life for many people. Increasingly it is recognised that negative disruptive impacts of the pandemic are not experienced equally and may exacerbate existing inequalities. People already suffering from psychological distress may have been especially vulnerable to disruptions. We investigated associations between pre-pandemic psychological distress and disruptions to healthcare, economic activity, and housing, and whether these associations were moderated by age, sex, ethnicity or education.

Methods Data were from 59,482 participants in 12 UK longitudinal adult population surveys with both pre-pandemic and COVID-19 surveys. Participants self-reported disruptions since the start of the pandemic to: healthcare (medication access, procedures, or appointments); economic activity (negative changes in employment, income or working hours); and housing (change of address or household composition). These were also combined into a cumulative measure indicating how many of these three domains had been disrupted. Logistic regression models were used within each study to estimate associations between pre-pandemic standardised psychological distress scores and disruption outcomes. Analyses were weighted for sampling design and attrition, and adjusted for age, sex, education, ethnicity, and UK country. Findings were synthesised using a random effects meta-analysis with restricted maximum likelihood. Effect modification by sex, education, ethnicity and age was assessed using group-difference tests during meta-analysis.

Results While exact prevalence varied between studies, pre-pandemic psychological distress was generally more common among women, ethnic minorities, younger age groups, and those with less education. One standard deviation higher psychological distress was associated with raised odds of health care disruptions (OR 1.40; 95% CI: 1.29–1.51; Heterogeneity I^2: 79.4%) and with experiencing disruptions in two or more of the three domains examined (OR 1.22; 95% CI: 1.14–1.31; Heterogeneity I^2: 75.8%), but not specifically with disruptions to economic activity (OR 1.03; 95% CI: 0.95–1.13; Heterogeneity I^2: 89.5%) or housing (OR 1.00; 95% CI: 0.97–1.03; Heterogeneity I^2: 0.0%). We did not find evidence of these associations differing by sex, ethnicity, education, or age group.

Conclusion Those suffering from psychological distress before the pandemic have been more likely to experience healthcare disruptions during the pandemic, and clusters of disruptions across multiple life domains. Individuals suffering from distress may need additional support to manage these disruptions, especially in relation to healthcare. Otherwise, considering psychological distress was already unequally distributed, the pandemic may exacerbate existing inequalities related to gender, ethnicity, education and age.

OP66 HOW THE DESIGN AND NATURE OF GAMBLING MARKETING AFFECTS CONSUMERS: FINDINGS FROM A CONTENT ANALYSIS OF ADVERTISING AND IN-DEPTH INTERVIEWS WITH SPORTS BETTORS AND YOUNG PEOPLE DURING THE COVID-19 PANDEMIC IN THE UNITED KINGDOM

[1]Nathan Critchlow*, [1]Ashley Brown, [2]Craig Donnachie, [1]Kate Hunt, [2]Heather Wardle, [1]Kathryn Angus. *[1]Institute for Social Marketing and Health, University of Stirling, Stirling, UK; [2]School of Social and Political Sciences, University of Glasgow, Glasgow, UK*

10.1136/jech-2021-SSMabstracts.66

Background Gambling advertising often contains a multitude of information about inducements and incentives, in addition to details of the specific gambling product marketed and other promotional features. Research suggests that consumers are more likely to misjudge the likelihood of winning or benefiting as the complexity of the gambling product offered increases. As part of a larger study concerning the impact of COVID-19 on gambling behaviours and marketing, we explored how gambling products and inducements are marketed in the United Kingdom (UK) and how inducements are received, and perceived, by gamblers.

Methods Two data sources are synthesised from the 'Betting and Gaming COVID-19 Impact Study'. An in-depth content analysis was conducted on a stratified random sample of gambling adverts (n=200) from seven media activities in UK (March-May 2020). Coding captured information about the gamble promoted (e.g. suggested odds and wagers), inducements (e.g. new customer offers, free bets), and how Terms and Conditions (T&Cs) were communicated. In-depth telephone interviews were conducted (July-November 2020) with sports bettors (n=16) and young adults (n=11) in the UK to explore experiences and practices related to gambling. Data were analysed thematically using the framework method.

Results Gambling adverts routinely featured complex information about the gambling products promoted and associated inducements. The design of adverts appeared carefully curated so that promotional and branding aspects had greater prominence than practical information about how inducements operated and eligibility to participate and benefit, if such T&Cs appeared at all. In the interviews, participants perceived gambling advertising to be ubiquitous. While several participants underplayed the influence that gambling advertising and marketing had on their gambling activity, some explicitly said that the content had a negative impact on their gambling, including the adoption of novel and potentially 'riskier' gambling behaviours (e.g. online casino games). A few highlighted a lack of transparency in relation to T&Cs underpinning inducements offered by gambling operators, which, in turn, compounded adverse gambling experiences.

Conclusion The way that gambling products and inducements are marketed in the UK is complex and likely to challenge comprehension by consumers. Bettors routinely recall awareness of, and engagement with, a variety of gambling marketing activities, and highlight concerns about the reach and impact that marketing may have, particularly on vulnerable groups such as young people and problem gamblers.

Friday 17 September

Tobacco, 13.00 – 15.30

OP67 WHEN MY WORKPLACE IS YOUR HOME: DOMICILIARY WORKERS' EXPOSURE TO SECOND-HAND TOBACCO SMOKE

[1]Ruaraidh Dobson*, [2]Evangelia Demou, [1]Sean Semple. *[1]Institute for Social Marketing and Health, University of Stirling, Stirling, UK; [2]MRC-CSO Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK*

10.1136/jech-2021-SSMabstracts.67

Background Second-hand smoke (SHS) exposure at work is a cause of serious ill-health. Consequently, many countries have

implemented smoke-free workplace laws designed to protect most workers. However, workers who work in other people's homes (such as home-care workers, tradespeople and nannies) are not protected by these laws, as smoking is not prohibited inside private homes. Previous research has suggested that domiciliary care workers, such as nurses making home visits to patients, are particularly heavily exposed to SHS. This research project sought to quantify that exposure in the context of wider occupational exposure to SHS.

Methods Through a programme of expert assessment, we developed a job exposure matrix (JEM) for SHS exposure among all classes of worker in the UK. Three raters assessed exposure to SHS for all UK occupations by 4-digit Standard Occupational Classification (SOC), rating likelihood, intensity and frequency of exposure.

To assess the extent of exposure to SHS among home-care workers, we conducted surveys of these workers in the NHS, two local authorities and a private organisation in Scotland. We conducted personal exposure monitoring with these groups of home-care workers, assessing their exposure to SHS by monitoring fine particulate matter ($PM_{2.5}$), air nicotine and changes in salivary cotinine over the course of a shift.

Results Our JEM indicated that around ten million workers in the UK may be occupationally exposed to SHS. Overall, 84 of 412 four-digit SOC codes (20.4%) were considered likely to have at least 10% of workers experiencing some degree of non-incidental exposure to SHS during their duties. Exposure is estimated to be most severe among lower SES workers, particularly care workers. Our survey results indicated that many home-care workers are occupationally exposed to SHS. Local authority workers were more likely to be exposed than NHS workers, with 84% of council respondents reporting exposure during their work vs 15% of NHS respondents. Measurements revealed highly variable patterns of SHS exposure based on shift pattern and visit duration. Visits to smoking homes included peak $PM_{2.5}$ concentrations in excess of $400\mu g/m^3$, sixteen times the WHO guideline limit for 24h periods.

Discussion SHS exposure remains a serious health concern for a considerable fraction of the UK working population. People in lower paid jobs are disproportionately affected by SHS at work, potentially a cause of health inequality. Home-care workers can experience frequent and high SHS exposure, and new policies are necessary to protect them from associated health harms.

OP68 CAN SOCIETY AFFORD FURTHER DISINVESTMENT IN SMOKING CESSATION? A MICROSIMULATION STUDY TO QUANTIFY SMOKING CESSATION SERVICES IMPACTS IN ENGLAND

Vincy Huang*, Iain Buchan, Simon Capewell, Martin O'Flaherty, Chris Kypridemos. *Public Health, Policy and Systems, University of Liverpool, Liverpool, UK*

10.1136/jech-2021-SSMabstracts.68

Background The UK smoking prevalence is decreasing, however, the inequality gap is increasing. A new UK Tobacco Strategy is being finalised and it urgently needs further underpinning research.Smoking cessation services (SCS) contributed around 15% of the reduction in UK smoking prevalence between 2001–2016. However, even these benefits are in jeopardy, given the proposed further funding cuts to SCS. Using a previously validated microsimulation model, we quantitively compared three future SCS scenarios: maintaining, disinvesting, or enhancing services.

Methods We modelled the effectiveness and equity impacts of three scenarios over a 20-year time horizon:

A) a baseline of maintaining current SCS levels and trends;

B) assuming disinvestment (no SCS);

C) an enhanced SCS enabling 30% of current smokers, aged between 30–79 years, to be supported in smoking cessation every five years. We used the validated $IMPACT_{HINT}$ microsimulation, an implementation of the $IMPACT_{NCD}$ framework, to estimate changes in smoking prevalence, disease burden, and economic impact. We simulated close-to-reality smoking histories, smoking-related diseases and lag times to disease. Population data were drawn from the Health Survey for England (HSE). We assumed the SCS one-year overall effectiveness of 8% quitting (reflecting published studies). We modelled the relapse probability post-cessation conditional on deprivation and years since cessation, informed by HSE. Standard UK Treasury discount rates were applied, and we report costs from a societal perspective, but no SCS costs included. We used R v4.04.

Results Preliminary results suggest that the disinvestment scenario could result in approximately 3000 (95% Uncertainty Intervals: 990 to 5400) additional cases of cardiometabolic diseases, common cancers, and chronic obstructive pulmonary disease compared to the baseline scenario; most of them in the most deprived quintiles. The policy could result in about 4500 (2700 to 6700) additional deaths and £220m (110m to 380m) additional costs.In contrast, enhancing SCS could prevent or postpone approximately 1700 (420 to 3000) disease cases, most of them in the most deprived quintiles, and about 1700 (680 to 2700) fewer all-cause deaths. The policy could produce savings of £270m (120m to 460m) over the simulated period.

Conclusion Disinvesting in SCS is likely to be counterproductive, given their substantial health and economic benefits. Our model suggests that SCS provision needs to be continued at least at current levels. An enhanced service provision could be beneficial (after addressing issues of staff capacity and implementation costs).

OP69 SOCIO-DEMOGRAPHIC DIFFERENCES IN SMOKING STATUS AND CESSATION BEFORE AND DURING EARLY PREGNANCY AMONG WOMEN IN ENGLAND: AN ANALYSIS OF THE NATIONAL MATERNITY SERVICES DATASET

[1,2]Danielle Schoenaker*, [3]Judith Stephenson, [2,4,5]Keith Godfrey, [2,4,5]Mary Barker, [1,2,6]Nisreen Alwan. *[1]School of Primary Care, Population Sciences and Medical Education, University of Southampton, Southampton, UK; [2]NIHR Southampton Biomedical Research Centre, University of Southampton, University Hospital Southampton NHS Foundation Trust, Southampton, UK; [3]Elizabeth Garrett Anderson Institute for Women's Health, University College London, London, UK; [4]Human Development and Health, University of Southampton, Southampton, UK; [5]MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK; [6]NIHR Applied Research Collaboration Wessex, Southampton, UK*

10.1136/jech-2021-SSMabstracts.69

Background Smoking in pregnancy increases the risk of major adverse health outcomes for mothers and their offspring. The aim of this study was to describe socio-demographic differences in smoking before and during early pregnancy among women in England.