

## Supplemental Appendix

### Survey Questions

Email Address:

Child' First Name:

Child's Last Name:

Date of Birth:

Male or Female?

What is your child's vaccine status?

No Vaccines

Partially Vaccinated

Vaccines Up-To-Date

Has your child been diagnosed with any of the following conditions?

Moderate to Severe Asthma (requiring regular use of a prescription inhaler or nebulizer)

Chronic Gastroenteritis Issues (recurrent or chronic constipation or diarrhea)

Severe Allergy (requiring prescription EpiPen)

Type 1 Diabetes

Chronic Ear Infections (3 or more per 12 months)

ADD/ADHD (requiring medication)

Seizures (requiring medication)

Autism

None of the above

If you selected "Autism," please choose from one of the following:

Severe (non-verbal and/or requiring constant supervision)

Mild/Moderate (verbal and capable of independent activity)

Has your child ever been diagnosed with any of the following?

Lip or Tongue Tie

Chickenpox

None of the above

Does this child have a sibling with autism?

Yes or No

Type of birth?

Vaginal (hospital birth)

Vaginal (home birth)

C-section

Exclusive breastfeeding for 6 months or longer?

Yes or No

Current education of child?

Home Educated

Private/Public School

Is this individual or any family member a patient at this medical practice?

Yes or No

**Supplemental Table S1.** Logistic regression model, vaccines “up to date” versus unvaccinated, stratified based on year of birth and sex, no covariates.

Diagnosis	Vaccinated Cases/ Non-cases	Unvaccinated Cases/ Non-cases	Odds Ratio (95% CI)	p-value
Allergies (severe)	8/128	15/930	4.45 (1.79 – 11.1)	0.0013
Autism	7/129	9/936	6.11 (2.15 – 17.4)	0.0007
Gastrointestinal Disorders	22/114	12/933	13.4 (6.18 – 29.3)	<0.0001
Asthma	23/113	8/937	22.9 (9.26 – 52.4)	<0.0001
ADD/ADHD	10/126	3/942	24.7 (6.20 – 98.5)	<0.0001
Ear Infections (chronic)	23/113	5/940	35.0 (12.6 – 87.1)	<0.0001
Chickenpox	4/71	90/376	0.096 (0.028 – 0.33)	0.0002

**Supplemental Table S2.** Logistic regression model, partially vaccinated versus unvaccinated, stratified based on year of birth and sex, no covariates.

Diagnosis	Vaccinated Cases/ Non-cases	Unvaccinated Cases/ Non-cases	Odds Ratio (95% CI)	P-value
Allergies (severe)	45/439	15/930	5.98 (3.25 – 11.0)	<0.0001
Autism	34/450	9/936	6.66 (3.10 – 14.3)	<0.0001
Gastrointestinal Disorders	63/421	12/933	11.9 (6.27 – 22.7)	<0.0001
Asthma	27/457	8/937	6.41 (2.80 – 14.7)	<0.0001
ADD/ADHD	19/465	3/942	10.4 (2.99 – 36.3)	0.0002
Ear Infections (chronic)	35/449	5/940	13.6 (5.21 – 35.6)	<0.0001
Chickenpox	36/254	90/376	0.27 (0.16 – 0.47)	<0.0001

**Supplemental Table S3.** Logistic regression model, breastfed for first six months of life versus not, stratified based on year of birth and sex.

Diagnosis	Breastfed Cases/ Non-cases	Non-Breastfed Cases/ Non-cases	Odds Ratio (95% CI)	p-value
Allergies (severe)	38/1228	30/269	<b>0.48 (0.28 – 0.82)</b>	<b>0.0076</b>
Autism	29/1237	21/278	0.63 (0.34 – 1.17)	0.14
Gastrointestinal Disorders	59/1207	38/261	0.67 (0.42 – 1.07)	0.092
Asthma	30/1236	28/271	<b>0.39 (0.22 – 0.70)</b>	<b>0.0016</b>
ADD/ADHD	16/1250	16/283	0.47 (0.22 – 1.01)	0.054
Ear Infections (chronic)	35/1231	28/271	<b>0.51 (0.29 – 0.88)</b>	<b>0.017</b>
Chickenpox	119/547	11/154	<b>2.66 (1.27 – 5.60)</b>	<b>0.0098</b>

**Supplemental Table S4.** Logistic regression model, vaginal delivery versus cesarean section, stratified based on year of birth and sex.

Diagnosis	V-delivery Cases/ Non-cases	C-section Cases/ Non-cases	Odds Ratio (95% CI)	p-value
Allergies (severe)	46/1233	22/264	1.64 (0.92 – 2.99)	0.092
Autism	31/1248	19/267	1.76 (0.94 – 3.31)	0.077
Gastrointestinal Disorders	66/1213	31/255	<b>1.92 (1.16 – 3.18)</b>	<b>0.011</b>
Asthma	44/1235	14/272	1.07 (0.54 – 2.11)	0.86
ADD/ADHD	23/1256	9/277	1.75 (0.73 – 4.21)	0.21
Ear Infections (chronic)	52/1227	11/275	0.64 (0.32 – 1.31)	0.22
Chickenpox	113/551	17/150	0.88 (0.47 – 1.65)	0.69