

compared outcomes before the introduction of HiP in Scotland and immediately after its withdrawal with those during the period for which it existed, and by varying the timing of the intervention period, ascertain if observed effects could be attributed to HiP or other co-existing policies.

Methods All singleton births with a gestational age 26–44 weeks were extracted from routinely collected birth data between January 2004 and December 2013. The outcomes of interest were birthweight and contacting midwife before 25 weeks. Interrupted time series models, adjusting for maternal, birth characteristics, seasonality and temporal trends, were used. The intervention period (April 2009 to April 2011) and post-intervention period (May 2011 to December 2013) were compared to the pre-intervention period (January 2004 to March 2009). Four different start dates (6 & 12 months before and after April 2009) and three duration periods (18, 24, 30 months) were chosen.

Results There were 272,935 births pre-intervention, 109,775 during the intervention and 144,663 post-intervention. Compared to pre-intervention, birthweight remained unchanged in both the intervention period -2.6 g (95% CI $-6.9; 1.7$) and post-intervention -5.0 g ($-11.1; 1.0$). During the intervention period women were more likely to contact the midwife OR 1.10 95%CI (1.02; 1.18). For birthweight, the duration of the intervention did not alter the effect of HiP. The effect on contacting a midwife was similar across start dates and duration periods.

Conclusion The strongest intervention effects did not coincide with the dates during which the HiP grant was in place, and there was little dilution of the effects, meaning any effects found could be due to policies and events other than the HiP grant. The lack of random allocation to intervention means the groups were exposed to different macro-level environments, which may impact on birth outcomes during the intervention period.

OP85

PATIENT AND STAFF PERCEPTIONS OF SAFETY AND RISK: TRIANGULATING PATIENT COMPLAINTS AND STAFF INCIDENT REPORTS TOWARDS A DUAL PERSPECTIVE ON ADVERSE EVENTS

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10.1136/jech-2020-SSMabstracts.84

Background Incident reporting systems in healthcare are historically based on staff descriptions of adverse events. An increasing body of literature suggests patients provide critical insights to risk and error, but their potential has not sufficiently been investigated at the incident level. This study aims to examine to what extent patient complaints and staff incident reports discuss identical incidents, and how their perspectives could be integrated for more comprehensive safety analysis.

Methods Deterministic data linkage was performed on all complaints ($n=5,265$) and staff incident reports ('PSIs') ($n=81,077$) between April 2014 and March 2019 at a multi-site hospital in London. A total of 402 complaints covered at least one incident also identified in the PSIs, and were included in the study. All incidents reported in complaints and staff incident reports were codified based on problem domain; problem severity; stage of care; staff group implicated; reported harm; and descriptive level (eg, description of human

factors and root causes); adapted from the Healthcare Complaints Analysis Tool (HCAT) and the National Reporting and Learning System (NRLS). Aggregated coding outputs informed targeted qualitative analysis of free text incident reports for an in-depth exploration of key overlap and discrepancies in patient and staff descriptions of unsafe care.

Results Our preliminary results indicate staff and patients reported similar problem themes for 81.1% of overlapping incidents (of which 66.5% clinical, followed by 27.1% institutional, and 6.4% relational), but commonly differed in their description of contributing factors and root causes (eg, different time points in patient journey). Alongside overlapping incidents, patients reported an average of 1.4 additional incidents in their complaint, of which 23.6% were high severity. Additional patient-reported incidents included blind spot clinical issues (36.7%; eg care continuity; care omissions) or relationship issues pre- or post mutually identified incidents (39.1%; eg failure to listen to patient concerns; breach of candour).

Conclusion Our study suggests that traditional, clinician-based models of safety and risk are likely to omit critical dimensions of root causes to adverse events. Patients and public are able to contribute to safety monitoring and evaluation in two ways: by highlighting overlooked or undervalued aspects of unsafe care (eg failure to listen; absent communication) and by revealing latent causes of incidents across time (eg failed continuity of care; systemic care omissions).

OP86

LOW ECONOMIC GROWTH, HEALTH, HEALTH INEQUALITIES AND SUSTAINABLE DEVELOPMENT GOALS IN A RICH COUNTRY: 27-YEAR JAPANESE TIME SERIES

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10.1136/jech-2020-SSMabstracts.85

Background Sustainable Development Goal #8 refers to decent work and economic growth. In the context of climate change and global resource depletion, it is important to understand whether low economic growth is compatible with positive population health in rich countries, particularly because the past decade of austerity in the UK and USA is associated with stagnating life expectancy. Japan provides a natural experiment in that it has experienced low economic growth since 1992, and life expectancy continued to improve. However, the trend in health inequality in good self-rated health is unknown.

Methods We examined trends in health and health inequalities using ten triennial waves of a nationally representative survey in Japan, 1986–2013 ($n=731,647$). Change in age-standardized self-rated good health was calculated, and health inequalities and their time trends were calculated using Slope and Relative Indices of Inequality (SII and RII respectively) in relation to net household income. Analyses were stratified by sex and age, for children (6–18 years), working-age adults (20–59 years), younger old (60–69 years) and older old (70–79 years), given age differences in relation to the economy

and labour market. Time trends of SII and RII were tested during the period of economic stagnation 1992–2013.

Results Overall, age-standardised self-rated good health was high among children (70%) and low among the older old (30%). In all age groups, prevalence of good health declined slightly from its peak in 1995 but increased after 2007. In 1992 among children, working-age adults and younger old, health inequality based on SII for net household income was small (approximately 10% lower prevalence of good health in those with lowest compared to highest income). Among working-age adults, time trends of health inequalities between 1992 and 2013 were curvilinear. The SII narrowed and then widened after 2002 (quadratic trends in men and women $p < 0.05$), resulting in the magnitude of health inequality returning to its level at the beginning of economic stagnation in 1992 but not exceeding it. Time trends in relative inequality (RII) were qualitatively similar to those in absolute inequality (SII). Health inequality narrowed and then widened, and the RIIs in 2013 was no larger than those in 1992.

Conclusion The long-term low-growth Japanese economy appears compatible with maintaining and improving population health and holding health inequalities at current levels. This evidence is of great significance for sustainable development and the health of current and future generations.

Friday 11 September

Transport

OP87 EXPLORING GENDERED ACTIVE TRAVEL BY POOLING AND SYNTHESISING QUALITATIVE STUDIES

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10.1136/jech-2020-SSMabstracts.86

Background Encouraging incidental physical activity is an important strategy to improve population health. Recent research has drawn on social practice theory to describe the recursive and relational character of active living, which could help to understand conditions for change. A growing evidence base suggests that gender should be considered amongst these conditions as an independent influence on travel behaviour, and qualitative studies have been particularly valuable to understand differential experiences. Our aim was to upscale insights from individual contexts, by synthesising data from primary qualitative research studies, to explore gendered patterns within active travel practices.

Methods We pooled 280 transcripts from five research projects conducted in the UK, including a range of populations, travel modes and settings. All data included gender descriptors, but most studies did not set out to study gender specifically. Text analytics software, Leximancer, was used in the first phase of the analysis to produce inter-topic distance maps to illustrate inter-related 'concepts'. These maps guided a second researcher-led interpretive analysis of text excerpts to infer meaning from the computer-generated outputs, whilst maintaining sight of the explanatory strength of qualitative data and its social theoretical framing or original context.

Results Our interpretative findings indicate gender differentiated experiences and travel narratives. Firstly, focusing particularly on respondents' commutes (travelling to and from work), and guided by social practice theory, we identified 'inter-related' and 'relating' practices across the pooled datasets. Women largely spoke about how their journeys associated with their commute were 'bundled together' as a series of multifunctional trips that included the school run or shopping, whereas men described relatively linear journeys from A to B but highlighted 'relating' practices to their journeys, such as showering after cycling to work. Secondly, we identified a gendered difference in the way men and women spoke about travel practices across contexts, particularly with reference to safety or danger. Women spoke more about themselves as actors in travel, how they are identified and their internal feelings of safety ('I feel unsafe'), and men's talk was more outwardly framed, and in terms of danger spoke about external conditions ('it is a dangerous road').

Conclusion Our research highlights gender differential experiences and accounts of travel experience. These findings can inform future research and policy decisions that aim to promote healthier travel practices, by emphasising the need to consider how gender (and other social positions) might shape practices and accounts of those practices.

OP89 A NATURAL EXPERIMENTAL STUDY OF NEW WALKING AND CYCLING INFRASTRUCTURE ACROSS THE UNITED KINGDOM: QUANTITATIVE ANALYSIS OF USE AND PHYSICAL ACTIVITY

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10.1136/jech-2020-SSMabstracts.87

Background Physical inactivity is a growing problem, increasing risks of non-communicable disease. Changing the built environment, including the provision of walking and cycling infrastructure, can influence population levels of physical activity, but high quality evaluations of these interventions are scarce. We demonstrate how different types of data can be used to investigate how context is associated with change in use of new walking and cycling infrastructure, and the association between use of infrastructure and overall physical activity. **Methods** We combined insights from multiple 'routine' and academic data sources. We conducted repeat cross-sectional pre-post analysis of pragmatic monitoring data from 84 new walking and cycling routes in the United Kingdom (the 'Connect2' programme), using four-day manual counts (pre $n=189,250$; post $n=319,531$), route intercept surveys (next-to-pass) (pre $n=15,641$; post $n=20,253$), and automatic count data which generated total estimated annual users, alongside longitudinal data from the iConnect cohort which involved postal questionnaires with local residents near three of the Connect2 schemes at baseline, 1-yr ($n=1853$) and 2-yr follow-up ($n=1524$). Multivariable binary logistic regression analysis was conducted using R to analyse:

1. Contextual features associated with increases of at least 50%, and doubling, of pedestrians, cyclists and particular user sub-groups. Models were adjusted for each independent contextual variable and time from infrastructure completion to post-monitoring.