

## Supplementary Online Content

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**eTable 1.** Results Using CDI Cases Validated Through Antibiotic Treatment or Subsequent CDI Hospitalization

**eTable 2.** Results for Hospital Onset CDI Cases

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

## Supplementary Material: Validation Results

**eTable 1. Results using CDI cases validated through antibiotic treatment or subsequent CDI hospitalization.** In total 142,090 CDI cases occurred in inpatient settings or were validated by outpatient treatment or hospitalization. A total of 51,878 of the 134,606 community-onset CDI cases were validated by subsequent antibiotic treatment or hospitalization.

Coefficient	Any CDI (N CDI Cases = 142,090)		Community Onset CDI (N CDI Cases = 51,878)		Community Onset CDI and No Prior Hospitalization (N CDI Cases = 39,761)	
	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI
<b>(Intercept)</b>	0	(0-0)	0	(0-0)	0	(0-0)
<b>Family Exposure</b>	8.351	(5.097-12.768)	10.689	(6.464-16.459)	13.261	(6.803-22.93)
<b>Family Exposure: dependent (age 18-26)</b>	0.953	(0.034-5.169)	1.405	(0.135-5.825)	1.129	(0.055-6.048)
<b>Prior Hospitalization</b>	16.741	(15.733-17.806)	9.934	(9.178-10.743)	N/A	
<b>Prior antibiotic use</b>						
None	(reference)		(reference)		(reference)	
Low-risk antibiotic	3.902	(3.607-4.215)	5.829	(5.319-6.379)	6.783	(6.012-7.636)
High-risk antibiotic	10.24	(9.59-10.929)	19.071	(17.682-20.565)	30.445	(27.682-33.475)
<b>Age Group</b>						
0-17	(reference)		(reference)		(reference)	
18-26	1.796	(1.565-2.059)	2.403	(2.034-2.839)	2.538	(2.067-3.118)
27-44	2.243	(2.006-2.512)	3.074	(2.672-3.547)	3.214	(2.701-3.842)
45-64	4.534	(4.109-5.015)	4.818	(4.237-5.5)	4.732	(4.035-5.584)
≥65	10.717	(9.657-11.916)	14.066	(12.314-16.125)	13.771	(11.644-16.372)
<b>Female sex</b>	1.209	(1.149-1.272)	1.375	(1.292-1.464)	1.404	(1.292-1.527)
<b>Year</b>						
2001	(reference)		(reference)		(reference)	
2002	1.37	(0.919-2.084)	1.103	(0.66-1.886)	1.069	(0.513-2.331)

2003	1.414	(0.969-2.116)	1.077	(0.662-1.807)	1.033	(0.517-2.194)
2004	1.737	(1.216-2.555)	1.36	(0.868-2.22)	1.267	(0.67-2.597)
2005	1.944	(1.372-2.842)	1.617	(1.049-2.608)	1.564	(0.852-3.147)
2006	1.962	(1.39-2.861)	1.788	(1.169-2.867)	1.711	(0.944-3.414)
2007	2.256	(1.606-3.276)	1.762	(1.155-2.821)	1.712	(0.949-3.405)
2008	2.614	(1.875-3.771)	2.021	(1.341-3.204)	2.035	(1.152-3.995)
2009	2.709	(1.946-3.905)	2.543	(1.698-4.014)	2.542	(1.451-4.962)
2010	2.82	(2.025-4.066)	2.886	(1.928-4.552)	2.969	(1.698-5.786)
2011	3.292	(2.371-4.736)	3.409	(2.288-5.362)	3.576	(2.057-6.943)
2012	3.586	(2.585-5.155)	3.88	(2.607-6.095)	4.087	(2.356-7.923)
2013	3.684	(2.652-5.301)	4.005	(2.687-6.299)	4.244	(2.442-8.238)
2014	3.966	(2.856-5.706)	4.392	(2.948-6.904)	4.711	(2.714-9.138)
2015	4.261	(3.056-6.148)	5.65	(3.788-8.891)	6.239	(3.59-12.112)
2016	4.487	(3.219-6.474)	6.518	(4.375-10.247)	7.239	(4.171-14.039)
2017	4.121	(2.944-5.967)	5.983	(4-9.435)	6.574	(3.77-12.79)
<b>Month</b>						
January	(reference)		(reference)		(reference)	
February	0.709	(0.627-0.802)	0.594	(0.51-0.69)	0.557	(0.456-0.68)
March	0.585	(0.518-0.66)	0.476	(0.411-0.552)	0.443	(0.364-0.539)
April	0.575	(0.509-0.65)	0.47	(0.405-0.546)	0.443	(0.364-0.54)
May	0.569	(0.503-0.643)	0.472	(0.407-0.548)	0.444	(0.364-0.541)
June	0.592	(0.523-0.669)	0.503	(0.433-0.583)	0.471	(0.386-0.575)
July	0.591	(0.522-0.668)	0.491	(0.423-0.571)	0.479	(0.393-0.584)
August	0.606	(0.536-0.684)	0.504	(0.433-0.585)	0.477	(0.391-0.582)
September	0.613	(0.541-0.693)	0.522	(0.449-0.606)	0.508	(0.416-0.619)
October	0.605	(0.535-0.684)	0.512	(0.441-0.594)	0.49	(0.402-0.597)
November	0.578	(0.51-0.655)	0.48	(0.412-0.559)	0.468	(0.383-0.572)
December	0.572	(0.505-0.647)	0.464	(0.399-0.54)	0.433	(0.354-0.53)

**eTable 2. Results for Hospital Onset CDI cases**

Coefficient	Hospital Onset CDI		Hospital Onset CDI (no prior hospitalization)	
	Estimate	95% CI	Estimate	95% CI
<b>(Intercept)</b>	0	(0-0)	0	(0-0)
<b>Family Exposure</b>	6.733	(3.299-11.995)	8.868	(3.561-17.885)
<b>Family Exposure: dependent (age 18-26)</b>	0.23	(0-6.57)	0.252	(0-9.561)
<b>Age Group</b>				
0-17	(reference)		(reference)	
18-26	1.527	(1.289-1.805)	1.667	(1.316-2.105)
27-44	1.874	(1.637-2.148)	2.195	(1.817-2.659)
45-64	4.416	(3.935-4.97)	4.772	(4.058-5.645)
≥65	9.253	(8.179-10.495)	18.123	(15.348-21.522)
<b>Female sex</b>	1.12	(1.053-1.191)	1.162	(1.067-1.266)
<b>Prior antibiotic use</b>				
None	(reference)		(reference)	
Low-risk antibiotic	3.083	(2.792-3.398)	3.757	(3.276-4.291)
High-risk antibiotic	6.973	(6.416-7.572)	13.795	(12.385-15.341)
<b>Prior Hospitalization</b>	22.49	(20.90-24.20)	N/A	
<b>Year</b>				
2001	(reference)		(reference)	
2002	1.512	(0.943-2.5)	1.481	(0.796-2.902)
2003	1.59	(1.017-2.582)	1.519	(0.844-2.911)
2004	1.931	(1.265-3.079)	1.796	(1.033-3.363)
2005	2.115	(1.397-3.353)	1.958	(1.14-3.638)
2006	2.047	(1.356-3.239)	1.884	(1.101-3.492)
2007	2.505	(1.672-3.942)	2.249	(1.329-4.136)
2008	2.912	(1.961-4.551)	2.552	(1.529-4.648)

2009	2.782	(1.874-4.348)	2.472	(1.482-4.5)
2010	2.774	(1.867-4.338)	2.526	(1.512-4.601)
2011	3.22	(2.174-5.022)	2.908	(1.75-5.277)
2012	3.42	(2.311-5.332)	3.134	(1.89-5.683)
2013	3.502	(2.362-5.468)	3.204	(1.927-5.819)
2014	3.732	(2.518-5.824)	3.354	(2.018-6.089)
2015	3.503	(2.345-5.499)	3.211	(1.91-5.875)
2016	3.392	(2.267-5.333)	3.086	(1.831-5.656)
2017	3.136	(2.082-4.952)	2.964	(1.744-5.463)
<b>Month</b>				
January	(reference)		(reference)	
February	0.773	(0.666-0.898)	0.719	(0.587-0.88)
March	0.648	(0.559-0.751)	0.6	(0.491-0.733)
April	0.636	(0.547-0.738)	0.596	(0.486-0.73)
May	0.623	(0.537-0.723)	0.58	(0.473-0.71)
June	0.64	(0.55-0.743)	0.603	(0.491-0.74)
July	0.646	(0.557-0.75)	0.612	(0.499-0.75)
August	0.663	(0.572-0.77)	0.636	(0.519-0.778)
September	0.662	(0.569-0.769)	0.628	(0.511-0.77)
October	0.657	(0.566-0.762)	0.625	(0.51-0.765)
November	0.633	(0.544-0.737)	0.607	(0.493-0.745)
December	0.634	(0.546-0.737)	0.611	(0.498-0.748)