

## Supplementary Table 1

### Baseline characteristics and delivery variables based on *per protocol* analyses

	Oxytocin IV N= 493	Oxytocin IM N= 507
Maternal age $\geq$ 35 years (%)	145 (29.4)	143 (28.2)
Obese (BMI $\geq$ 30.0) (%) *	59 (12.0)	69 (13.6)
Nulliparous (%)	241 (48.9)	243 (47.9)
Parity 1-3 (%)	252 (51.1)	264 (52.1)
Parity $\geq$ 4 (%)	0 (0.0)	0 (0.0)
Previous caesarean section (%)	22 (4.5)	23 (4.5)
Hb < 10.5g/dL pre-delivery (%) <sup>†</sup>	31 (6.9)	32 (7.0)
Iron supplements taken (%)	320 (64.9)	336 (66.3)
Induction of labour (%)	263 (53.3)	271 (53.5)
Augmentation with oxytocin (%)	177 (35.9)	168 (33.1)
Epidural analgesia (%)	348 (70.6)	349 (68.8)
Prolonged labour > 12 hours (%)	31 (6.3)	29 (5.7)
Pyrexia in labour (%) <sup>‡</sup>	18 (3.7)	12 (2.4)
Spontaneous vaginal delivery	332 (67.3)	356 (70.2)
Operative vaginal delivery	161 (32.6)	141 (29.8)
Episiotomy	166 (33.7)	157 (31.0)
Second degree perineal tear	183 (37.1)	175 (34.5)
Third/Fourth degree perineal tear	20 (4.1)	23 (4.5)
Male Infant (%)	259 (52.5)	259 (51.1)
Birth weight $\geq$ 4.0 kg (%)	75 (15.2)	72 (14.2)

\* BMI, body mass index is the weight in kilograms divided by the square of the height in metres

<sup>†</sup> Hb, haemoglobin; blood tests performed N=405 IV and N=410 IM

<sup>‡</sup> Temperature  $\geq$  38.0°C or  $\geq$  37.5°C x2

**Supplementary Table 2 Postpartum Haemorrhage – primary and secondary outcomes based on *per protocol* analyses**

	Oxytocin IV N=493	Oxytocin IM N=507	Adjusted OR (95% CI) or Mean difference (95% CI)	p value	NNT ‡ (95% CI)
Postpartum Haemorrhage (%) (PPH, blood loss $\geq$ 500mL)	97 (19.7)	120 (23.7)	0.68 (0.46 to 1.00)	0.05	—
Severe postpartum haemorrhage (%) (PPH, blood loss $\geq$ 1000mL)	19 (3.9)	37 (7.3)	0.53 (0.31 to 0.91)	0.019	30 (16 to 163)
Mean blood loss in mL (SD)	385 (327)	445 (411)	60 (13 to 106)	0.005	—
Need for blood transfusion (%)	8 (1.6)	22 (4.3)	0.37 (0.17 to 0.83)	0.012	37 (21 to 161)

‡ NNT, number needed to treat

Adjusted Odds Ratio (95% Confidence Interval) for parity and OVD

**Supplementary Table 3      Secondary outcomes - third stage complications based on *per protocol* analyses**

	Oxytocin IV N=493	Oxytocin IM N=507	Adjusted OR (95% CI) or Mean difference (95% CI)	p value
Side effects to oxytocin (%) †	19 (3.9)	27 (5.3)	0.72 (0.41 to 1.28)	0.27
Additional uterotonic agent (%) <sup>II</sup>	123 (24.9)	139 (27.4)	0.91 (0.74 to 1.12)	0.38
Additional surgical procedure (%) ‡	20 (4.1)	28 (5.5)	0.73 (0.42 to 1.29)	0.28
Transfer to High Dependency unit (%)	9 (1.8)	19 (3.7)	0.49 (0.22 to 1.07)	0.07
Prolonged hospitalisation (> 3 days) (%)	46 (9.3)	40 (7.9)	1.18 (0.79 to 1.77)	0.42
Breast feeding initiation	299 (60.6)	301 (59.4)	1.02 (0.92 to 1.13)	0.68
Breast feeding at discharge	275 (55.8)	275 (54.2)	1.03 (0.92 to 1.15)	0.62
Hospital readmission	4 (0.8)	5 (1.0)	0.82 (0.22 to 3.05)	0.77
Hb fall ≥20% pre / post-delivery (%) *	95 (23.5)	101 (24.6)	0.95 (0.75 to 1.22)	0.69
Mean Hb g/dL fall post-delivery (SD)	1.68 (1.42)	1.80 (1.48)	0.11 (-0.09 to 0.32)	0.29
Mean Hct fall post-delivery (SD)	0.047 (0.042)	0.050 (0.045)	0.003 (-0.003 to 0.009)	0.32

† Nausea, vomiting, hypotension, tachycardia      <sup>II</sup> Oxytocin infusion, ergometrine, misoprostol, carboprost

‡ Manual removal of placenta, examination under anaesthesia, Rusch balloon tamponade

\* A total of 405 in the IV group and 410 in the IM group had paired blood tests reflecting early discharges in advance of testing

**Supplementary Table 4 Subgroup analysis *per protocol* of PPH and severe PPH by parity and onset of labour**

	Oxytocin IV	Oxytocin IM	Adjusted OR (95% CI)	p value
<b>Nulliparous</b>	N=241	N=243		
PPH $\geq$ 500mL (%)	60 (24.9)	80 (32.9)	0.68 (0.46 to 1.00)	0.05
Severe PPH $\geq$ 1000mL (%)	11 (4.6)	29 (11.9)	0.35 (0.17 to 0.72)	0.005
<b>Multiparous</b>	N=252	N=264		
PPH $\geq$ 500mL (%)	37 (14.7)	40 (15.2)	0.96 (0.59 to 1.57)	0.88
Severe PPH $\geq$ 1000mL (%)	8 (3.2)	8 (3.0)	1.05 (0.39 to 2.84)	0.93
<b>Induction of labour</b>	N=263	N=271		
PPH $\geq$ 500mL (%)	51 (19.4)	64 (23.6)	0.78 (0.51 to 1.18)	0.24
Severe PPH $\geq$ 1000mL (%)	9 (3.4)	25 (9.2)	0.35 (0.16 to 0.76)	0.008
<b>Spontaneous labour</b>	N=230	N=243		
PPH $\geq$ 500mL (%)	46 (20.0)	56 (23.7)	0.80 (0.52 to 1.25)	0.33
Severe PPH $\geq$ 1000mL (%)	10 (4.3)	12 (5.1)	0.85 (0.36 to 2.00)	0.71