was to simulate a range of policy-relevant calorie-reduction interventions to measure the impact on obesity and inequalities.

Methods The predicted probability of obesity at age 11 was estimated using marginal structural models adjusted for total calorie consumption, as calculated from three-day diet diaries at age 7 years, and other baseline and intermediate confounding using data from Avon Longitudinal Study of Parents and Children (n=10,680). Socioeconomic inequalities were indicated using maternal social class and assessed using odds ratios for absolute and relative inequalities. Complete case and multiple imputation analyses were conducted to manage survey attrition and missing data. A series of probabilities were estimated by manipulating the mediator to simulate daily calorie-reduction interventions, including targeted and informed scenarios.

Results Using imputed data and adjusting for inequalities and confounding, 18.3% of children were living with obesity at 11 years. Maternal social class at baseline and total daily calories at 7 years significantly predicted obesity at 11 years. A simulation to reduce intake down to recommended levels, a 6% reduction in daily calories, universally applied but with random variation, reduced overall obesity prevalence by 0.8% with the greatest decrease observed among the lowest social class, meaning this intervention would reduce inequalities. Targeted interventions by income led to variations in reductions by social group. Informed interventions for children with overweight or obesity, or for children who ate excess calories daily, both at age 7 reduced obesity prevalence at age 11 by 0.9% and 1.5% respectively.

Conclusions A universal decrease in total daily calories to the recommended daily limit would reduce childhood obesity and inequalities but disproportionate uptake targeted across SES would have little impact on the overall effect. Informed interventions to reduce caloric intake among children who ate excess calories daily, or with overweight or obese at age 7, would be effective at reducing obesity and inequalities.

P44 ADOLESCENT SEXUAL ACTIVITY, CONTRACEPTIVE USE AND PREGNANCY IN BRITAIN AND THE UNITED STATES: A CROSS-NATIONAL COMPARISON

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Aims Pregnancy rates among adolescents have declined in the US and Britain, but remain high compared to other high-income countries. This comparison examines trends in pregnancy rates, recent sexual activity and contraceptive use among women aged 16-19 in the US and Britain to consider the behavioural drivers of the decline in pregnancy rates in the two countries and the differences between them.

Methods We use data from two rounds of the US National Survey of Family Growth, conducted 2002-3 and 2011-15, and the British National Survey of Sexual Attitudes and Lifestyles, conducted 2000-2001 and 2010-2012, to examine differences between countries and over time in sexual activity and contraceptive use. We calculate pregnancy rates using national births and abortions data.

Results Pregnancy rates declined in both countries from 2001 to 2013 (US 45%, England and Wales 33%; this decline began earlier in the US and was steeper. In the later period a higher proportion of adolescents in Britain than the US reported ever having sex (GB 65% v. US 49%), sex in the last six months (59% v. 39%) and four weeks (48% v. 29%) and using highly-effective contraception (68% v. 52%). Between the two time periods there was no change in sexual activity in Britain, but in the US the proportion reporting recent sex declined. In both countries, there was a shift towards more effective contraception. IUD and implant use increased from 1% to 13% in Britain and from less than 1% to 5% between 2002 and 2013 (p<0.001). Pill, ring and patch use declined in Britain (58% to 49%, p=0.02), but did not change in the US. No method use declined only in the US (8% to 4%). Neither country had changes in condom or withdrawal use.

Conclusions In both countries, improvements in contraceptive use appear the main driver of the decline in pregnancy rates. Comparing Britain and the US shows that more sex among young people does not have to mean more pregnancies, and supports expanding comprehensive sex education programmes and youth-friendly contraceptive services in both countries.

P45 SMOKING AND DRINKING BEHAVIOUR OF BISSAU-GUINEAN ADOLESCENTS AGED 15-16 COMPARED TO EUROPEAN PEERS

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Aims With the Sustainable Development Goals 2016-2030 increased attention is given to adolescents' health and well-being, and the multiple challenges they face related to their health and wellbeing with trajectories of importance for their later adult health. A recent trend within childhood and youth studies acknowledges commonalities of lived experiences of young people in middle- and low-income countries, where the majority of them lives, *vis-à-vis* high-income countries. In sub-Saharan Africa adolescents comprise 23% of the population compared to 12% in high-income countries. Here we describe and analyse the prevalence of smoking and use of alcohol by Bissau-Guinean adolescents aged 15-16 and compare to peers European cities.

Methods Survey with locally adapted and pilot tested *Planet Youth* questionnaire was conducted in June 2017 in 16 secondary schools in the capital Bissau, Guinea-Bissau. It targeted adolescents aged 15-16 years in randomly selected classes with information that is comparable with data from eight European cities in 2015-2016.

Results In Bissau, 871 adolescents aged 15-16 participated (52% girls and 46% boys) compared to 6,534 peers in eight European cities (49% girls and 51% boys). In total, 2.2% of the Bissau-Guineans reported daily smoking (boys=3.9%; girls=0.7%) compared to 11.3% of their European peers (boys=13.2%; girls=9.4%). About 1/3 of the Bissau Guineans had life-time experience of drinking alcohol compared to about 2/3 of the European ones, with no difference among boys and girls; 10.6% of Bissau-Guineans reported having been drunk during the last 30 days compared to 14% of the