identifying the key measures of policy impact. We aimed to develop a set of logic models that could be widely used in tobacco control policy evaluation.

Methods We developed logic models for policies recently implemented in England, including smokefree legislation, changes to age of sale laws and point-of-sale display bans. We used an iterative process to develop models for each policy, before combining outcomes into a single overarching model. We initially reviewed policy documents to identify the outcomes expected to result from the implementation of each policy, and then conducted a literature review of existing policy evaluations to identify further outcomes. The models were refined through research team meetings, and revised according to feedback from a range of stakeholders including a public involvement group and national tobacco control policymakers.

Results The final models represented expected causal pathways for each policy and identified the populations in which outcomes were expected to occur. The models included short-term outcomes (such as policy awareness, compliance and social cognitive outcomes), intermediate outcomes (such as changes in smoking behaviour) and long-term outcomes (such as mortality, morbidity and health service usage).

Conclusion The logic models guided the development of hypotheses and choice of outcome measures in subsequent evaluations of tobacco control policies. The use of logic models enables prospective and theory-based planning of evaluation analyses, which in turn enhances the transparency of policy evaluation. The use of logic models should be encouraged in the evaluation of tobacco control policy, as well as in other areas of public health.

This study is funded by NIHR PRP (PR-R14-1215-24001). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR, the Department of Health and Social Care, arms length bodies or other government department.

OP91 PRICE RESPONSIVENESS OF CIGARETTE CONSUMPTION AMONG PAKISTANI ADULTS: EVIDENCE FROM GLOBAL ADULT TOBACCO USE SURVEY (GATS)

H Masud*, O Oyebode. *Warwick Medical School, University of Warwick, Coventry, UK*

10.1136/jech-2019-SSMabstracts.95

Background Raising tobacco taxation and prices is an effective policy tool to reduce tobacco use and has been identified by the WHO Framework Convention for Tobacco Control (FCTC) as a leading tobacco control strategy, and highlighted with the sustainable developmental goals (SDGs).

It is important to base the tobacco taxation and pricing policies on the consumers' actual responsiveness to price rises which is measured by price elasticity (PE) of demand. Policy makers use PE estimates to design effective taxation policies and to project the impact of different policy options on tobacco consumption and their revenues.

This study aims to estimate the PE of demand for cigarettes among adult Pakistanis and to distinguish the effect on smoking prevalence and intensity.

Methods We used data from Pakistan's 2014 Global Adult Tobacco Survey (GATS). GATS is part of the WHO's global tobacco surveillance system to monitor tobacco use and key tobacco control indicators in a nationally representative household survey. A total of 7831 individuals aged 15+ years participated in the survey. We estimated PE using the standard two-part model for cross-sectional studies; smoking participation and smoking intensity. The probability of smoking cigarettes was estimated using a logit model, and for smoking intensite an Ordinary Least Squares regression model was used. Explanatory variables in both models were: price, demographic characteristics, indicators of the socioeconomic status of individuals, rural/urban residence, knowledge about smoking hazards, exposure to anti-smoking messages and cigarette advertisements and smoking restrictions at home. Analyses were weighted to adjust for national representation.

Results The adult PE of cigarettes demand was estimated to be -0.43. The overall PE is comprised of a statistically non-significant PE of smoking participation (-0.17) and statistically significant PE of smoking intensity (-0.26), indicating that a 10% increase in price is expected to reduce smoking prevalence by 1.7% on average and can decrease the average number of cigarettes smoked by 2.6%.

The price elasticity is slightly reduced if estimated for only males (-0.40) and the magnitude increased to -0.71 if the highest income quintile is excluded from the analysis. If individuals exposed to high price cigarettes (PKR >150) are excluded from the study, an increase in the price of (low priced) cigarettes would significantly decrease both smoking participation and intensity and impact would be higher for smoking participation (PE=-1.01).

Conclusion The analysis yielded negative price elasticity of cigarettes demand for Pakistani adults, indicating an increase in price would decrease cigarette use both by decreasing smoking prevalence and daily consumption among smokers in the country. We found that an increase in the price of low priced cigarettes would have a greater negative impact on smoking prevalence and daily consumption by smokers. These findings demonstrate that cigarette prices can be used as an effective policy tool to control smoking in Pakistan.

Population Health

OP92 USE OF SYSTEMATIC REVIEW EVIDENCE BY PUBLIC HEALTH PROFESSIONALS IN ENGLISH LOCAL AUTHORITIES: A QUALITATIVE STUDY

E South*, T Lorenc. *Centre for Reviews and Dissemination, University of York, York, UK*

10.1136/jech-2019-SSMabstracts.96

Background Studies have generally found limited use of academic research in policy-making. In 2013 the context for public health decision-making in England changed from the NHS to local authorities (LAs). This represents a different policy environment; however, public health is still considered an evidence-based profession. Despite systematic reviews being regarded as the best available evidence for health decision-making, little is known about how they are used in local government. As the relationship between evidence and policy is potentially complex, it is important to consider the role of research beyond directly informing decisions. The aim of this study was to explore the extent to which public health decision-makers in LAs engage with systematic review evidence and how they do so.

Methods Semi-structured interviews were conducted with senior public health professionals involved in decision-making in Yorkshire and the Humber LAs. Sampling was purposive

with recruitment in two phases; contacting Directors of Public Health (DsPH) directly and snowballing through key contacts. Other professionals were interviewed where recommended by DsPH. Face-to-face or telephone interviews were digitally recorded and transcribed verbatim, and data analysed using the framework method.

Results Public health professionals (n=14) in ten LAs were interviewed, including DsPH (n=5) and consultants (n=5). Participants viewed evidence use as an important part of their roles, and had a high level of relevant skills. However, public health teams and individuals differed in the extent to which they used systematic reviews. Some consultants used systematic reviews extensively; for other participants, while they were highly valued in principle, their value and impact in practice was limited by various barriers and the nature of decision-making in LAs. Barriers included time constraints, a lack of relevant reviews, limited applicability to LA context and the role of evidence in a political organisation. Evidence, including systematic reviews, was sometimes used to directly inform decisions but also used tactically. Participants regularly engaged with research evidence outside the decision-making process, often through a personal commitment to maintaining knowledge.

Conclusion Systematic reviews are used in LA public health in various ways but use varies and is limited by a range of factors. Decision-making processes can be complex, with systematic reviews used in conjunction with other evidence types, and therefore research use should be seen within the political context. This qualitative study developed understanding of systematic review use but a limitation is that there may be professionals less committed to evidence use that were not included in the sample.

OP93 THE MENTAL HEALTH IMPACT OF UNIVERSAL CREDITINTRODUCTION ON WORKING AGE UNEMPLOYED INDIVIDUALS ACROSS ENGLAND: DIFFERENCE-IN-DIFFERENCE ANALYSIS OF THE UNDERSTANDING SOCIETY HOUSEHOLD LONGITUDINAL STUDY

SL Wickham*, L Bentley, T Rose, D Taylor-Robinson, B Barr. *Public Health and Policy, University of Liverpool, Liverpool, UK*

10.1136/jech-2019-SSMabstracts.97

Background An increase in mental health problems and a widening in inequalities has occurred in England during a period of austerity and welfare reform. Universal Credit (UC) was introduced for unemployed people first in the UK in 2013, to simplify the benefit system by bringing six 'legacy benefits' together into one means tested benefit. Qualitative research suggested potential negative mental health impacts. We assessed this natural policy experiment, taking advantage of the variation in UC introduction across local authority areas to see whether the introduction of UC was associated with an increase in self-reported psychological distress.

Methods We conducted a difference-in-difference analysis using longitudinal data from the Understanding Society Household Panel Survey on 88,060 working age (16–64) adults who participated between 1991 and 2018. We linked UC data from the DWP by local authority, month and year to identify when UC was introduced in each area. The primary outcome was self-reported psychological distress using the continuous General Health Questinaaire-12 (GHQ-12) measure, with high scores indicating increased psychological distress. We compared the change in mental health of unemployed people after UC was introduced in their local authority area to individuals who were not unemployed, and not effected by UC. Analysis was conducted in STATA-14.2 and accounted for confounding variables such as year, age, sex, having dependents, and marital status.

Results 18% (n=15,847) had a spell of unemployment at some time between 1991 and 2018. 3058 of these were unemployed in an area where UC had been introduced. When UC was introduced in an area the mental health of the unemployed deteriorated, whilst we did not see a deterioration in the mental health of those not unemployed. The trends in mental health in these two groups prior to the introduction of UC were parallel. The difference-in-differences in total GHQ-12 scores showed that the introduction of UC on an area was associated with a rise in psychological distress amongst the unemployed (β=0.27, 95% CI 0.09, 0.45, p=.003) relative to those not unemployed.

Conclusion Our analysis shows that the introduction of UC has led to an increase in psychological distress amongst unemployed individuals. UC has the potential to positively transform the benefit system, however our analysis, alongside the growing body of evidence suggests that in its current form UC has a negative impact on peoples mental health, and actions to address this are needed to help tackle the UK mental health crisis.

OP94 HEALTH AND PRODUCTIVITY COSTS OF VIOLENCE AGAINST WOMEN AND GIRLS

[1]N Duvvury, [1]M Chadha*, [1]S Scriver, [2]S Raghavendran, [3]F Asante, [4]K Ghaus, [5]K Elmusharaf, [1]M Sabir, [1]G Mcdarby, [1]C Ballantine. *[1]Political Science and Sociology, NUI Galway, Galway, Ireland; [2]J.E. Cairnes School of Business and Economics, NUI Galway, Galway, Ireland; [3]Institute of Statistical, Social and Economic Research, University of Ghana, Accra, Ghana; [4]Social Policy and Development Centre, Karachi, Pakistan; [5]Graduate Entry Medical School, University of Limerick, Limerick, Ireland*

10.1136/jech-2019-SSMabstracts.98

Background Violence against Women and Girls (VAWG) is widely recognized as a violation of human rights and a challenge to public health. In recognition of the dearth of knowledge of the impacts and costs due to VAWG, particularly in fragile and developing contexts, the UK Department for International Development (DFID) funded this research to investigate the social and economic costs of VAWG in Ghana, Pakistan and South Sudan (2014–2019), as part of its wider What Works to Prevent Violence research and innovation programme.

Methods This study used a mixed method approach including both quantitative surveys of individual women, households, and businesses, and qualitative inquiry methods including key informant interviews, participatory focus groups, and individual in-depth interviews. The direct health-related effects on women are measured by the out of pocket health expenditure incurred by women experiencing violence. The indirect mental health-related effects are quantified by productivity loss which is estimated as women missing work, being late at work or being not being mentally present at work. The study also estimates various health-related scores: Depression, Disability and Acute Illness scores, and compares women who experience violence and who do not.