Appendix Table 1. Odds ratio associated with CXR+ case (N=1162) versus non-pneumonia case (reference) (N=398) as a predictor of organism presence, stratified by antibiotic use among cases with high quality induced sputum samples

	H. influenzae				*S. pneumoniae*				*M. catarrhalis*				*S. aureus*				OGNR			
	Prior antibiotics -		Prior antibiotics +		Prior antibiotics -		Prior antibiotics +		Prior antibiotics -		Prior antibiotics +		Prior antibiotics -		Prior antibiotics +		Prior antibiotics -		Prior antibiotics +	
Sputum culture interpretative criteria	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**	**OR (95% CI)**	**P value**
Present in any quantity	0.99 (0.62,1.59)	.98	1.22 (0.91,1.65)	.19	1.14 (0.72,1.8)	.57	0.88 (0.64,1.2)	.41	1.27 (0.81,1.97)	.30	0.61 (0.45,0.81)	<.01	0.59 (0.26,1.33)	.20	1.62 (0.91,2.86)	.10	3.85 (0.85,17.35)	.08	1.23 (0.66,2.29)	.51
Present in any quantity with compatible Gram stain	0.98 (0.63,1.54)	.94	1.63 (1.1,2.41)	<.01	1.08 (0.69,1.68)	.73	1.15 (0.8,1.65)	.46	1.39 (0.88,2.2)	.16	0.62 (0.45,0.86)	<.01	0.37 (0.1,1.32)	.13	1.39 (0.61,3.19)	.43	1.72 (0.34,8.65)	.51	1.18 (0.51,2.73)	.70
Present in any quantity without compatible Gram stain	1.03 (0.48,2.23)	.94	0.83 (0.57,1.21)	.33	1.23 (0.49,3.1)	.66	0.49 (0.29,0.82)	<.01	0.79 (0.36,1.7)	.54	0.74 (0.47,1.16)	.18	0.84 (0.29,2.43)	.75	1.76 (0.82,3.77)	.15	--	--	1.28 (0.52,3.14)	.59
Predominant organism	0.92 (0.59,1.43)	.71	1.19 (0.86,1.63)	.29	0.85 (0.55,1.32)	.46	0.81 (0.58,1.13)	.22	1.11 (0.69,1.78)	.67	0.59 (0.43,0.79)	<.01	0.42 (0.15,1.16)	.10	1.61 (0.85,3.02)	.14	1.71 (0.18,16.6)	.64	1.18 (0.58,2.39)	.65
Predominant organism with compatible Gram stain	0.96 (0.62,1.5)	.87	1.63 (1.05,2.52)	.03	0.88 (0.56,1.37)	.56	1.12 (0.76,1.65)	.57	1.26 (0.76,2.11)	.37	0.62 (0.44,0.87)	<.01	0.42 (0.09,1.89)	.26	1.54 (0.59,4.05)	.38	1.13 (0.1,12.63)	.92	1.06 (0.39,2.87)	.92
Predominant organism without compatible Gram stain	0.84 (0.36,1.93)	.68	0.83 (0.55,1.24)	.35	0.79 (0.24,2.53)	.69	0.42 (0.25,0.73)	<.01	0.68 (0.27,1.68)	.40	0.65 (0.4,1.04)	.07	0.44 (0.12,1.68)	.23	1.62 (0.71,3.66)	.25	--	--	1.3 (0.49,3.46)	.60

Abbreviations: OGNR, other gram-negative rods; CXR+, chest radiograph positive.
CXR+ defined as radiographic evidence of pneumonia (consolidation and/or other infiltrates).
Non-pneumonia (Non-Pn) case defined as a case with a normal CXR, blood culture pathogen negative, and normal respiratory rate or non-hypoxic in the absence of crackles, or normal respiratory rate and non-hypoxic in the presence of crackles.
Prior use of antibiotics defined as bioassay positive, antibiotic administration at the referral facility, antibiotic administration prior to IS specimen collection at the study facility.
CXR+ N without prior antibiotics = 219 (19.4%); N with prior antibiotics = 908 (80.6%).
Non-pneumonia case N without prior antibiotics = 124 (31.8%); N with prior antibiotics = 266 (68.2%).
Restricted to IS samples with < 10 squamous epithelial cells per low power field.
Other non-fermentative gram-negative rods include *Pseudomonas aeruginosa*, *Acinetobacter* species, *Pseudomonas* species.

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