diagnosis and deprivation were included in the model (OR=1.0390; 1.0133–1.0648, p=0.003).

No significant associations were identified between social support and physical activity, diet, alcohol or smoking.

Conclusions Social support may be an important facilitator for attendance at appointments and adherence to CVD medications; however no association was found between social support and lifestyle behaviours. Harnessing positive social relationships in the delivery of interventions for reducing CVD risk in this population should be considered as a strategy for encouraging uptake.

LB2 APPLYING MACHINE LEARNING TO POOLED QUALITATIVE STUDIES ON ACTIVE TRAVEL: A METHOD TO UNCOVER UNANTICIPATED PATTERNS TO INFORM BEHAVIOUR CHANGE?

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Background Innovative approaches are required to better address physical inactivity. To move beyond individual approaches to behaviour change and develop more appropriate insights for the complex challenge of increasing population levels of activity, recent research has drawn on social practice theory. This theoretical approach describes the relational character of active living and related social practices. However, to date these investigations have been limited to small-scale qualitative research studies. To move beyond individual contexts and population groups and uncover conditions for 'practice change' across similar datasets, we explored a novel approach to qualitative data synthesis. Our aim was to pool several qualitative studies and apply machine learning to uncover patterns and interconnections in 'active travel' that have not emerged from the original qualitative data analyses.

Methods A pooled qualitative dataset of almost 250 transcripts was drawn from five studies conducted in different contexts in the UK, including Belfast, London, Glasgow, Cambridge and Cardiff. Machine learning approaches such as text mining have previously been applied to identify key recurring terms in large data sets. Recent software developments suggest the possibility of identifying 'concepts within context'. This unsupervised analysis of inter-relating concepts, which focuses on pattern recognition, is known as 'topic modelling analysis'. Text mining analysis software, Leximancer, was used to analyse the data and produce inter-topic distance maps to illustrate 'themes' and constituent 'concepts'.

Results In our analysis, we interrogated the insightfulness of this software to facilitate an inductive, data-driven process, and provide an analytical 'fresh lens' and the potential for identifying novel patterns and linkages that might not be identified by manual coding. For example, a new 'uncovered' theme was that women's accounts of 'cycling' were closely connected to 'people'. Exploring this in the original data, this related to their notions of who is a 'cyclist', what 'cyclists' look like, and aspects such as required fitness. In contrast, for men, 'cycling' did not connect to 'people' but to logistics, how to get to work and how long it takes. This researcher

input and interpretative work was a necessary analytical next step to make meaning from software outputs.

Conclusion This study contributes new insights into the, to date, rare application of machine learning to qualitative social science research, and towards a social science approach to behaviour change. Developing new methods and conceptual understandings can inform future research and policy decisions about social environments for promoting social practices which increase physical activity.

LB3 BUILDING INTERNATIONAL CONSENSUS ON GUIDELINES FOR RESEARCHERS INTERACTING WITH THE FOOD INDUSTRY: SYSTEMATIC SCOPING REVIEW, DELPHI STUDY AND INTERNATIONAL WORKSHOP

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Rationale Most food in the UK comes from commercial food companies, which contribute to the environments that drive what we eat. Many food companies need to change to support healthier diets. Population health researchers need to understand how food companies shape food choices and identify levers for change. This may require that researchers interact with industry. However, there is no explicit consensus among researchers regarding what constitutes acceptable or effective interaction. This has led to confusion over potential conflicts of interest, which could obscure findings and undermine scientific integrity. We aimed to build international consensus on what constitutes appropriate interactions between population health researchers and the food industry.

Methods We undertook a systematic scoping review of published and grey literature, and a two-stage international Delphi study of population health researchers. Scopus and Pubmed were searched to May 2017 for articles in English referring to principles guiding interactions between population health researchers and the food industry. We also asked experts to nominate documents, conducted an advanced Google search and hand searched reference lists. We thematically analysed included articles to saturation to derive principles. A two-round, online Delphi survey was undertaken to determine and build consensus on these principles, using a multi-pronged, purposeful approach to recruitment of researchers internationally. Consensus was defined as 80% agreement on each statement. Content analysis of qualitative feedback informed the second Delphi round. Findings provided the starting point for a two-day international workshop, in which we discussed a framework and principles for guidance.

Findings Our systematic review identified 56 principles in five key areas: governance of funding, risk assessment, maintaining standards of governance, ensuring transparency and improving publication standards. 100 researchers completed the first round of the Delphi and 92 the second. After round two, there was consensus on 39 statements (68%). Detailed comments by participants helped to modify principles. The international workshop identified the need for guidance as a 'thinking tool' rather than set of rules, offering support for researchers to assess risks and manage potential conflicts of