### **Supplementary Online Content**

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This supplementary material has been provided by the authors to give readers additional information about their work.

## eTable1. American Hospital Formulary System Codes Used in Study

#### **Antibiotics**

08.12.06 cephalosporins

08.12.12 macrolides

08.12.16 penicillins

08.12.18 quinolones

08.12.20 sulfonamides

08.12.24 tetracyclines

08.12.28 miscellaneous antibiotics (including clindamycin)

08.14.08 azoles

(additionally, specific searches performed in the drug name field for linezolid, colistmethate sodium, and metronidazole)

<u>Proton pump inhibitors:</u> 56.28.36 (omeprazole, lansoprazole, esomeprazole, pantoprazole, dexlansoprazole, and rabeprazole)

H2 Receptor antagonists: 56.28.12 (cimetidine, famotidine, nizatidine, and ranitidine)

# eTable2. International Classification of Diseases, 9th revision, Clinical Modification Diagnostic Codes Used in Study

Peanut allergy V1501 Milk allergy V1502 Egg allergy V1503

Seafood allergy V1504 Other food allergy V1505, 9957

Anaphylaxis 9956, 99560, 99561, 99562, 99563, 99564, 99565, 99566, 99567, 99568, 99569, 9950
Asthma 4930, 49301, 49302, 4931, 49310, 49311, 49312, 4932, 49320, 49321, 49322, 4938,

49381, 49382, 4939, 49390, 49391, 49392

Atopic Dermatitis 6918, 6920, 6921, 6922, 6923, 6925, 6926, 6928, 69281, 69283,

Allergic Rhinitis 477, 4770, 4772, 4778, 4779

Allergic Conjunctivitis 37205, 37214

Urticaria 708, 7080, 7081, 7082, 7083, 7084, 7085, 7088, 7089
Other Allergy V1507, V1509, 9994, 99941, 99949, 99527, 9953
Contact Dermatitis 6924, 69284, 69289, 6929, 6930, 6931, 6938, 6939,

Medication Allergy V140, V141, V142, V143, V144, V145, V146, V147, V148, V149

Prematurity 76521, 76522, 76523, 76524, 76525, 76526, 76527, 76528

Cesarean section V3001, V3101, V3201, V3301, V3401, V3501, V3601, V3701, V3901, 7634

eTable3. Adjusted Hazard Ratios for Allergic Diseases by Gender, Cesarean Section, and Prematurity in Children. Ratios were adjusted for gender, prematurity, birth by Cesarean section, and effect of the other medication classes.

	Male vs Female	Cesarean Section	Prematurity
	Adjusted Hazard	Adjusted Hazard	Adjusted Hazard
	Ratio (95% CI)	Ratio (95% CI)	Ratio (95% CI)
Any Food	1.13	1.07	1.04
Allergy	(1.11-1.18)	(1.05-1.11)	(0.98-1.11)
Cow's Milk	1.24	1.1	1.12
Allergy	(1.14-1.29)	(1.04-1.19)	(0.98-1.29)
Peanut	1.28	1.06	1.02
Allergy	(1.22-1.35)	(1.004-1.13)	(0.89-1.16)
	1.18	1.27	1.25
Egg Allergy	(1.08-1.28)	(1.14-1.40)	(1.004-1.55)
Seafood	1.20	1.20	1.18
Allergy	(1.07-1.28)	(1.05-1.36)	(0.89-1.55)
Other Food	1.13	1.06	1.05
Allergy	(1.09-1.16)	(1.02-1.09)	(0.97-1.13)
	1.31	1.06	1.03
Anaphylaxis	(1.24-1.38)	(1.001-1.13)	(0.90-1.18)
	1.55	1.10	1.44
Asthma	(1.53-1.58)	(1.09-1.12)	(1.39-1.50)
Atopic	1.10	1.06	0.98
Dermatitis	(1.08-1.12)	(1.04-1.07)	(0.95-1.01)
Allergic	1.12	1.11	1.06
Rhinitis	(1.11-1.13)	(1.10-1.13)	(1.03-1.09)
Allergic	1.24	1.09	1.09
Conjunctivitis	(1.21-1.27)	(1.06-1.12)	(1.02-1.16)
	1.03	1.03	0.98
Urticaria	(1.01-1.04)	(1.01-1.05)	(0.94-1.01)
	1.11	1.07	0.98
Other Allergy	(1.10-1.13)	(1.05-1.09)	(0.93-1.03)
Contact	1.07	1.03	1.01
Dermatitis	(1.06-1.08)	(1.02-1.04)	(0.98-1.03)
Medication	1.17	1.10	1.10
Allergy	(1.11-1.23)	(1.06-1.14)	(1.02-1.20)

# eTable 4. Incidence Densities (in Cases per 10,000 Person-Years) of Food and Non-Food Allergic Diseases In Children Diagnosed With GERD During Infancy and Given Antibiotics, H2RAs, or PPIs Prior to 6 Months of Age.

	No Drug Exposure	Antibiotics	H2RA	PPI
	(n=33,634)	(n=22,626)	(n=49,681)	(n=12,128)
Any Food Allergy	73.8	101.3	118.8	153.0
Any Non-Food Allergy	2424.9	3322.5	2834.7	3006.3

eTable 5. Adjusted Hazard Ratios for Food and Non-Food Allergic Diseases in Children Diagnosed With GERD During Infancy and Given Antibiotics, H2RAs, or PPIs Prior to 6 Months of Age.

	Antibiotics	H2RA Adjusted	PPI Adjusted
	Adjusted Hazard	Hazard Ratio	Hazard Ratio
	Ratio	(95% CI)	(95% CI)
	(95% CI)	, ,	, ,
Any Food Allergy	1.02 (0.95-1.09)	1.50 (1.38-1.64)	1.93 (1.73-2.16)
Any Non-Food Allergy	1.44 (1.39-1.49)	1.07 (1.03-1.10)	1.16 (1.10-1.21)