entry, 82% of "internet" women and 1 (7%) "IVRS" woman went on to complete a detailed baseline questionnaire. The choice of follow up period varied between country, but overall 43% (range 28-49%) chose every two weeks and 58%, (range 49-72%) every 4 weeks. To date, 38% have provided follow-up data, despite all receiving reminders at each follow-up time point. Limited information was available as to why participants stopped participating as few subjects completed the discontinuation forms, which inquired about reasons.

Conclusions: Pregnant women can be recruited directly to provide information for research via the internet but recruitment for data provision by IVRS was poor. Our research suggests additional tools are needed to enhance retention of recruited volunteers. These results should help guide future study designs using direct-to-patient enrolment and follow-up. Additional research from this project will examine self-reported medication use.

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578. Discontinuation of Antipsychotic Medication in Pregnancy: A Cohort Study

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Background: Women prescribed antipsychotics face the dilemma on whether to continue medication in pregnancy in terms of balancing potential teratogenic effects and other adverse effects of the medication against the consequences of a relapse of their illness. Previous research on other psychotropic medications including antidepressants and antiepileptic drugs suggests that many women discontinue treatment in early pregnancy. However, limited evidence exists on whether pregnancy is associated with discontinuation of antipsychotic medication.

Objectives: To assess whether pregnancy is major determinant for stopping antipsychotics and identify characteristics of those who stopped antipsychotics during pregnancy.

Methods: We identified 495,953 pregnant women from The Health Improvement Network primary care database. Kaplan-Meier plots were used to examine time to last prescription in pregnant versus non-pregnant women and Poisson regression to examine characteristics of those who stopped treatment during pregnancy.

Results: Prescribing of atypical antipsychotics has been increasing both before and during pregnancy, resulting in an overall increase in prevalence of prescribing since 2007. Antipsychotics were more likely to be stopped in pregnant than non-pregnant women. Only 107/279 (38%) of women on atypical antipsychotics and 39/207 (19%) of women on typical antipsychotics before pregnancy still received treatment at the start of third trimester. Older women were more likely to continue typical antipsychotic treatment in pregnancy (35+ versus <25 years Risk Ratio: 3.09 [95% CI 1.76, 5.44]). Likewise, those who received typical antipsychotics for longer periods before were most likely to continue treatment in pregnancy (12+ versus <6 months: RR: 3.12 [95% CI 1.97, 4.95]). For atypical antipsychotics length and dose of prior prescribing were also associated with continuation in pregnancy.

Conclusions: Pregnancy was a major determinant of cessation of antipsychotics. This may be explained by concern about potential adverse effects of the drug, even though these concerns need to be balanced against the potential harm of inadequate treatment of psychoses and other serious mental illnesses during pregnancy.

579. Trends in the Use of Anti-Epileptic Drugs during Pregnancy in the Netherlands

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Background: The use of anti-epileptic drugs (AEDs) during pregnancy is associated with an increased risk of birth defects. Since epilepsy itself is also associated with potential risks for mother and child, an optimal AED treatment is needed. Over the past years, the introduction of new AEDs and the amendments of guidelines have changed the use of AEDs in this vulnerable group of patients. The extend of the changes over time in the Netherlands has not been studied before.

Objectives: To compare the use of different AEDs in pregnant women over the past 10 years in the Netherlands.

Methods: This retrospective cohort study data is based on data from the register that is being used

to submit Dutch cases to the EURAP study. Pregnancies were included in which women were exposed to an AED between January 2003 and December 2012 either preconceptionally or during the first trimester. Binary logistic regression analysis was used to compare the proportion of various AEDs annually. Dependent variable was the year in which conception took place; the AED and type of epilepsy were covariates. In addition, the mean number of concomitantly used AEDs were calculated per year and analyzed by ANOVA.

Results: A total number of 1,733 pregnancies in were included in the analysis. The proportion of use of levetiracetam and lamotrigine showed an upwards trend from 6.2 and 16.0% in 2003 till 25.0 and 33.5% in 2012, with corresponding adjusted Odds Ratio (OR) of 4.89 (95% CI 2.65-9.06) and 2.77 (95% CI 1.76-4.34) respectively. The proportion of use of valproate and carbamazepine decreased from 28.4 and 28.4% in 2003 till 9.3 and 17.3% in 2013, with an adjusted OR of 0.28 (95% CI 0.16-0.48) and from 0.44 (95%CI 0.28-0.70) respectively. The use of other miscellaneous AEDs decreased from 20.9% to 14.9%, OR 0.61 (95%CI 0.38-0.98). The average number of AEDs being used was 1.30 in 2003 and 1.24 in 2012 ($p > 0.05$).

Conclusions: The use of relatively safer AEDs gradually increased over the past 10 years compared to drugs more frequently associated with congenital defects. The mean number of AEDs used remained stable of the years. Our findings are in line with advice provided in the literature on the use of AEDs.

580. Outcomes of Opioid Use in Pregnancy: A Danish Population-Based Study

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Background: Few data exist on birth outcomes in women who received opioid maintenance treatment with methadone or buprenorphine during pregnancy.

Objectives: To examine adverse birth outcomes in women exposed to methadone or buprenorphine during pregnancy and to examine the risk of neonatal abstinence syndrome (NAS) among neonates exposed in utero to buprenorphine and methadone.

Methods: The study included all female Danish residents with a live or a still-birth from 1997-2011. We identified the study population, use of opioids and opioid-substitution treatment, birth outcomes, and NAS through medical registers. Birth outcomes included preterm birth (<gestational week 38), low birth weight (<2500 grams), small for gestational age (weight below 2 standard deviations from the sex- and gestational-week-specific mean), congenital malformations, and stillbirths.

Results: Among 571,823 women who gave birth during the study period, we identified 626 opioid users (190 used buprenorphine only and 215 used methadone only). Compared with non-exposed, prenatal opioid use was associated with greater prevalence of preterm birth (prevalence ratios (PR) of 2.2 (95% confidence interval (CI): 1.6-3.1) in buprenorphine-exposed and 3.6 (95% CI: 2.8-4.6) in methadone-exposed), low birth weight (PR of 2.2 (95% CI:1.5-3.3) in buprenorphine-exposed and 4.8 (95% CI: 3.8-6.1) in methadone-exposed), and being small for gestational age (PR of 1.4 (95% CI:0.6-3.2) in buprenorphine-exposed and 2.4 (95% CI:1.2-4.5) in methadone-exposed). The prevalence of congenital malformations was 8.0% in buprenorphine-exposed, 11.3% in methadone-exposed, and 4.3% in non-exposed. This corresponded to PRs of 1.9 (95% CI: 1.2-3.0) in buprenorphine-exposed and 2.6 (95% CI: 1.8-3.8) in methadone-exposed. The risk of NAS ranged from 7.0% in buprenorphine-exposed to 55.2% in methadone-exposed neonates.

Conclusions: Maternal use of buprenorphine and methadone during pregnancy was associated with increased prevalence of adverse birth outcomes. The risk of NAS was 8-fold higher in methadone-exposed neonates than in buprenorphine exposed. We did not, however, control for lifestyle factors or underlying indication for opioid treatment.

581. Birth Outcomes after Exposure to Mebendazole and Pyrvinium During Pregnancy – A Danish Nationwide Cohort Study

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