

Appendix 1b. Effect of factors on being of very low weight and and very small head circumference (SD score <-3) at 30 months postnatal corrected age. Odds ratios calculated from univariate logistic regression.

Variable (yes vs no unless otherwise stated)	Standard deviation score below -3SDs	
	Head circumference (43/277) Odds ratio (95% CI)	Weight (22/270) Odds ratio (95% CI)
Pre-pregnancy		
Ethnicity of mother		
Indian sub cont	6.46 (2.28, 18.32)***	(0/16) p=0.38 ^b
White	0.67 (0.32, 1.39)	2.98 (0.68, 13.15)
Black	0.43 (0.13, 1.45)	0.59 (0.13, 2.63)
Primip	0.71 (0.34, 1.49)	1.89 (0.78, 4.55)
Two or more previous deaths	0.80 (0.36, 1.77)	0.46 (0.13, 1.62)
In pregnancy		
Male		
Singleton	0.59 (0.30, 1.16)	0.92 (0.38, 2.20)
Maternal smoking in pregnancy	0.81 (0.40, 1.66)	0.65 (0.26, 1.61)
Pre- eclampsia	0.85 (0.41, 1.76)	1.73 (0.70, 4.29)
Antepartum haemorrhage	0.77 (0.09, 6.38)	(0/8) p=1.0 ^b
Chorioamnionitis	1.54 (0.75, 3.16)	2.58 (1.05, 6.37)*
Premature rupture of membranes	0.72 (0.31, 1.64)	1.62 (0.63, 4.17)
Cervical suture	0.99 (0.47, 2.08)	0.79 (0.28, 2.21)
Any antenatal steroids given	1.15 (0.37, 3.56)	(0/24) p=0.24 ^b
Any tocolytics given	0.68 (0.32, 1.45)	0.78 (0.27, 2.22)
Any tocolytics given	1.54 (0.78, 3.02)	0.60 (0.21, 1.67)
At birth		
Caesarean section	0.38 (0.11, 1.27)	0.50 (0.11, 2.24)
Vaginal breech delivery	1.31 (0.64, 2.69)	1.13 (0.42, 3.00)
OFC SD score (national standards) (per SD)	0.93 (0.64, 1.37)	0.61 (0.34, 1.08)
OFC for birthweight (from admitted infants) (per cm)	1.02 (0.71, 1.48)	0.76 (0.43, 1.36)
OFC for gest age (from admitted infants) (per cm)	0.86 (0.62, 1.18)	0.67 (0.42, 1.09)
Birthweight SD score (from admitted babies) (per SD)	0.62 (0.44, 0.88)**	0.52 (0.32, 0.84)**
Birthweight SD score (National standards) (per SD)	0.70 (0.47, 1.04)	0.50 (0.29, 0.87)*
Birthweight (per 100g)	0.59 (0.43, 0.80)***	0.54 (0.35, 0.82)**
Gestational age (per week)	0.68 (0.44, 1.05)	0.69 (0.39, 1.22)
During 1st day of life		
Crib score (some estimated) (per unit)	1.14 (1.03, 1.26)**	1.22 (1.07, 1.39)**
Fetal heart rate > 100bpm	1.53 (0.34, 6.92)	(0/16), p=0.38 ^b
Temperature ³ 35°C	0.53 (0.26, 1.09)	0.41 (0.16, 1.06)
First chest radiograph 3 or 4 vs 1, 2 or missing result ^a	0.92 (0.45, 1.86)	2.04 (0.84, 4.93)
Any surfactant given	1.77 (0.60, 5.27)	1.75 (0.39, 7.82)
Moved hospital in first 24hrs	1.24 (0.48, 3.22)	2.41 (0.82, 7.05)
In hospital		
Treatment for PDA	0.83 (0.43, 1.60)	1.50 (0.62, 3.65)
Pulmonary haemorrhage	1.28 (0.41, 3.99)	1.86 (0.50, 6.86)
Any systemic steroids for chronic lung disease	1.70 (0.75, 3.87)	0.98 (0.37, 2.60)
Enteral feeding begun by day 7	0.65 (0.33, 1.27)	0.63 (0.26, 1.55)
Total parenteral nutrition given	0.35 (0.08, 1.46)	(0/9) p=1.0 ^b
Any breast milk given	0.36 (0.16, 0.77)**	0.31 (0.12, 0.82)*
Definite or probable diagnosis of necrotising enterocolitis	7.47 (2.17, 25.75)***	5.30 (1.27, 22.17)*
Treatment for retinopathy of prematurity	2.48 (1.15, 5.35)*	0.88 (0.25, 3.12)
Ventriculomegaly or parenchymal cysts on last USS	2.02 (0.93, 4.39)	2.01 (0.74, 5.46)
Systemic steroids for chronic lung disease (per week)	1.09 (0.98, 1.20)	1.07 (0.94, 1.21)
>8 weeks of systemic steroids for chronic lung disease	1.38 (0.37, 5.09)	3.08 (0.80, 11.86)
In oxygen at 36wks PMA	1.98 (0.84, 4.67)	0.97 (0.36, 2.58)
In oxygen at 40wks PMA	1.78 (0.91, 3.47)	1.14 (0.48, 2.74)
Discharged in oxygen	2.21 (1.14, 4.26)*	1.41 (0.57, 3.49)
Post menstrual age at discharge (per week)	1.12 (1.05, 1.20)***	1.13 (1.04, 1.23)**
Post discharge		
Admissions to hospital (per cat 0,1,2,3,4+)	1.04 (0.82, 1.32)	1.04 (0.76, 1.44)
Child's state at 30 months		
Feeding problems	4.30 (2.17, 8.49)***	2.72 (1.12, 6.56)*
Severe neuromotor delay	6.33 (2.75, 14.58)***	4.05 (1.43, 11.46)**
Neuromotor delay (per cat none, any, severe)	2.55 (1.68, 3.89)***	2.46 (1.46, 4.17)***
MDI score (per 10 points) if MDI>49	0.88 (0.61, 1.27)	0.75 (0.48, 1.16)
PDI score (per 10 points) if PDI>49	0.92 (0.66, 1.29)	0.91 (0.60, 1.38)
Social conditions at 30 months		
Manual vs non-manual (adjusted for other)	1.35 (0.54, 3.35)	0.65 (0.20, 2.12)
Other vs non-manual (adjusted for manual)	1.89 (0.80, 4.49)	1.19 (0.42, 3.36)
Other vs manual or non-manual	1.60 (0.81, 3.17)	1.46 (0.59, 3.62)
Maternal smoking at home	1.08 (0.55, 2.10)	2.47 (1.00, 6.09)*
Mother's age at birth (per 10y)	0.84 (0.48, 1.47)	0.57 (0.27, 1.22)
Mother has GCSE or equivalent.	0.50 (0.26, 0.96)*	0.43 (0.17, 1.05)
Two or more older children in the household.	1.57 (0.75, 3.31)	1.12 (0.40, 3.19)
Has car	1.38 (0.51, 3.75)	1.06 (0.30, 3.80)
Lives with biological father	0.75 (0.20, 2.77)	0.63 (0.13, 2.99)

legend

- * $p \leq 0.05$
- ** $p \leq 0.01$
- *** $P \leq 0.001$

- a chest radiograph scored in four categories, 1-clear, 2-respiratory distress syndrome (RDS) pattern with heart border seen, 3-RDS pattern with most of heart border obscured, 4- white out. (22 cases with no result of CXR)
- b no yeses to factor in those with SD score < -3 . figures are number of yeses with SD score < -3 out of number of yeses. P-values are calculated using Fisher's exact test.