

**Supplementary Table 1:** missing values for baseline characteristic data and outcome data

	Study cohort (n=1762) n(%)*	ABT group			
		No ABT (n=548) n(%)*	ABT start day 1 or 2 (n=973) n(%)*	ABT start day 3-6 (n=147) n(%)*	ABT start day ≥ 7 (n=94) n(%)
Gestational age	0	0	0	0	0
Birth weight	0	0	0	0	0
Sex	0	0	0	0	0
Multiples	0	0	0	0	0
SGA	0	0	0	0	0
Antenatal steroids	17 (0.9)	7 (1.2)	8 (0.8)	0	2 (2.1)
Mode of delivery	0	0	0	0	0
Apgar Score					
5min	1 (<0.1)	0	1 (0.1)	0	0
10min	1 (<0.1)	0	1 (0.1)	0	0
Arterial cord blood pH	105 (5.6)	15 (2.7)	74 (7.6)	10 (6.8)	6 (6.4)
Base excess	<b>274 (15.6)</b>	<b>53 (9.6)</b>	<b>193 (19.8)</b>	<b>18 (12.2)</b>	<b>10 (10.6)</b>
IAI	0	0	0	0	0
pPROM	121 (6.9)	31 (5.7)	78 (8.0)	9 (6.1)	3 (3.2)
Central line	0	0	0	0	0
Arterial line	0	0	0	0	0
Intratracheal ventilation	0	0	0	0	0
BPD	0	0	0	0	0
FIP surgery (n=1760)	2	0	2	0	0
IVH (n=1758)	4 (0.2)	1 (0.2)	3 (0.3)	0	0
NEC surgery (n=1760)	2	0	2	0	0
PDA surgery	0	0	0	0	0
PVL	0	0	0	0	0
ROP ≥ 3 (n=1411)	<b>351 (19.9)</b>	<b>172 (31.4)</b>	<b>141 (14.5)</b>	<b>26 (17.7)</b>	<b>12 (12.8)</b>
Sepsis	1 (<0.1)	0	1 (0.1)	0	0
Death	0	0	0	0	0

\*unless otherwise stated; ABT antibiotic therapy; SGA small for gestational age; C/S caesarean section; ABT antibiotic therapy; IAI intraamniotic infection; pPROM premature preterm rupture of membranes

**Supplementary Table 2:** baseline characteristics for complete datasets without cases including at least one missing value

Variables	Study cohort (n=1373) n(%)*	ABT group			
		No ABT (n=465) n(%)*	ABT start day 1 or 2 (n=710) n(%)*	ABT start day 3-6 (n=120) n(%)*	ABT start day ≥ 7 (n=79) n(%)*
Gestational age [weeks]: median(IQR)	29.6 (27.0 to 31.3)	31.1 (29.9 to 32.3)	27.7 (25.7 to 29.9)	29.0 (27.3 to 31.1)	30.0 (28.0 to 31.6)
Birth weight [grams]: median(IQR)	1100.0 (800.0 to 1330.0)	1280.0 (1100.0 to 1410.0)	950.0 (710.0 to 1220.0)	970.0 (732.5 to 1238.8)	1090.0 (820.0 to 1320.0)
Sex [male]	666 (48.5)	210 (45.2)	357 (50.3)	67 (55.8)	32 (40.0)
Multiples	578 (42.1)	218 (46.9)	288 (40.6)	37 (30.8)	35 (44.3)
SGA	440 (32.0)	194 (41.7)	161 (22.7)	48 (40.0)	37 (46.8)
Antenatal steroids	1261 (91.8)	416 (89.5)	665 (93.7)	112 (93.3)	68 (86.1)
Mode of delivery					
Spontaneous	83 (6.0)	17 (3.7)	61 (8.6)	3 (2.5)	2 (2.5)
Elective C/S	877 (63.8)	324 (69.7)	389 (54.8)	97 (80.8)	67 (84.8)
Emergency C/S	414 (30.1)	124 (26.7)	260 (36.6)	20 (16.7)	10 (12.7)
Apgar Score					
5min	8.0 (7.0 to 9.0)	9.0 (8.0 to 9.0)	8.0 (7.0 to 9.0)	8.0 (8.0 to 9.0)	8.0 (7.0 to 9.0)
10min	9.0 (8.0 to 9.0)	9.0 (9.0 to 10.0)	9.0 (8.0 to 9.0)	9.0 (8.0 to 10.0)	9.0 (8.0 to 9.0)
Arterial cord blood: median(IQR)	7.3 (7.3 to 7.4)	7.3 (7.3 to 7.3)	7.3 (7.3 to 7.4)	7.3 (7.3 to 7.3)	7.3 (7.3 to 7.3)
Base excess [mmol/l]: median(IQR)	-1.9 (-3.8 to -0.5)	-2.0 (-3.7 to -0.6)	-1.9 (-4.0 to -0.5)	-1.8 (-3.8 to 0.2)	-1.5 (-4.0 to -0.3)
IAI	283 (20.6)	49 (10.5)	216 (30.4)	9 (7.5)	9 (11.4)
pPROM	357 (26.0)	71 (15.3)	263 (37.0)	10 (8.3)	13 (16.5)
Central line	369 (26.9)	16 (3.4)	285 (40.1)	44 (36.7)	24 (30.4)
Arterial line	52 (3.8)	4 (0.9)	41 (5.8)	7 (5.8)	0 (0.0)
Intratracheal ventilation	589 (42.9)	44 (9.5)	453 (63.8)	68 (56.7)	24 (30.4)

\*unless otherwise stated; ABT antibiotic therapy; SGA small for gestational age; C/S caesarean section; ABT antibiotic therapy; IAI intraamniotic infection; pPROM premature preterm rupture of membranes

**Supplementary Table 3:** Factors associated with very early initiation of antibiotic therapy

Variables	ABT start day 1 or 2 (n=973) n(%)*	ABT start day ≥ 3 (n=241) n(%)*	p-value <sup>#</sup>
Gestational age [weeks]: median(IQR)	27.4 (25.6 to 29.6)	29.4 (27.5 to 31.1)	<.01
Birth weight [grams]: median(IQR)	920.0 (682.5 to 120.0)	980.0 (747.5 to 1240.0)	<.01
Sex [male]	495 (50.9)	119 (49.4)	.68
Multiples	389 (40.0)	92 (38.2)	.61
SGA	217 (22.3)	105 (43.6)	<.01
Antenatal steroids (n=1745)	905 (93.0)	218 (90.5)	.16
Mode of delivery	§	§	<.01
Spontaneous	88 (9.0)	5 (2.1)	
Elective C/S	524 (53.9)	196 (81.3)	
Emergency C/S	361 (37.1)	40 (16.6)	
Apgar Score (n=1761)			
5min	8.0 (7.0 to 9.0)	8.0 (7.5 to 9.0)	<.01
10min	9.0 (8.0 to 9.0)	9.0 (8.0 to 9.0)	<.01
Arterial cord blood pH (n=1657): median(IQR)	7.3 (7.3 to 7.4)	7.3 (7.3 to 7.3)	<.01
Base excess [mmol/l] (n=1488): median(IQR)	-2.6 (-4.0 to -0.5)	-1.8 (-4.0 to 0.1)	.22
IAI	285 (29.3)	18 (7.5)	<.01
pPROM (n=1124)	331 (34.0)	26 (10.8)	<.01
Central line	409 (42.0)	83 (34.4)	.02
Arterial line	65 (6.7)	8 (3.3)	.05
Intratracheal ventilation	650 (66.8)	115 (47.7)	<.01

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<sup>#</sup>Kruskal-Wallis test for numerical variables, chi squared test for categorical variables