after unplanned and mistimed pregnancies born to more disadvantaged families. ART children had a higher risk of asthma at age 5 (OR 1.9 (95% CI: 1.0 to 3.1)) and age 7 (OR 1.5 (95% CI: 0.9 to 2.6)) compared to the 'planned' group. Controlling for confounding strengthens the observed effects (adjusted OR 2.2 (95% CI: 1.3 to 4.0) and 1.7 (95% CI: 1.0 to 3.0) at age 5 and 7 respectively). After adjustment, there was no excess risk observed in the unplanned, mistimed, subfertile or OS groups.

Conclusion These results suggest that children born after ART may have an increased risk of asthma, which persists after controlling for confounding other risk factors. Children born after unplanned or mistimed pregnancies, or following ovulation induction or subfertility do not experience an increased risk.

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ARE CHILDREN BORN AFTER INFERTILITY AT INCREASED RISK OF ASTHMA?

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Objectives To examine whether children born after infertility or assisted reproductive treatment (ART) are at increased risk of asthma by age 7.

Design Prospective population-based cohort (Sweeps 1, 3 and 4 of the UK Millennium Cohort Study).

Setting UK.

Participants A nationally representative sample was recruited when the children were 9 months old, and surveyed at 5 and 7 years. Analysis was restricted to 14,248 singletons at age 5 and 12,986 at age 7 for whom data on pregnancy, asthma and key confounders were available.

Exposure measure Mothers reported whether their pregnancy was planned and how they felt when first pregnant. Women who planned their pregnancy provided data on time to conception (TTC) and details of any assisted reproductive treatment (ART) needed. The population was divided into 'unplanned' (unplanned and unhappy), 'mistimed' (unplanned but happy), 'planned' (planned, TTC<12 months), 'subfertile' (planned, TTC>12 months), 'ovulation stimulated (OS)' (received clomiphene citrate) and 'ART' (in vitro fertilisation or intracytoplasmic sperm injection).

Outcome measure Mothers were asked if their child had asthma or related symptoms, using validated questions from the International Study of Asthma and Allergies in Childhood (ISAAC) questionnaire. Logistic regression was used to estimate Odds Ratios (OR), adjusting for family history of asthma, socioeconomic, pregnancy-related and environmental risk factors. The 'planned' children were the reference group in the analyses.

Results 52% of pregnancies were 'planned', 4% of children were born after subfertility, 1% following OS and 1% after ART. 15% of pregnancies were 'unplanned' and 27% 'mistimed'. In general, children born after ART had older, wealthier, and more highly educated parents who were less likely to smoke, less likely to have asthma themselves, and more likely to breastfeed than the 'planned' group, while children born