preterm. Number of grandchildren increased with increasing number of children in both sexes, providing no evidence for a trade-off between quantity of offspring and their subsequent reproductive “quality”.

Conclusions: Early life characteristics can affect reproductive success even in post-demographic transition populations. These effects operate via multiple pathways and include “biological” characteristics such as birthweight having an effect via social facts such as adult marital status. These findings can inform analyses of reproductive career as a determinant of health in later life in this and other similar populations. They also generate hypotheses regarding the potential long term consequences of adverse early environments in concurrent cohorts around the world.

006 TRENDS IN MATERNAL OBESITY AND HEALTH INEQUALITIES IN A NATIONALLY REPRESENTATIVE SAMPLE OF 619 323 BIRTHS IN ENGLAND, UK, 1989–2007

N Heslehurst, J Rankin, J Wilkinson, CD Summerbell. 1Health and Social Care Research Institute, University of Teesside, Middlesbrough, Tees Valley, UK; 2Institute of Health and Society, Newcastle University, Newcastle upon Tyne, UK; 3North East Public Health Observatory, Durham University, Stockton, UK; 4School of Medicine and Health, Durham University, Stockton, UK

doi:10.1136/jech.2009.096701f

Objectives: Maternal obesity has serious implications to the health of both mothers and infants, including maternal and neonatal death, stillbirth, congenital anomalies, poor breastfeeding rates, and obesity in the offspring. There are also additional complications during antenatal, intrapartum, and postnatal periods which impact on maternity services. However, there is an absence of national statistics for maternal obesity in the UK. This study is the first to describe a nationally representative maternal obesity research dataset in England.

Design of the Study: Descriptive epidemiological study using routinely collected data.

Setting: 34 maternity units in England.

Participants: 619 323 women who delivered at the maternity units sampled, between January 1989 and December 2007.

Main Outcome Measures: Trends in first trimester maternal BMI status over time and geographical distribution of maternal obesity by Government Office Regions in England. Demographics of the population were analysed to identify any maternal obesity associated health inequalities, including maternal age, parity, ethnic group, deprivation, and employment. All demographics were tested for multicollinearity. Logistic regression adjusted for all included demographics as confounders.

Results: The demographic characteristics of the study population were representative when compared to census and deprivation data. Obesity in the first trimester of pregnancy is significantly increasing over time, having more than doubled from 7.6% to 15.6% over the 19 years studied (p<0.001). There is significant geographic variation in the incidence of maternal obesity, with the West Midlands, Yorkshire and the Humber and North East Government Office Regions having higher than national average incidence of first trimester obesity. There are health inequalities associated with maternal obesity, including increased odds of being obese with increasing age (1.02, 95% CI 1.02 to 1.02), parity (1.17, 95% CI 1.16 to 1.18), black ethnic group (1.78, 95% CI 1.70 to 1.87), and deprivation (2.20, 95% CI 2.13 to 2.28). There is also an association between super morbid obesity and unemployment (1.50, 95% CI 1.12 to 2.02).

Conclusions: The increase in maternal obesity at booking has yielded an additional 47 500 women per year requiring high dependency care in England. The demographics of women most at risk of first trimester obesity highlight health inequalities associated with maternal obesity which need to be addressed.