

Supplementary Table 3: Estimated components of variance for each outcome

Outcome	Log (alpha)*	Variances	
		District (95% CI)	Facility (95% CI)
Primary outcomes			
Stillbirths Stillbirth rate (per 1,000 births)	-3.89 (-4.26,-3.51)	0.01 (0.00,0.18)	0.20 (0.12,0.32)
Newborns: Early Neonatal Death Rate (per 1,000 live births)	-1.57 (-2.20,-0.94)	0.00 (0.00,0.00)	0.29 (0.17,0.49)
Maternal: Institutional maternal mortality ratio (iMMR) (per 100,000 live births)	-0.81 (-1.68,0.06)	0.06 (0.01,0.75)	0.58 (0.22,1.49)
Direct obstetric CFR	-0.21 (-0.58,0.17)	0.14 (0.04,0.49)	0.76 (0.32,1.82)
Secondary outcomes			
iMMR for <u>direct</u> maternal deaths only	-0.64 (-1.23,-0.05)	0.02 (0.00,137)	0.74 (0.31,1.78)
iMMR for <u>indirect</u> maternal deaths only	-11.2 (-41.5,19.0)	1.64 (0.47,5.69)	0.00 (0.00,0.00)
Obstetric Case Fatality Rates (CFR)			
CFR – all complications (direct & indirect)	-0.34 (-0.81,0.13)	0.17 (0.06,0.53)	0.85 (0.30,2.25)
Indirect obstetric CFR	-15.6 (-16.6,-14.7)	0.00 (0.00,0.00)	1.15 (0.15,8.62)
CFR by type of complication			
Haemorrhage ^d	-0.26 (-1.93,1.40)	0.00 (0.00,0.00)	0.86 (0.32,2.31)
PPH ^d	-0.34 (-1.88,1.20)	0.00 (0.00,0.00)	1.44 (0.59,3.50)
Eclampsia	-0.19 (-1.82,1.44)	0.00 (0.00,0.00)	1.07 (0.40,2.91)
Postpartum sepsis ^{d,e}	0.25 (-0.78,1.29)	0.52 (0.18,1.52)	n/a
Obstructed labour		n/a	n/a
Ruptured uterus ^{d,e}	0.24 (-1.16,1.63)	0.00 (0.00,0.00)	n/a
Complication rates			
Any complication	-1.26 (-1.61,-0.90)	0.10 (0.05,0.19)	0.45 (0.27,0.75)
Haemorrhage	-1.62 (-1.90,-1.34)	0.08 (0.03,0.23)	0.26 (0.16,0.42)
PPH	-0.88 (-1.06,-0.70)	0.05 (0.01,0.24)	0.50 (0.35,0.71)
Eclampsia	-0.65 (-0.93,-0.38)	0.10 (0.03,0.36)	0.85 (0.61,1.19)

Outcome	Log (alpha)*	Variances	
		District (95% CI)	Facility (95% CI)
Postpartum sepsis	0.15 (-0.46,0.75)	0.20 (0.03,1.14)	1.93 (1.09,3.42)
Obstructed labour	-0.27 (-0.58,0.04)	0.08 (0.02,0.32)	1.06 (0.67,1.68)
Ruptured uterus	0.67 (0.02,1.33)	0.27 (0.06,1.23)	0.78 (0.54,1.13)

* alpha measures the magnitude of conditional over-dispersion and is a positive quantity; log(alpha) is a rescaling used in model fitting and estimation