Background Climate change is increasing population exposure to weather-related hazards, such as extreme precipitation, storms, and flooding. There’s growing concern that such exposure affects people’s mental health. However, little evidence exists based on probability samples or using robust assessment of mental disorders.

Methods We analysed the Adult Psychiatric Morbidity Survey, a representative study of adults in England (n=7525). The most recent in the series asked about damage to the home (wind, rain, snow, flood) in the six months prior to interview. We investigated a) the social profile of those who experienced storm- and flood-damage, and b) whether experience of recent damage was independently associated with common mental disorder (CMD) after adjustment for other factors.

Results One person in twenty reported living in a storm or flood-damaged home in the previous six months (n=354). Social advantage (home ownership, higher household income) increased the odds of exposure. People whose homes had been damaged were more likely to have CMD (6.9%, 95% CI 18.5–28.4% than the rest of the population (16.7%, 95% CI:15.7–17.8, p=0.005). The strength of this association was similar to that of living in the most disadvantage Index of Multiple Deprivation quintile. Exposure was associated with CMD even when the damage had not forced them to leave the property. In adjusted regression analyses, recent exposure to living a storm or flood damaged home increased the odds of CMD by 50% (adjusted OR 1.5, 95% CI 1.08; 2.07, p=0.01). Higher risk in children includes LPG 1.19 [1.01–1.41] p=0.04; coal/lignite 1.21 [1.11–1.36] p<0.00; and natural-gas 1.73 [1.18–2.53] p=0.01. The highest risk of anaemia (89%) was found in children aged 6–11 months.

Conclusion The study adds to the body of evidence of the risk to health of women and children from the specific fuel used for cooking. It is urgent for policymakers to prioritise funding for clean, affordable, equitable fuel in these low-mid-income countries and for implementation research to establish the best suited for each community based on resources available to them. The increase in global migration calls for healthcare professionals to enhance socio-demographic history taking to include detailed information about fuel use for the accurate diagnosis of anaemia.

P25 PILOTING A GROUP-BASED MODELLING APPROACH TO EXPLORE LOCAL FOOD SYSTEMS WITH AN AGENT-BASED MODEL

Background Daily dietary choices can be influenced by a host of behavioural factors (e.g., personal preferences, mental health state), as well as the social and policy environment (affordability, acceptability, and availability). Prioritising food environment policy changes to address dietary quality is thus challenging, and not well suited to some traditional research approaches.

Complex systems science is increasingly gaining ground in public health research and can be leveraged to better understand the determinants of poor dietary intake. Key methods include conceptual model building and computational modelling techniques. A co-production process called group model building (GMB) aims to bridge local issues and policy options. Traditionally, GMB has been used alongside system dynamics but not in agent-based modelling (ABM).

We, therefore, pilot a group modelling approach to inform development of a conceptual model of the local food environment in the Liverpool City Region to inform an ABM.

Methods We adapted and piloted a series of GMB stakeholder engagement activities (called scripts) for use in the ABM conceptual model with academics and partners from the local authority. We also developed a series of use-cases – policy