, UK; [3]Public Health Sciences section, Centre for Population Health Sciences, University of Edinburgh, Medical School, Edinburgh, UK; [4]Mary Seacole Research Centre, De Montfort University, Leicester, UK; [5]Institute of Health & Society, Faculty of Medical Sciences, Newcastle University, Newcastle upon Tyne, UK; [6]School of the Built Environment, Heriot-Watt University, Edinburgh, UK; [7]Institute of Health and Society, University of Newcastle, Newcastle upon Tyne, UK*

Background Some UK ethnic minority groups experience disproportionate levels of morbidity and mortality when compared with the majority White population. For these populations, access to and use of health promotion interventions may be limited. Adaptation of smoking cessation, physical activity and nutrition interventions of proven effectiveness for the majority population could represent an efficient strategy for reducing persistent health inequalities when adapted for minority ethnic populations.

Objectives To identify the high-level evidence for health promotion interventions which have proven effectiveness for the general population and construct a framework of effective interventions, including any recommendations relating to ethnic minority populations.

Design A systematic overview was conducted with two reviewers independently searching and identifying guidelines and systematic reviews of interventions for smoking cessation, improving nutrition and physical activity. SIGN, NICE and Clinical Evidence databases were searched for relevant guidelines. Cochrane Library, Campbell Collection, HTA reviews and DARE databases were searched for systematic reviews. Data on the effectiveness of interventions were extracted.

Results 19 guidelines were identified as relevant. 2399 systematic review records were identified and assessed for eligibility. 187 systematic reviews were included in the final analysis. The guidelines revealed a large evidence base for smoking cessation interventions, but highlighted major gaps in relation to how best to increase physical activity and improve nutrition. There was little advice in these guidelines on how to adapt interventions to meet the needs of ethnic minority populations. The 187 systematic reviews were screened to identify any additional effective interventions not included in the guidelines. All effective, evidence-based interventions have been compiled into a summary framework. The 187 systematic reviews were also subjected to a detailed assessment of the population composition to determine whether any subgroup analysis for ethnic minority groups was undertaken. Approximately half of the reviews reported the inclusion of ethnic minority groups; however, no reviews conducted subgroup analyses according to ethnicity and ethnic-specific recommendations were scarce.

Conclusions The evidence base reviewed provides specific guidance on effective interventions for smoking cessation, but generic advice for increasing physical activity and improving nutrition. Identification of the range of evidence-based interventions for these three areas has led to the development of a summary framework that can be utilised for health promotion. Interventions already found to be effective in the majority population are, if appropriately adapted, likely to prove effective in minority ethnic populations. This work will advance current guidance on how to approach adaptation.

P49 MODIFYING HEALTH PROMOTION INTERVENTIONS FOR ETHNIC MINORITY GROUPS: SYSTEMATIC REVIEW OF EMPIRICAL EVIDENCE

doi:10.1136/jech.2010.120477.49

[1]J J Liu, [1]E Davidson, [2]R Bhopal, [3]M Johnson, [4]M White, [5]M Deverill, [6]G Netto, [1]A Sheikh. *[1]General Practice section, Centre for Population Health Sciences, The University of Edinburgh, Medical School, Edinburgh, UK; [2]Public Health Sciences section, Centre for Population Health Sciences, University of Edinburgh, Medical School, Edinburgh, UK; [3]Mary Seacole Research Centre, De Montfort University, Leicester, UK; [4]Institute of Health & Society, Faculty of Medical Sciences, Newcastle University, Newcastle upon Tyne, UK; [5]Institute of Health and Society, University of Newcastle, Newcastle upon Tyne, UK; [6]School of the Built Environment, Heriot-Watt University, Edinburgh, UK*

Background Health promotion interventions have proved to be cost-effective strategies to reduce morbidity and mortality associated with smoking, physical inactivity and poor diet in the general population. Some ethnic minority groups are disproportionately affected by these lifestyle factors, and existing evidence suggests that adapting evidence-based health promotion interventions for these populations may prove to be an effective strategy to tackle health inequalities.

Objectives To identify health promotion interventions for smoking cessation, increasing physical activity and improving nutrition which have been adapted for African-Caribbean, South Asian and Chinese-origin populations and to document how this has been achieved and with what effect.

Design A systematic review was conducted with two reviewers independently searching, identifying, extracting and critically appraising empirical studies of adapted interventions. The databases searched include MEDLINE, EMBASE, ASSIA, Psycinfo,