

**Supplementary Table 2.** Factors associated with primary listener disagreement for cases and controls, stratified by lung examination result<sup>1</sup>

Dichotomous lung examination group	Characteristic	Disagreement, n/N (%)	OR (95% CI)	p value	Adjusted <sup>2</sup> OR (95% CI)	p value
Crackle or no crackle	All cases and controls (N=987)	258 (26.1%)	--	--	--	--
	Cases only (N=709)	209 (29.5%)	1.95 (1.38, 2.77)	<0.001	1.37 (0.82, 2.30)	0.23
	Controls only (N=278)	49 (17.6%)	--	--	--	--
	Age 1-11 months (N=601)	154 (25.6%)	0.93 (0.70, 1.25)	0.65	--	--
	Age 12-59 months (N=386)	104 (26.9%)	--	--	--	--
	Tachypnea <sup>3</sup> (N=592)	186 (31.4%)	2.09 (1.52, 2.85)	<0.001	1.76 (1.15, 2.67)	<0.01
	No tachypnea (N=383)	69 (18.0%)	--	--	--	--
	≥3 uninterpretable chest positions (N=344)	91 (26.5%)	1.03 (0.76, 1.38)	0.87	--	--
	<3 uninterpretable chest positions (N=643)	167 (26.0%)	--	--	--	--
	Intermittent crying (N=514)	138 (26.9%)	1.08 (0.81, 1.44)	0.60	--	--
	No intermittent crying (473)	120 (25.4%)	--	--	--	--
	Upper airway noises (N=607)	192 (31.6%)	2.20 (1.61, 3.02)	<0.001	2.15 (1.55, 2.99)	<0.001
	No upper airway noises	66 (17.4%)	--	--	--	--

	(N=380)					
	<b>PERCH site</b>	--	--	<0.001	--	<0.001
	<b>Thailand (N=227)</b>	45 (19.8%)	1.00	--	--	--
	<b>Bangladesh (N=165)</b>	53 (32.1%)	1.91 (1.21, 3.04)	--	--	--
	<b>Kenya (N=120)</b>	38 (31.7%)	1.87 (1.13, 3.10)	--	--	--
	<b>The Gambia (N=122)</b>	49 (40.2%)	2.72 (1.67, 4.42)	--	--	--
	<b>Zambia (N=258)</b>	50 (19.4%)	0.97 (0.62, 1.52)	--	--	--
	<b>South Africa (N=95)</b>	23 (24.2%)	1.29 (0.73, 2.29)	--	--	--
<b>Dichotomous lung examination group</b>	<b>Characteristic</b>	<b>Disagreement, n/N (%)</b>	<b>OR (95% CI)</b>	<b>p value</b>	<b>Adjusted<sup>2</sup> OR (95% CI)</b>	<b>p value</b>
<b>Wheeze or no wheeze</b>	<b>All cases and controls (N=987)</b>	267 (27.1%)	--	--	--	--
	<b>Cases only (N=709)</b>	194 (27.4%)	1.06 (0.77, 1.45)	0.73	--	--
	<b>Controls only (N=278)</b>	73 (26.3%)	--	--	--	--
	<b>Age 1-11 months (N=601)</b>	169 (28.1%)	1.15 (0.86, 1.54)	0.35	--	--
	<b>Age 12-59 months (N=386)</b>	98 (25.4%)	--	--	--	--
	<b>Tachypnea<sup>3</sup> (N=592)</b>	161 (27.2%)	1.07 (0.80, 1.44)	0.64	--	--
	<b>No tachypnea (N=383)</b>	99 (25.9%)	--	--	--	--
	<b>≥3 uninterpretable chest positions (N=344)</b>	101 (29.4%)	1.19 (0.89, 1.60)	0.23	--	--

	<b>&lt;3 uninterpretable chest positions (N=643)</b>	166 (25.8%)	--	--	--	--
	<b>Intermittent crying (N=514)</b>	161 (31.3%)	1.58 (1.19, 2.10)	<0.01	1.62 (1.20, 2.18)	<0.01
	<b>No intermittent crying (473)</b>	106 (22.4%)	--	--	--	--
	<b>Upper airway noises (N=607)</b>	209 (34.4%)	2.92 (2.11, 4.04)	<0.001	2.95 (2.12, 4.11)	<0.001
	<b>No upper airway noises (N=380)</b>	58 (15.3%)	--	--	--	--
	<b>PERCH site</b>	--	--	0.10	--	0.21

OR indicates Odds Ratio; CI, confidence interval; PERCH, Pneumonia Etiology Research for Child Health.

<sup>1</sup>Excludes uninterpretable primary listener lung examination results in both cases and controls. 83/792 cases and 23/301 controls were excluded. Primary listeners were the first two listeners randomly assigned to interpret a lung sound examination.

<sup>2</sup>Adjusted for all characteristics associated with disagreement at the significance level of 0.20.

<sup>3</sup>Tachypnea defined as follows: <2 months: >60 breaths/minute; 2-11 months: >50 breaths/minute; 12-59 months: >40 breaths/minute