

**Table D1: Multivariable association of BPD, defined as oxygen supplementation for  $\geq 28$  days of life (a), and its severity defined at 36 (b-d) and 40 (e-g) weeks' PMA and results of Bayley-II test at mean (SD) corrected age 23.1 (3.6) months. Models were adjusted for variables that were significantly unequally distributed among infants with and without BPD.**

a) Multivariate association of BPD, defined as oxygen supplementation for  $\geq 28$  days of life, and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
BPD (vs no BPD)	1.5 0.8-2.5	0.136	0.180
Gestational age	1.0 0.8-1.2	0.105	0.832
Male sex	2.0 1.2-3.1	0.249	0.010
Birthweight z-score	0.8 0.6-1.1	0.150	0.192
Intraventricular haemorrhage > grade 2	2.9 1.4-6.2	0.384	0.005
Persistent ductus arteriosus	1.0 0.6-1.7	0.254	0.978
Days of mechanical ventilation	1.0 0.9-1.0	0.009	0.925
Surfactant	0.8 0.5-1.4	0.259	0.516
Sepsis	1.0 0.5-1.8	0.307	0.962

b) Multivariate association of mild BPD versus no BPD, defined at 36 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Mild BPD vs no BPD	1.1 0.6-2.1	0.330	0.722
Gestational age	1.1 0.8-1.4	0.132	0.536
Male sex	1.2 0.7-2.1	0.298	0.547
Birthweight z-score	0.994 0.7-1.4	0.189	0.976
Intraventricular haemorrhage > grade 2	2.0 0.7-5.5	0.518	0.180
Persistent ductus arteriosus	1.0 0.5-1.8	0.318	0.912
Days of mechanical ventilation	1.0 0.9-1.1	0.022	0.070
Surfactant	1.0 0.5-1.9	0.333	0.977
Sepsis	0.9 0.4-2.1	0.452	0.760

c) Multivariate association of moderate BPD versus no BPD, defined at 36 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Moderate BPD vs no BPD	1.5 0.7-3.4	0.425	0.324
Gestational age	1.1 0.8-1.5	0.163	0.663
Male sex	2.7 1.3-5.6	0.367	0.007
Birthweight z-score	1.0 0.7-1.6	0.209	0.833
Intraventricular haemorrhage > grade 2	5.4 1.8-15.6	0.543	0.002
Persistent ductus arteriosus	1.3 0.7-2.7	0.361	0.409
Days of mechanical ventilation	1.0 0.9-1.1	0.031	0.445
Surfactant	0.7 0.3-1.5	0.390	0.331
Sepsis	0.7 0.3-2.0	0.516	0.564

d) Multivariate association of severe BPD versus no BPD, defined at 36 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Severe BPD vs no BPD	5.6 2.0-15.9	0.538	0.001
Gestational age	1.2 0.9-1.7	0.175	0.223
Male sex	3.6 1.7-7.7	0.385	0.001
Birthweight z-score	1.0 0.6-1.5	0.219	0.979
Intraventricular haemorrhage > grade 2	4.3 1.0-17.6	0.721	0.043
Persistent ductus arteriosus	0.7 0.3-1.6	0.390	0.464
Days of mechanical ventilation	1.0 0.9-1.0	0.011	0.731
Surfactant	0.8 0.4-1.8	0.410	0.632
Sepsis	0.9 0.3-2.4	0.494	0.838

e) Multivariate association of mild BPD versus no BPD, defined at 40 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Mild BPD vs no BPD	1.2 0.6-2.1	0.303	0.599
Gestational age	1.1 0.9-1.4	0.119	0.497
Male sex	1.6 0.9-2.8	0.272	0.065
Birthweight z-score	0.9 0.7-1.3	0.166	0.574
Intraventricular haemorrhage > grade 2	2.8 1.2-6.4	0.422	0.015
Persistent ductus arteriosus	1.2 0.7-2.0	0.288	0.609
Days of mechanical ventilation	1.0 0.9-1.1	0.019	0.157
Surfactant	0.9 0.5-1.7	0.293	0.868
Sepsis	0.8 0.4-1.7	0.390	0.532

f) Multivariate association of moderate BPD versus no BPD, defined at 40 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Moderate BPD vs no BPD	2.2 0.6-8.1	0.657	0.213
Gestational age	1.2 0.8-1.8	0.407	0.032
Male sex	2.4 1.1-5.3	0.407	0.032
Birthweight z-score	1.0 0.6-1.7	0.248	0.895
Intraventricular haemorrhage > grade 2	6.6 1.7-25.9	0.696	0.007
Persistent ductus arteriosus	0.9 0.4-2.2	0.422	0.890
Days of mechanical ventilation	1.0 0.9-1.1	0.028	0.263
Surfactant	0.7 0.3-1.8	0.469	0.474
Sepsis	0.8 0.2-3.0	0.652	0.747

g) Multivariate association of severe BPD versus no BPD, defined at 40 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Severe BPD vs no BPD	16.6 4.6-59.9	0.655	< 0.001
Gestational age	1.2 0.8-1.7	0.193	0.381
Male sex	2.5 1.1-5.5	0.404	0.024
Birthweight z-score	1.1 0.7-1.8	0.237	0.622
Intraventricular haemorrhage > grade 2	3.6 0.8-16.3	0.772	0.097
Persistent ductus arteriosus	0.7 0.3-1.7	0.420	0.471
Days of mechanical ventilation	0.9 0.9-1.0	0.012	0.464
Surfactant	0.9 0.4-2.2	0.449	0.824
Sepsis	1.1 0.4-3.5	0.574	0.805

**Table D2: Multivariable association of BPD, defined as oxygen supplementation for  $\geq 28$  days of life (h), and its severity defined at 36 (i-k) and 40 (l-n) weeks' PMA and results of Bayley-II test at mean (SD) corrected age 23.1 (3.6) months. Models were adjusted for known neonatal predictors of poor neurodevelopment.**

h) Multivariate association of BPD, defined as oxygen supplementation for  $\geq 28$  days of life, and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
BPD (vs no BPD)	1.5 0.8-3.1	0.156	0.172
Gestational age	1.1 0.8-1.4	0.118	0.540
Male sex	2.7 1.5-4.8	0.299	0.001
Necrotizing enterocolitis	2.9 0.8-10.3	0.641	0.092
Retinopathy of Prematurity	5.3 1.5-19.1	0.656	0.011
Major brain lesion	3.8 1.6-8.2	0.424	0.003
Sepsis	0.9 0.4-13.9	0.369	0.809
Socioeconomic score	1.12 1.1-1.3	0.058	0.003

i) Multivariate association of mild BPD versus no BPD, defined at 36 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Mild BPD vs no BPD	1.4 0.6-3.2	0.407	0.417
Gestational age	1.1 0.8-1.6	0.156	0.365
Male sex	1.5 0.7-2.9	0.354	0.278
Necrotizing enterocolitis	4.6 1.1-18.6	0.712	0.032
Retinopathy of Prematurity	8.8 1.6-47.7	0.861	0.012
Major brain lesion	3.9 1.3-11.4	0.551	0.014
Sepsis	0.9 0.3-2.6	0.515	0.915
Socioeconomic score	1.2 1.0-1.4	0.073	0.013

j) Multivariate association of moderate BPD versus no BPD, defined at 36 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Moderate BPD vs no BPD	1.8 0.7-4.4	0.459	0.201
Gestational age	0.9 0.7-1.3	0.175	0.713
Male sex	5.8 2.2-15.7	0.503	0.001
Necrotizing enterocolitis	6.9 1.5-31.6	0.779	0.013
Retinopathy of Prematurity	4.9 0.9-26.1	0.850	0.060
Major brain lesion	9.2 2.8-30.5	0.611	< 0.001
Sepsis	0.7 0.2-2.2	0.570	0.566
Socioeconomic score	1.3 1.1-1.5	0.083	0.004

k) Multivariate association of severe BPD versus no BPD, defined at 36 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Severe BPD vs no BPD	5.1 1.5-17.4	0.621	0.008
Gestational age	1.2 0.8-1.7	0.205	0.479
Male sex	5.2 2.0-13.7	0.493	0.001
Necrotizing enterocolitis	6.9 1.42-33.9	0.808	0.017
Retinopathy of Prematurity	34.7 4.8-250.8	1.009	< 0.001
Major brain lesion	5.7 1.3-25.0	0.749	0.020
Sepsis	0.745 0.218-2.542	0.627	0.638
Socioeconomic score	1.3 1.0-1.5	0.091	0.012

I) Multivariate association of mild BPD versus no BPD, defined at 40 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Mild BPD vs no BPD	1.4 0.7-2.8	0.350	0.379
Gestational age	1.1 0.8-1.4	0.133	0.494
Male sex	2.2 1.2-4.1	0.325	0.015
Necrotizing enterocolitis	3.2 0.9-11.5	0.649	0.071
Retinopathy of Prematurity	4.4 0.9-19.9	0.765	0.051
Major brain lesion	4.1 1.7-10.2	0.459	0.002
Sepsis	0.9 0.4-2.1	0.421	0.834
Socioeconomic score	1.2 1.0-1.3	0.063	0.005

m) Multivariate association of moderate BPD versus no BPD, defined at 40 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Moderate BPD vs no BPD	3.8 0.8-18.3	0.763	0.096
Gestational age	1.1 0.7-1.7	0.225	0.723
Male sex	3.5 1.3-9.5	0.511	0.014
Necrotizing enterocolitis	14.1 2.2-90.9	0.949	0.005
Retinopathy of Prematurity	18.4 2.5-138.4	1.028	0.005
Major brain lesion	11.5 2.5-53.2	0.782	0.002
Sepsis	0.3 0.053-2.0	0.920	0.220
Socioeconomic score	1.3 1.1-1.6	0.101	0.005

n) Multivariate association of severe BPD versus no BPD, defined at 40 weeks' PMA and neurodevelopmental impairment (NDI) at mean (SD) corrected age 23.1 (3.6) months.

	<b>OR (95% CI)</b>	<b>SE</b>	<b>p-value</b>
Severe BPD vs no BPD	17.5 3.3-91.7	0.830	0.001
Gestational age	1.1 0.7-1.7	0.232	0.639
Male sex	3.7 1.3-10.6	0.536	0.013
Necrotizing enterocolitis	10.6 1.8-61.3	1.075	0.002
Retinopathy of Prematurity	28.3 3.4-232.7	1.075	0.002
Major brain lesion	7.5 1.4-38.9	0.843	0.017
Sepsis	0.8 0.2-3.4	0.734	0.777
Socioeconomic score	1.3 1.0-1.6	0.103	0.016

NDI, neurodevelopmental impairment; BPD, bronchopulmonary dysplasia; PMA, postmenstrual age; OR, odds ratio; 95% CI, 95% confidence interval; SE, standard error.