Supplementary materials to

Chlamydia trachomatis during pregnancy and childhood asthma-related morbidity: a

population-based prospective cohort

Running title: Maternal Chlamydia and childhood asthma morbidity

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Supplementary Figure S1. Directed acyclic graph (DAG) of exposure, outcome and

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Supplementary Table S1. Differences between those included and not included in the study

	Included	Not included	P-value
	n = 2,475	n = 1,580	
Maternal characteristics			
Age, mean (SD), y	30.76 (4.82)	27.96 (5.49)	<0.001
Caesarian section, No. (%)	275 (12.3)	170 (13.1)	0.523
Low/middle education level, No. (%)	1,117 (47.7)	947 (72.2)	<0.001
Maternal psychiatric symptoms, median (IQR)	0.15 (0.06, 0.33)	0.25 (0.10, 0.52)	0.006
Smoking during pregnancy, No. (%)	520 (24.0)	24 (32.4)	0.098
Alcohol use during pregnancy, No. (%)	1,239 (58.2)	492 (39.0)	<0.001
Chlamydia trachomatis infection, No. (%)	78 (3.2)	79 (5.0)	0.003
Child's characteristics			
Female sex, No. (%)	1,230 (49.7)	713 47.4)	0.155
Gestational age at birth, median (IQR), weeks	40.1 (39.3, 41.0)	39.9 (38.9, 40.9)	<0.001
Birth weight, mean (SD), grams	3,447 (543)	3,344 (612)	<0.001
European ethnicity, No. (%)	1,621 (66.5)	636 (45.3)	<0.001
Ever breastfeeding, No. (%)	1,977 (93.5)	41 (91.1)	0.527
Day care attendance 1st year, No. (%)	1,021 (61.8)	11 (52.4)	0.377

Abbreviation: IQR, interquartile range. Differences between groups were evaluated using t-tests for continuous variables, chi-square tests for categorical variables or Mann-Whitney U tests for non-normal distributed variables. Values are based on observed data.

Supplementary Table S2. Associations of *Chlamydia trachomatis* infection during pregnancy with lower respiratory tract infections from age 1 to 6 years

	Lower respiratory tract infections Odds Ratio (95% Confidence Interval)					
	1 year	2 years	3 years	4 years	6 years	Overall
Chlamydia trachomatis **infection during pregnancy (yes versus no)**						
Crude model	1.24 (0.56, 2.75)	0.6 (0.31, 1.47)	1.15 (0.52, 2.52)	**2.25 (1.17, 4.34)**	1.51 (0.71, 3.18)	0.85 (0.54, 1.35)
p-value	*0.589*	*0.320*	*0.737*	*0.016*	*0.283*	*0.500*
Confounder model[a]	1.00 (0.33, 3.04)	0.49 (0.17, 1.38)	1.29 (0.46, 3.60)	1.50 (0.37, 6.14)	0.77 (0.19, 3.20_	0.95 (057, 1.59)
p-value	*0.996*	*0.191*	*0.633*	*0.576*	*0.723*	*0.855*
Full model[b]	0.95 (0.57, 1.59)	1.03 (0.18, 1.42)	1.32 (0.47, 3.69)	1.54 (0.38, 6.25)	0.79 (0.19, 3.27)	0.95 (0.57, 1.59)
p-value	*0.961*	*0.197*	*0.601*	*0.550*	*0.749*	*0.735*

Values are odds ratios with 95% confidence interval from generalized estimating equation models. [a]Adjusted for maternal age, educational level, psychiatric symptoms, and smoking and alcohol use during pregnancy, and child's ethnicity, breastfeeding and day care attendance in the first year of life. [b]Additionally adjusted for mode of delivery, gestational age at birth and birth weight.

Supplementary Table S3. Associations of *Chlamydia trachomatis* infection during pregnancy with wheezing from age 1 to 10 years

	Wheezing Odds Ratio (95% Confidence Interval)						
	1 year	**2 years**	**3 years**	**4 years**	**6 years**	**10 years**	**Overall**
***Chlamydia trachomatis* infection during pregnancy (yes versus no)**							
Crude model	1.24 (0.77, 1.99)	1.14 (0.67, 1.95)	**3.30 (2.05, 5.31)**	**2.36 (1.43, 3.89)**	1.13 (0.56, 2.29)	1.58 (0.90, 2.77)	**2.03 (1.50, 2.75)**
p-value	*0.378*	*0.624*	*<0.001*	*0.001*	*0.734*	*0.112*	*<0.001*
Confounder model[a]	1.31 (0.72, 2.38)	1.22 (0.66, 2.24)	**2.09 (1.10, 3.96)**	1.41 (0.64, 3.12)	1.23 (0.56, 2.69)	2.06 (0.88, 4.83)	**1.50 (1.10, 2.03)**
p-value	*0.374*	*0.529*	*0.028*	*0.399*	*0.551*	*0.100*	*0.013*
Full model[b]	1.31 (0.72, 2.38)	1.22 (0.66, 2.24)	**2.09 (1.10, 3.96)**	1.41 (0.64, 3.12)	1.27 (0.58, 2.79)	2.06 (0.88, 4.83)	**1.47 (1.09, 1.99)**
p-value	*0.374*	*0.529*	*0.028*	*0.399*	*0.551*	*0.100*	*0.015*

Values are odds ratios with 95% confidence interval from generalized estimating equation models. [a]Adjusted for maternal age, educational level, psychiatric symptoms, and smoking and alcohol use during pregnancy, and child's ethnicity, breastfeeding and day care attendance in the first year of life. [b]Additionally adjusted for mode of delivery, gestational age at birth and birth weight.

Supplementary Figure S1. Directed acyclic graph (DAG) of exposure, outcome and possible covariates

Minimal sufficient adjustment for estimating the total effect of *Chlamydia trachomatis* on respiratory health:
maternal age, maternal education, maternal stress, smoking during pregnancy, alcohol during pregnancy, ethnicity of the child, breastfeeding, daycare attendance.