

Supplement

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eTable 1. Exclusion criteria used in cohort construction.

A) Percentage of visits excluded by criterion

Category	Percentage of visits excluded (%)
Age above 18	0.58
Weekday	1.09
7am – 6pm	0.77
Within physiological range (32 – 45°C)	0.04
No antibiotics within one week	19.08
No infection codes within one week	19.30
Only one temperature measurement per patient (after all other exclusions)	8.63

Percentages are relative to all outpatient visits (patient-days) with at least one temperature measurement within the 2009-2014 period

B) Top 10 Antibiotic categories excluded, by SNOMED category

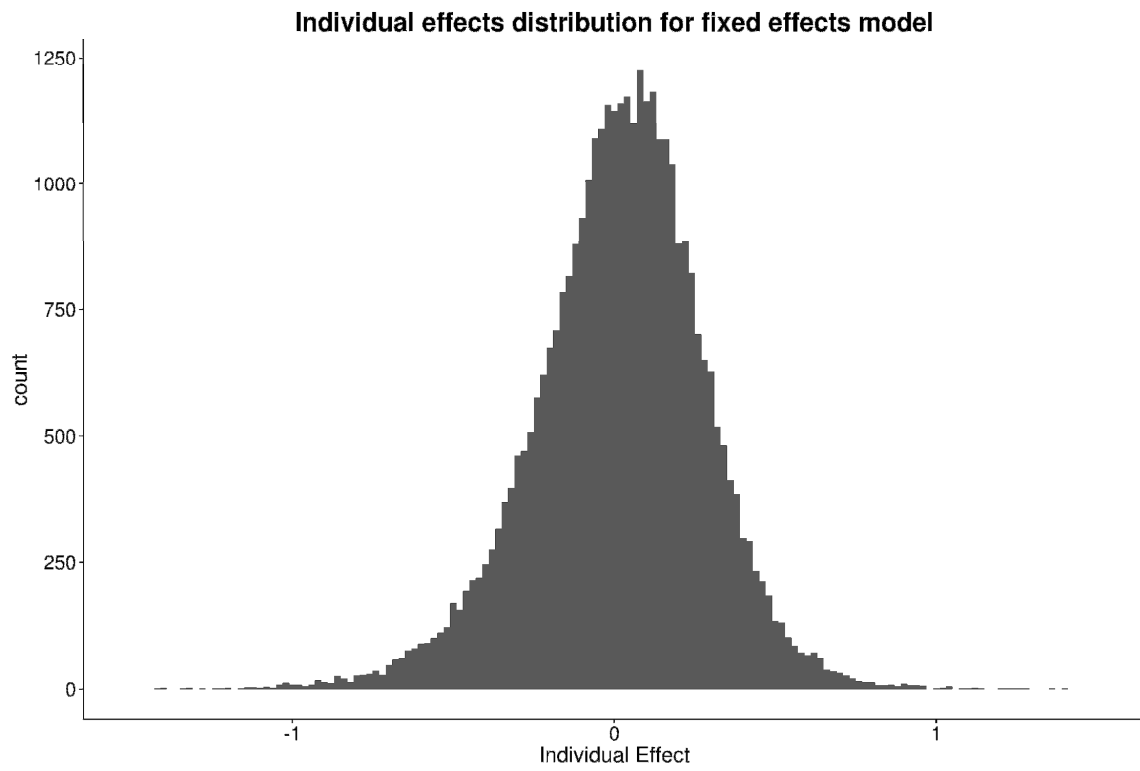
Antibiotic category	Number of visits excluded
beta-lactam	24779
quinolone	16692
macrolide	14748
urinary anti-infective	13789
nitroimidazole	8195
aminoglycoside	5609
tetracycline	5312
glycopeptide	3927
polymyxins	905
rifamycins	654

C) Top 10 Infection categories excluded

Infection category	Number of visits excluded	ICD 9 codes
Infectious and Parasitic Diseases	22302	001-139
Acute Respiratory infections	18078	460-466
UTI	8890	599.0, 595.1, 595.2, 595.9, 597.80, 595.0, 597.0, 595.82, 595.89, 595.81, 598.00, 597.89, 595.4, 595.3, 597.81
Infections of skin and subcutaneous tissue	7901	680-686
Pneumonia and Influenza	4749	480-488
Fever and other physiologic disturbances of temperature	4246	780.6
Inflammatory disease of female pelvic organs	4238	614-616
Synovitis and tenosynovitis	1929	727

Osteomyelitis periostitis and other infections involving bone	1673	730
Eye infection	1532	372.30, 372.13, 372.14, 372.10, 372.00, 377.39, 377.30, 377.32, 364.3, 375.30, 372.39, 360.19, 364.00, 360.11, 363.21, 372.11, 372.03, 372.05, 375.42, 364.04, 360.00, 375.03, 360.01, 363.20, 375.32, 372.02, 372.06, 364.10, 363.14, 372.21, 364.05, 372.20, 364.24, 360.12, 364.03, 363.01, 363.04, 364.01, 372.31, 364.02, 363.03, 375.00, 377.31, 377.34, 364.11, 377.33, 372.33, 375.01, 372.22, 363.05, 372.04, 372.01, 363.00, 363.22

eFigure 1. Distribution of individual effect coefficients estimated using a fixed effects model



eTable 2. Temporal and environmental effects coefficients for random effects model

	Coefficient	Std. Error	P-value
Year: 2009	<i>Reference</i>		
Year: 2010	0.00003	0.00335	0.99298
Year: 2011	-0.00431	0.00348	0.21519
Year: 2012	0.00878	0.00349	0.01192
Year: 2013	0.01255	0.00356	<0.001
Year: 2014	0.02816	0.00412	<0.001
January	0.01146	0.00460	0.01280
February	0.01326	0.00459	0.00390
March	0.00281	0.00401	0.48332
April	<i>Reference</i>		
May	-0.01606	0.00394	<0.001
June	-0.06151	0.00489	<0.001
July	-0.04568	0.00447	<0.001
August	-0.05998	0.00484	<0.001
September	-0.04990	0.00440	<0.001
October	-0.02837	0.00397	<0.001
November	-0.00093	0.00395	0.81339
December	-0.00038	0.00436	0.93109
7:00 AM	-0.04172	0.00751	<0.001
8:00 AM	-0.05709	0.00411	<0.001
9:00 AM	-0.05081	0.00372	<0.001
10:00 AM	-0.03099	0.00361	<0.001
11:00 AM	-0.01384	0.00368	<0.001
12:00 PM	<i>Reference</i>		
1:00 PM	0.00630	0.00372	0.09017
2:00 PM	0.01849	0.00377	<0.001
3:00 PM	0.03112	0.00394	<0.001
4:00 PM	0.03371	0.00464	<0.001
5:00 PM	0.02007	0.00838	0.01668
Monday	<i>Reference</i>		
Tuesday	-0.00433	0.00265	0.10210
Wednesday	-0.00588	0.00273	0.03138
Thursday	-0.01003	0.00273	<0.001
Friday	-0.00676	0.00284	0.01749
Site: Axillary	-0.26414	0.04740	<0.001
Site: Blank	-0.16912	0.00507	<0.001
Site: Oral	<i>Reference</i>		
Site: Rectal	0.04384	0.13647	0.74801
Site: Temporal	-0.03197	0.00504	<0.001
Site: Tympanic	-0.06000	0.00595	<0.001
Temperature Decile: 1	-0.01912	0.00558	<0.001
Temperature Decile: 2	-0.00938	0.00445	0.03497
Temperature Decile: 3	-0.01598	0.00405	<0.001
Temperature Decile: 4	-0.00725	0.00363	0.04570

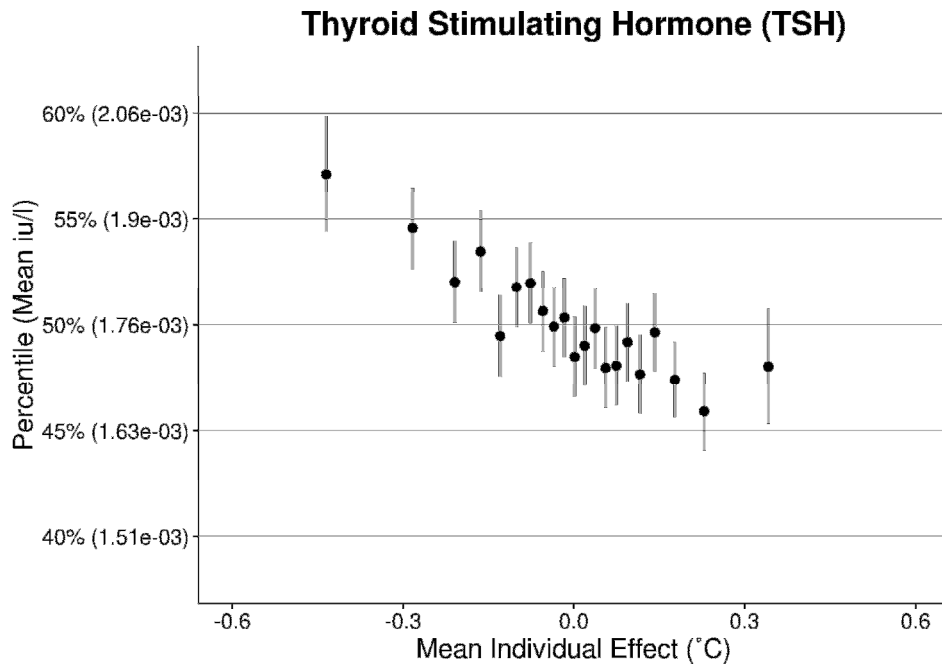
Temperature Decile: 5	<i>Reference</i>		
Temperature Decile: 6	0.00789	0.00346	0.02271
Temperature Decile: 7	0.02004	0.00366	<0.001
Temperature Decile: 8	0.03131	0.00407	<0.001
Temperature Decile: 9	0.03306	0.00432	<0.001
Temperature Decile: 10	0.05153	0.00471	<0.001
Dew Point Decile: 1	-0.03652	0.00490	<0.001
Dew Point Decile: 2	-0.02921	0.00399	<0.001
Dew Point Decile: 3	-0.02054	0.00377	<0.001
Dew Point Decile: 4	-0.01373	0.00345	<0.001
Dew Point Decile: 5	<i>Reference</i>		
Dew Point Decile: 6	0.00237	0.00356	0.50672
Dew Point Decile: 7	0.02009	0.00361	<0.001
Dew Point Decile: 8	0.02956	0.00384	<0.001
Dew Point Decile: 9	0.03144	0.00407	<0.001
Dew Point Decile: 10	0.04007	0.00441	<0.001

eTable3. Regression of individual temperature effect on demographics, comorbidities, and physiological measurements with p-values adjusted using Holm, Hochberg, and Bonferroni methods.

Predictor variables included in the model	Regression coefficients modeling individual temperature					
	Coefficient	Std. Err.	p	Adjusted p		
				Holm	Benjamini-Hochberg	Bonferroni
<i>Demographics</i>						
Age [†]	-0.021	0.001	<0.001	<0.001	<0.001	<0.001
White [§] Female	0.023	0.003	<0.001	<0.001	<0.001	<0.001
White [§] Male				<i>reference</i>		
Black Female	0.052	0.004	<0.001	<0.001	<0.001	<0.001
Black Male	0.015	0.006	0.009	0.124	0.124	0.249
Hispanic Female	0.030	0.004	<0.001	<0.001	<0.001	<0.001
Hispanic Male	0.019	0.006	0.001	0.014	0.014	0.023
<i>Comorbidities</i>						
Comorbidity Sum Score ^a	0.002	0.002	0.268	1	0.956	1
Hypertension [‡]	-1.7e-4	0.003	0.956	1	0.956	1
Tumor [¶]	0.020	0.003	<0.001	<0.001	<0.001	<0.001
Arrhythmia [‡]	-0.002	0.004	0.624	1	0.956	1
Pulmonary Disease [¶]	-0.012	0.004	0.001	0.011	0.011	0.015
Uncomplicated Diabetes [‡]	0.009	0.003	0.005	0.076	0.076	0.142
Depression [‡]	0.008	0.003	0.013	0.165	0.165	0.355
Anemia [‡]	0.005	0.004	0.240	1	0.956	1
Obesity [‡]	-0.011	0.004	0.004	0.059	0.059	0.104
Electrolytes [‡]	-0.003	0.004	0.463	1	0.956	1
Hypothyroid [‡]	-0.013	0.004	0.001	0.012	0.012	0.018
Congestive Heart Failure [¶]	-0.027	0.006	<0.001	<0.001	<0.001	<0.001
Metastatic [¶]	0.004	0.010	0.680	1	0.956	1
Renal [‡]	-0.025	0.006	<0.001	<0.001	<0.001	<0.001
Psychosis [‡]	-0.005	0.005	0.335	1	0.956	1
Cerebrovascular [¶]	0.003	0.004	0.526	1	0.956	1
Neurodegenerative [‡]	-0.003	0.005	0.531	1	0.956	1
<i>Physiological measures</i>						
BMI, kg/m ²	0.002	1.8e-4	<0.001	<0.001	<0.001	<0.001
Pulse, bpm	4.0e-5	1.6e-5	0.014	0.170	0.170	0.398
Systolic BP, mmHg	1.8e-6	4.0e-6	0.653	1	0.956	1
Diastolic BP, mmHg	1.2e-4	3.5e-5	0.001	0.014	0.014	0.022
Resp. Rate, bpm	-2.5e-5	1.1e-4	0.817	1	0.956	1
<i>n</i> = 20,718						

eFigure 2. Laboratory result percentile vs. individual effect.

A) Thyroid Stimulating Hormone



B) C-Reactive Protein

