

Supplemental Digital Content 4, Table. Detection of Organisms by PCR in NP/OP and Whole Blood Specimens from Cases and Controls

				Odds Ratio (95% CI)	
	All Cases	CXR-positive Cases	All Controls	All Cases vs. All Controls	CXR-positive Cases vs. All Controls
NP/OP PCR					
Pathogen					
Any pathogen	522 (99.4)	218 (99.5)	770 (99.9)	0.15 (0.02, 1.48)	0.20 (0.01, 3.45)
Any pathogen, with thresholds applied	512 (97.5)	212 (96.8)	737 (95.6)	1.28 (0.62, 2.63)	1.12 (0.44, 2.84)
Bacteria					
Any bacteria	477 (90.9)	197 (90.0)	752 (97.5)	0.46 (0.24, 0.87)	0.54 (0.24, 1.19)
Any bacteria, with thresholds applied for <i>S. pneumoniae</i> , <i>H. influenzae</i>	364 (69.3)	146 (66.7)	644 (83.5)	0.84 (0.51, 1.38)	0.57 (0.30, 1.11)
<i>S. pneumoniae</i>	354 (67.4)	148 (67.6)	633 (82.1)	0.48 (0.35, 0.66)	0.55 (0.37, 0.83)
>6.9 log ₁₀ copies/ml	68 (13.0)	32 (14.6)	82 (10.6)	1.71 (1.15, 2.56)	2.28 (1.37, 3.80)
Among those with >6.9 log ₁₀ copies/ml					
PCV13-type	29 (42.6)	13 (40.6)	43 (52.4)	1.26 (0.72, 2.21)	1.54 (0.75, 3.18)
Non PCV13-type	37 (54.4)	19 (59.4)	45 (54.9)	1.65 (0.99, 2.76)	2.18 (1.15, 4.10)
PCV10-type	26 (38.2)	11 (34.4)	37 (45.1)	1.29 (0.71, 2.35)	1.53 (0.69, 3.36)
Non PCV10-type	40 (58.8)	21 (65.6)	51 (62.2)	1.57 (0.96, 2.56)	2.08 (1.14, 3.81)
<i>H. influenzae</i>	291 (55.4)	134 (61.2)	496 (64.3)	0.77 (0.59, 1.01)	1.0 (0.69, 1.43)
<i>H. influenzae</i> not type b	287 (54.7)	132 (60.3)	483 (62.6)	0.77 (0.59, 1.01)	1.00 (0.69, 1.44)
>5.9 log ₁₀ copies/ml	127 (24.2)	58 (26.5)	210 (27.2)	1.02 (0.75, 1.38)	1.17 (0.78, 1.76)
<i>H. influenzae</i> type b	4 (0.8)	2 (0.9)	13 (1.7)	0.59 (0.18, 1.98)	0.81 (0.16, 3.97)
>5.9 log ₁₀ copies/ml	2 (0.4)	1 (0.5)	4 (0.5)	0.82 (0.14, 4.97)	0.79 (0.08, 7.80)
<i>S. aureus</i>	87 (16.6)	33 (15.1)	167 (21.7)	0.56 (0.40, 0.79)	0.47 (0.29, 0.75)
<i>B. pertussis</i>	1 (0.2)	0 (0.0)	0 (0.0)	-- ^a	-- ^a
<i>C. pneumoniae</i>	2 (0.4)	0 (0.0)	4 (0.5)	0.82 (0.10, 7.09)	--
<i>M. catarrhalis</i>	260 (49.5)	109 (49.8)	507 (65.8)	0.45 (0.34, 0.59)	0.46 (0.32, 0.66)
<i>M. pneumoniae</i>	7 (1.3)	3 (1.4)	13 (1.7)	0.79 (0.26, 2.47)	0.98 (0.25, 3.82)
Salmonella species	0 (0.0)	0 (0.0)	1 (0.1)	-- ^a	-- ^a
Legionella	0 (0.0)	0 (0.0)	0 (0.0)	-- ^a	-- ^a
Fungi					
<i>P. jirovecii</i>	28 (5.3)	11 (5.0)	43 (5.6)	0.76 (0.42, 1.40)	0.76 (0.34, 1.71)
>4 log ₁₀ copies/ml	13 (2.5)	5 (2.3)	14 (1.8)	0.74 (0.29, 1.92)	0.93 (0.28, 3.14)
Virus					

				Odds Ratio (95% CI)	
	All Cases	CXR-positive Cases	All Controls	All Cases vs. All Controls	CXR-positive Cases vs. All Controls
NP/OP PCR					
Any virus	501 (95.4)	205 (93.6)	683 (88.6)	1.01 (0.59, 1.75)	0.80 (0.40, 1.61)
Any virus, with thresholds applied for CMV	484 (92.2)	197 (90.0)	610 (79.1)	1.24 (0.75, 2.03)	1.08 (0.56, 2.07)
Adenovirus	61 (11.6)	21 (9.6)	134 (17.4)	0.69 (0.47, 1.00)	0.53 (0.31, 0.91)
CMV	336 (64.0)	147 (67.1)	480 (62.3)	1.20 (0.91, 1.60)	1.39 (0.95, 2.05)
>4.9 log ₁₀ copies/ml	160 (30.5)	65 (29.7)	224 (29.1)	0.98 (0.72, 1.34)	0.99 (0.66, 1.48)
Coronavirus 43	9 (1.7)	2 (0.9)	30 (3.9)	0.53 (0.22, 1.24)	0.25 (0.05, 1.17)
Coronavirus 63	6 (1.1)	4 (1.8)	21 (2.7)	0.35 (0.12, 0.99)	0.53 (0.16, 1.76)
Coronavirus HKU	10 (1.9)	7 (3.2)	24 (3.1)	0.87 (0.36, 2.10)	1.19 (0.43, 3.29)
Coronavirus 229	13 (2.5)	4 (1.8)	20 (2.6)	0.52 (0.22, 1.22)	0.56 (0.17, 1.83)
HBOV	93 (17.7)	41 (18.7)	117 (15.2)	1.60 (1.14, 2.26)	1.59 (1.02, 2.49)
HMPV A/B	39 (7.4)	19 (8.7)	24 (3.1)	4.54 (2.57, 8.03)	5.76 (2.89, 11.50)
Influenza A	5 (1.0)	3 (1.4)	13 (1.7)	1.07 (0.34, 3.41)	1.10 (0.26, 4.62)
Influenza B	4 (0.8)	1 (0.5)	4 (0.5)	1.63 (0.34, 7.81)	1.51 (0.16, 14.45)
Influenza C	0 (0.0)	0 (0.0)	4 (0.5)	-- ^a	-- ^a
Parainfluenza 1	20 (3.8)	10 (4.6)	7 (0.9)	10.06 (3.68, 27.48)	7.97 (2.42, 26.28)
Parainfluenza 2	7 (1.3)	2 (0.9)	16 (2.1)	0.59 (0.21, 1.66)	0.40 (0.08, 1.99)
Parainfluenza 3	21 (4.0)	10 (4.6)	40 (5.2)	1.06 (0.58, 1.94)	1.30 (0.60, 2.83)
Parainfluenza 4	17 (3.2)	7 (3.2)	21 (2.7)	2.08 (1.00, 4.33)	1.83 (0.68, 4.91)
PV/EV	66 (12.6)	24 (11.0)	92 (11.9)	2.22 (1.49, 3.29)	1.56 (0.90, 2.70)
Rhinovirus	192 (36.6)	78 (35.6)	196 (25.4)	3.01 (2.24, 4.05)	2.48 (1.68, 3.68)
RSV	146 (27.8)	55 (25.1)	25 (3.2)	17.94 (10.99, 29.27)	12.92 (7.33, 22.78)
Whole Blood PCR					
<i>S. pneumoniae</i>	5 (1.0)	1 (0.5)	6 (0.8)	1.08 (0.32, 3.57)	0.66 (0.08, 5.52)
≥2.2 log ₁₀ copies/ml	2 (0.4)	1 (0.5)	0 (0.0)	-- ^a	-- ^a

Abbreviations: HBOV, Human bocavirus; CMV, cytomegalovirus; CXR, chest x-ray; HMPV, Human metapneumovirus A/B; NP/OP, nasopharyngeal/oropharyngeal; PCV, pneumococcal conjugate vaccine; PV/EV, Parechovirus/Enterovirus; RSV, Respiratory syncytial virus A/B.

NP/OP PCR odds ratio adjusted for age in months, site, and all other pathogens detected on NP/OP PCR. Whole blood PCR odds ratios adjusted for age in months and site.

a. Odd ratios could not be calculated due to zero cells.

NP/OP PCR thresholds: *P. jirovecii*, 4.0 log₁₀ copies/mL; *H. influenzae*, 5.9 log₁₀ copies/mL; CMV, 4.9 log₁₀ copies/mL; *S. pneumoniae*, 6.9 log₁₀ copies/mL).