

TABLES AND FIGURES

Table 1: Baseline characteristics for gastroschisis patients and date-of-birth matched controls

	Gastroschisis (n=141)	Controls (n=1410)	P
Male (%)	72 (51.10)	731 (51.80)	0.930
Birthweight (grams)	2721.30 (\pm 615.73)	3466.93 (\pm 546.60)	<0.001
Gestational age (weeks)	36.5 (\pm 1.84)	39.11 (\pm 1.84)	<0.001
1-minute Apgar	6.31 (\pm 2.48)	7.91 (\pm 1.66)	<0.001
5-minute Apgar	8.04 (\pm 1.33)	8.34 (\pm 2.01)	0.094
Length of stay (days)	46.30 (\pm 55.29)	3.01 (\pm 5.75)	<0.001
Socioeconomic Factor Index	0.89 (\pm 1.20)	0.20 (\pm 1.11)	<0.001

Table 2. Risk of respiratory outcomes for gastroschisis cases and date-of-birth matched controls 0-5 years-of-age. Gastroschisis cases were found to have a higher risk of bronchitis/bronchiolitis and pneumonia, specifically viral pneumonia.

Respiratory outcome	Risk ratio	95%CI	Odds ratio	95%CI	P	Adjusted odds ratio	95%CI	P
Asthma	1.46	1.07,1.99	1.64	1.03,2.55	0.029	1.55	0.99-2.38	0.05
All respiratory infections	1.05	0.97,1.13	1.38	0.78,2.60	0.298	1.55	0.89-2.90	0.14 6
<i>Acute respiratory infections</i>	1.02	0.94,1.11	1.13	0.67,1.99	0.706	1.26	0.76-2.21	0.39 6
Nasopharyngitis	1.04	0.65,1.68	1.05	0.56,1.85	0.886	0.96	0.53-1.64	0.88 0
Sinusitis	0.16	0.02,1.13	0.15	0,0.89	0.025	-	-	-
Pharyngitis	0.96	0.65,1.40	0.94	0.56,1.54	0.905	0.99	0.59-1.58	0.95 7
Tonsillitis	0.33	0.15,0.74	0.30	0.11,0.68	0.001	-	-	-
Laryngitis and tracheitis	0.61	0.34,1.09	0.57	0.27,1.09	0.101	0.61	0.30-1.13	0.14 2
Upper respiratory infection	0.98	0.87,1.10	0.93	0.60,1.46	0.746	1.07	0.70-1.68	0.76 2
Bronchitis and bronchiolitis	1.61	1.27,2.03	2.04	1.35,3.07	<0.001	1.76	1.17-2.62	0.00 6
<i>Chronic sinusitis</i>	1.25	0.61,2.54	1.27	0.51,2.74	0.526	-	-	-
<i>Pneumonia</i>	1.99	1.45,2.72	2.39	1.51,3.74	<0.001	2.13	1.35-3.29	0.00 1
Viral	5.15	1.79,14.81	5.32	1.40,17.45	0.007	-	-	-
Pneumococcal	10.3	0.65,163.59	10.34	0.13,809.52	0.169	-	-	-
Other bacterial	5.15	0.47,56.37	5.17	0.09,100.13	0.243	-	-	-
All bacterial (pneumococcal + other bacterial)	6.87	1.16,40.68	6.95	0.57,61.34	0.065	-	-	-
Due to other organisms	2.06	0.24,17.48	2.07	0.04,18.70	0.427	-	-	-
Bronchopneumonia, organism unspecified	1.06	0.33,3.44	1.07	0.20,3.53	0.758	-	-	-
Pneumonia, organism unspecified	2.06	1.45,2.92	2.41	1.47,3.85	<0.001	2.14	1.32-3.38	0.00 1
<i>Influenza</i>	1.49	0.79,2.82	1.54	0.69,3.12	0.219	1.39	0.65-2.71	0.36 4

- = insufficient sample size for adjusted analysis

*Pneumonia in infectious diseases classified elsewhere was not included in the table because no results were found

Table 3. Risk of asthma related prescription medication for gastroschisis cases and date-of-birth matched controls 0-5 and 5-10 years-of-age. Prescriptions for inhaled bronchodilators and inhaled steroids are more common in gastroschisis patients than date-of-birth matched controls for the younger children but not the older children.

	0-5 years-of-age			5-10 years-of-age		
Prescriptions	Risk ratio	95%CI	P	Risk ratio	95%CI	P
Inhaled bronchodilators	1.44	1.12,1.86	0.010	0.73	0.40,1.30	0.334
Inhaled steroids	1.52	1.08,2.13	0.026	0.61	0.28,1.34	0.267

Table 4. Relative rate of respiratory diagnoses (found in *Medical Claims/Medical Services* dataset) for cases and date-of-birth matched controls 0-5 and 5-10 years-of-age. The proportional intensity model compares diagnosis rates between cases and controls over the time period, and the Pearson’s correlation examines if the rate of diagnoses varies with age.

	0 - 5 years old					5 - 10 years old				
	Proportional Intensity Model			Pearson's correlation		Proportional Intensity Model			Pearson's correlation	
Respiratory Outcome	Relative rate	95%CI	P	X ²	P	Relative rate	95%CI	P	X ²	P
Acute nasopharyngitis	0.78	0.52,1.67	0.224	0.21	0.644	-	-	-	-	-
Acute upper respiratory infection	0.94	0.85,1.05	0.258	2.65	0.103	1.02	0.84,1.24	0.807	14.38	<0.001
Acute bronchitis and bronchiolitis	2.14	1.79,2.57	<0.001	12.27	<0.001	0.14	0.03,0.56	0.005	2.77	0.096
Chronic sinusitis	1.59	0.99,2.55	0.053	5.05	0.025	0.39	0.10,1.61	0.195	0.05	0.816
Viral pneumonia	8.1	3.79,17.31	<0.001	6.18	0.013	-	-	-	-	-
Pneumococcal pneumonia	4.85	0.44,53.45	0.198	0.72	0.397	-	-	-	-	-
Other bacterial pneumonia	2.58	0.29,23.10	0.396	2.33	0.127	-	-	-	-	-
All bacterial (pneumococcal + other bacterial pneumonia)	1.48	0.87,2.49	0.146	0.05	0.830	3.03	1.67,5.51	<0.001	2.03	0.155
Pneumonia due to other organisms	1.16	0.15,9.13	0.890	1.75	0.186	-	-	-	-	-
Bronchopneumonia	1.34	0.61,2.94	0.472	0.06	0.814	-	-	-	-	-
Influenza	1.48	0.87,2.49	0.146	0.09	0.768	3.03	1.67,5.51	<0.001	0.68	0.410
- = insufficient sample size										

Table 5. Relative rate of respiratory hospital admissions (found in *Hospital Abstracts* dataset) for cases and date-of-birth matched controls 0-5 years-of-age. No cases or controls were admitted to hospital for respiratory diagnosis in the 5-10 years-of-age group. The proportional intensity model compares diagnosis rates between cases and controls over the time period, and the Pearson's correlation examines if the rate of diagnoses varies with age.

	0 - 5 years old				
	Proportional Intensity Model			Pearson's correlation	
Respiratory outcome	Relative rate	95%CI	P	X ²	P
Acute upper respiratory infection	4.27	1.39,13.11	0.011	0.01	0.939
Acute bronchitis and bronchiolitis	4.22	1.97,9.05	<0.001	1.41	0.240
Viral pneumonia	10.89	4.21,28.18	<0.001	0.09	0.764
Pneumococcal pneumonia	5.22	0.32,84.04	0.244	2.30	0.130
All bacterial (pneumococcal + other bacterial pneumonia)	2.18	0.44,10.90	0.342	2.30	0.130
Bronchopneumonia	0.74	0.17,3.20	0.682	0.32	0.570
Influenza	2.18	0.44,10.90	0.342	0.31	0.576
*Acute nasopharyngitis, chronic sinusitis, other bacterial pneumonia and pneumonia due to other organisms were not included in the table because no results were found					

Table 6. Risk of respiratory outcomes for gastroschisis cases and date-of-birth matched controls 5-10 years-of-age.

Respiratory outcome	Risk ratio	95%CI	Odds ratio	95%CI	P	Adjusted odds ratio	95%CI	P
Asthma	0.48	0.22,1.05	0.44	0.15-1.03	0.066	-	-	-
All respiratory infections	1.03	0.87,1.23	1.09	0.64-1.90	0.799	1.31	0.77,2.28	0.328
Acute respiratory infections	0.94	0.78,1.14	0.85	0.51-1.45	0.527	1.07	0.64,1.81	0.811
Pharyngitis	0.85	0.52,1.38	0.81	0.41-1.52	0.558	0.87	0.44,1.60	0.658
Tonsillitis	1.16	0.71,1.91	1.20	0.60-2.26	0.622	1.32	0.68,2.43	0.385
Upper respiratory infection	0.87	0.66,1.15	0.77	0.46-1.29	0.327	0.91	0.54,1.51	0.711
Bronchitis and bronchiolitis	0.25	0.06,1.00	0.23	0.03-0.90	0.024	-	-	-
Chronic sinusitis	0.70	0.17,2.86	0.69	0.08-2.82	1	-	-	-
Pneumonia	0.81	0.30,2.18	0.80	0.20-2.27	0.810	-	-	-
Pneumococcal	-	-	-	-	-	-	-	-
All bacterial (pneumococcal + other bacterial)	10.11	0.64,159.95	10.17	0.13-798.81	0.172	-	-	-
Pneumonia, organism unspecified	0.72	0.23,2.27	0.71	0.14-2.32	0.790	-	-	-
Influenza	1.63	0.65,4.06	1.68	0.49-4.55	0.363	-	-	-

- = insufficient sample size
 *Pneumonia due to other organisms and pneumonia in infectious diseases classified elsewhere were not included in the table because no results were found
 *Acute nasopharyngitis, acute sinusitis, acute laryngitis/tracheitis, viral pneumonia, other bacterial pneumonia, and bronchopneumonia, organisms unspecified were not included in the table because their risk ratios were zero.

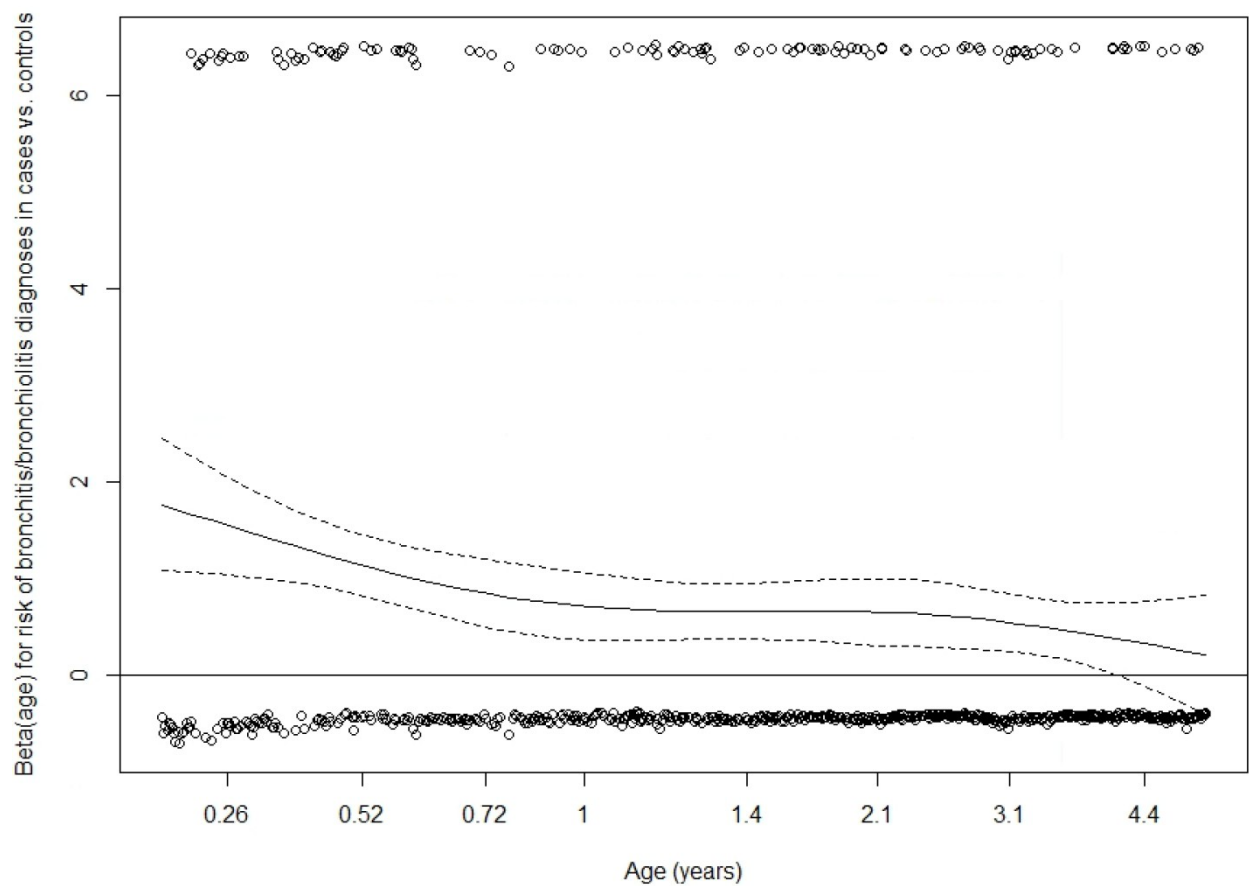


Figure 1. Model demonstrating that bronchitis/bronchiolitis diagnoses are more frequent in children with gastroschisis compared to date-of-birth matched controls. The solid line represents the estimated regression parameter, beta, at a given age and the dashed lines represent the 95% confidence interval. At approximately 4 years, beta approaches 0 which indicates that the relative rate of diagnosis is almost equal after 4 years.

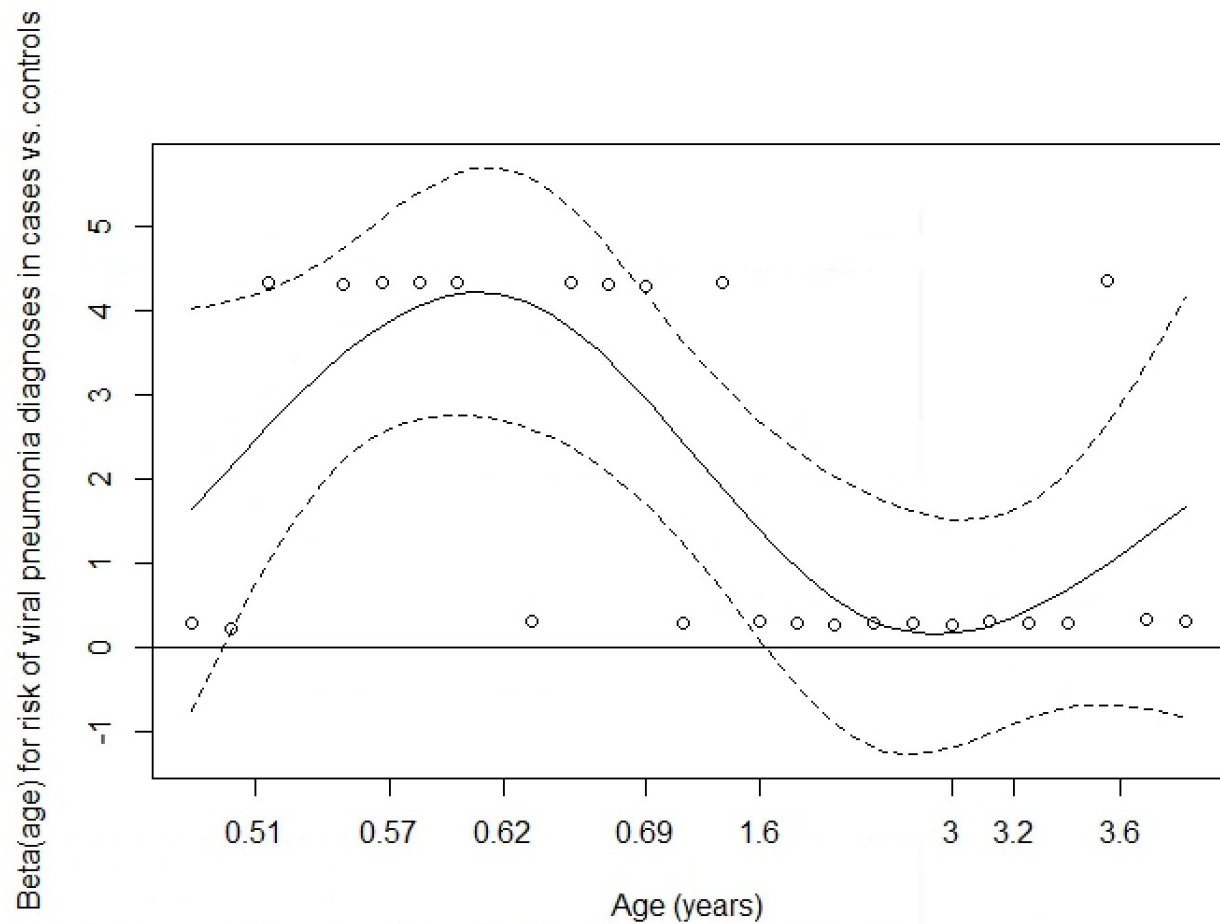


Figure 2. Model demonstrating that viral pneumonia diagnoses are more frequent in children with gastroschisis compared to date-of-birth matched controls. The solid line represents the estimated regression parameter, beta, at a given age and the dashed lines represent the 95% confidence interval. At approximately 1½ years, beta approaches 0 which indicates that the relative rate of diagnosis is almost equal after 1½ years.