

Table S1 | Yearly distribution of maternal deaths reported in MDSR Sierra Leone^s

Districts	Year				Total
	2016	2017	2018	2019	
	N=706	N=551	N=590	N=581	N=2,428
Western Area	183 (33.3%)	109 (19.8%)	133 (24.2%)	125 (22.7%)	550
Bo	76 (31.4%)	51 (21.1%)	55 (22.7%)	60 (24.8%)	242
Bombali	57 (33.5%)	42 (24.7%)	24 (14.1%)	47 (27.6%)	170
Bonthe	28 (37.8%)	14 (18.9%)	15 (20.3%)	17 (23.0%)	74
Kailahun	31 (38.8%)	18 (22.5%)	13 (16.3%)	18 (22.5%)	80
Kambia	Western Area, 40.0 37 (23.9%)	33 (21.3%)	49 (31.6%)	36 (23.2%)	155
Kenema	60 (26.7%)	60 (26.7%)	53 (23.6%)	52 (23.1%)	225
Koinadugu	33 (23.9%)	28 (20.3%)	41 (29.7%)	36 (26.1%)	138
Kono	53 (30.5%)	47 (27.0%)	39 (22.4%)	35 (20.1%)	174
Moyamba	29 (22.8%)	31 (24.4%)	35 (27.6%)	32 (25.2%)	127
Port loko	44 (23.5%)	52 (27.8%)	50 (26.7%)	41 (21.9%)	187
Pujehun	31 (26.7%)	23 (19.8%)	31 (26.7%)	31 (26.7%)	116
Tonkolili	44 (23.2%)	43 (22.6%)	52 (27.4%)	51 (26.8%)	190

Table S2 | Subgroup analysis of other obstetric complications

	Causes									
	Obstructed labour		Ruptured uterus		Pulmonary embolism		Intoxication		Other obstetric complications	
Districts	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Western Area	8	1.5 (0.6,2.8)	17	3.1 (1.8,4.9)	9	1.6 (0.7,3.0)	0	-	34	6.2 (4.3,8.5)
Bo	10	4.1 (1.9,7.4)	6	2.5 (0.9,5.3)	3	1.2 (0.2,3.5)	0	-	19	7.9 (4.8,12.9)
Bombali	8	4.7 (2.0,9.0)	7	4.1 (1.6,8.2)	0	-	0	-	15	8.8 (5.0,14.1)
Bonthe	2	2.7 (0.3,9.4)	4	5.4 (1.4,13.2)	0	-	0	-	6	8.1 (3.0,16.8)
Kailahun	0	-	5	6.3 (2.0,13.9)	0	-	0	-	5	6.3 (2.0,13.9)
Kambia	6	3.9 (1.4,8.2)	10	6.5 (3.1,11.5)	1	0.6 (0.01,3.5)	2	1.3 (0.1,4.5)	19	12.3 (7.5,18.4)
Kenema	15	6.7 (3.7,10.7)	7	3.1 (1.2,6.3)	0	-	0	-	22	9.8 (6.2,14.4)
Koinadugu	5	3.6 (0.1,5.1)	7	5.1 (2.0,10.1)	0	-	0	-	12	8.7 (4.5,14.6)
Kono	10	5.7 (2.7,10.3)	8	4.6 (2.0,8.8)	2	1.1 (0.1,4.0)	0	-	20	11.5 (7.1,17.1)
Moyamba	9	7.1 (3.2,13.0)	1	0.8 (0.1,4.3)	0	-	0	-	10	7.9 (3.8,14.0)
Port loko	7	3.7 (1.5,7.5)	3	1.6 (0.3,4.6)	1	0.5 (0.1,2.9)	0	-	11	5.9 (2.9,10.2)
Pujehun	4	3.4 (0.9,8.5)	4	3.4 (0.9,8.5)	4	3.4 (0.9,8.5)	0	-	12	10.3 (5.4,17.3)
Tonkolili	3	1.6 (0.3,4.5)	10	5.3 (2.5,9.4)	2	1.1 (0.1,3.7)	0	-	15	7.9 (4.4,12.6)
Country-wide	87	3.6 (2.8,4.4)	89	3.7 (2.9,4.4)	22	0.9 (0.5,1.3)	2	0.1 (0.01,0.5)	200	8.2 (7.1,9.4)

Data shown are the estimated proportion of cause of death (%) with 95% confidence interval (95% CI) for each district

Table S3 | Subgroup analysis of non-obstetric complications

	Causes																	
	Heart failure / cardiomyopathy / Stroke		HIV/AIDS		Tuberculosis		Malaria		Respiratory Distress		Severe anemia		Sickle cell disease		Cervical cancer		Non-obstetric complications	
Districts	N	% (95%CI)	N	% (95%CI)	N	% (95%CI)	N	% (95%CI)	N	% (95%CI)	N	% (95%CI)	N	% (95%CI)	N	% (95%CI)	N	% (95%CI)
Western Area	8	1.5 (0.6,2.8)	11	2.0 (1.0,3.5)	5	0.9 (0.2,2.1)	20	3.6 (2.2,5.5)	0	-	20	3.6 (2.2,5.5)	9	1.6 (0.7,3.0)	1	0.2 (0.04,1.0)	74	13.5 (10.7,15.6)
Bo	2	0.8 (0.1,2.9)	3	1.2 (0.2,3.5)	0	-	4	1.7 (0.4,4.1)	2	0.8 (0.1,2.9)	18	7.4 (4.4,11.5)	1	0.4 (0.01,2.2)	0	-	30	12.4 (8.5,17.2)
Bombali	4	2.4 (0.6,5.9)	4	2.4 (0.6,5.9)	2	1.2 (0.1,4.1)	5	2.9 (0.9,6.7)	0	-	11	6.5 (3.2,11.2)	1	0.6 (0.01,3.3)	0	-	27	15.9 (10.7,22.2)
Bonthe	0	-	1	1.4 (0.03,7.3)	0	-	0	-	0	-	0	-	1	1.4 (0.03,7.3)	0	-	2	2.7 (0.3,9.4)
Kailahun	0	-	0	-	0	-	3	3.8 (0.7,10.5)	0	-	7	8.8 (3.5,17.2)	0	-	0	-	10	12.5 (6.2,21.8)
Kambia	3	1.9 (0.4,5.5)	1	0.6 (0.01,3.5)	0	-	1	0.6 (0.01,3.5)	0	-	16	10.3 (6.0,16.2)	5	3.2 (1.0,7.3)	0	-	26	16.8 (11.2,23.6)
Kenema	5	2.2 (0.7,5.1)	7	3.1 (1.2,6.3)	2	0.9 (0.1,3.1)	7	3.1 (1.2,6.3)	0	-	13	5.8 (3.1,9.6)	2	0.9 (0.1,3.1)	0	-	36	16.0 (11.4,21.4)
Koinadugu	2	1.4 (0.1,5.1)	0	-	1	0.7 (0.01,3.9)	2	1.4 (0.1,5.1)	0	-	9	6.5 (3.0,12.0)	2	1.4 (0.1,5.1)	0	-	16	11.6 (6.7,18.1)
Kono	4	2.3 (0.6,5.7)	3	1.7 (0.3,4.9)	2	1.1 (0.1,4.0)	7	4.0 (1.6,8.1)	0	-	5	2.9 (0.9,6.5)	5	2.9 (0.9,6.5)	0	-	26	14.9 (9.9,21.1)
Moyamba	0	-	0	-	0	-	4	3.1 (0.8,7.8)	0	-	3	2.4 (0.4,6.7)	0	-	0	-	7	5.5 (2.2,11.0)
Port loko	0	-	1	0.5 (0.1,2.9)	1	0.5 (0.1,2.9)	1	0.5 (0.1,2.9)	0	-	4	2.1 (0.5,5.3)	0	-	0	-	7	3.7 (1.5,7.5)
Pujehun	4	3.4 (0.9,8.5)	0	-	0	-	1	0.9 (0.02,4.7)	0	-	3	2.6 (0.5,3.7)	0	-	0	-	8	6.9 (3.0,13.1)
Tonkolili	2	1.1 (0.1,3.7)	2	1.1 (0.1,3.7)	2	1.1 (0.1,3.7)	0	-	0	-	2	1.1 (0.1,3.7)	1	0.5 (0.01,2.8)	0	-	9	4.7 (2.1,8.8)
Country-wide	34	1.4 (0.9,1.9)	33	1.4 (0.9,1.9)	15	0.6 (0.3,1.0)	55	2.3 (1.7,2.9)	2	0.1 (0.01,0.5)	111	4.6 (3.7,5.4)	27	1.1 (0.7,1.6)	1	0.04 (0.001,0.2)	278	11.5 (10.2,12.7)

Data shown are the estimated proportion of cause of death (%) with 95% confidence interval (95% CI) for each district

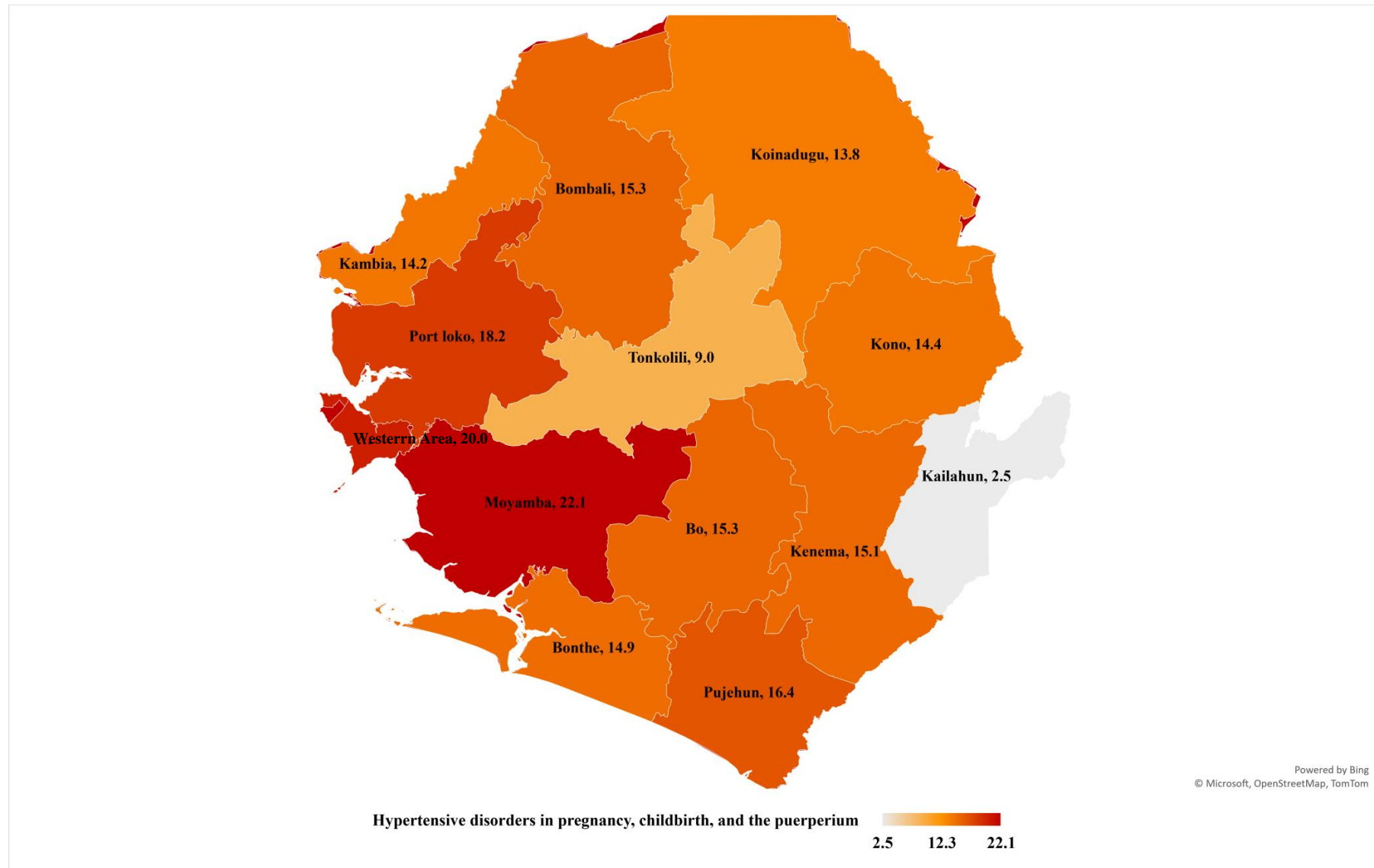
Table S4 | Coincidental causes and Unknown/ undetermined causes

Districts	Causes			
	Unknown/ undetermined		Coincidental causes	
	N	% (95% CI)	N	% (95% CI)
Western Area	60	10.9 (8.4,13.8)	1	0.2 (0.04,1.0)
Bo	21	8.7 (5.4,13.1)	0	-
Bombali	17	10.0 (5.9,15.5)	0	-
Bonthe	11	14.9 (7.7,25.0)	0	-
Kailahun	4	5.0 (1.3,12.3)	0	-
Kambia	25	16.1 (10.7,22.9)	0	-
Kenema	22	9.8 (6.2,14.4)	0	-
Koinadugu	10	7.3 (3.5,12.9)	0	-
Kono	17	9.8 (5.7,15.1)	0	-
Moyamba	18	14.2 (8.6,21.4)	0	-
Port loko	26	13.9 (9.2,19.7)	0	-
Pujehun	17	14.7 (8.7,22.4)	0	-
Tonkolili	35	18.4 (13.1,24.6)	0	-
Countrywide	283	11.7 (10.4,12.9)	1	0.04 (0.00,0.2)

[§]Data shown is proportion of cause of death (%) with 95% confidence interval (95% CI) for each district in the MDSR data

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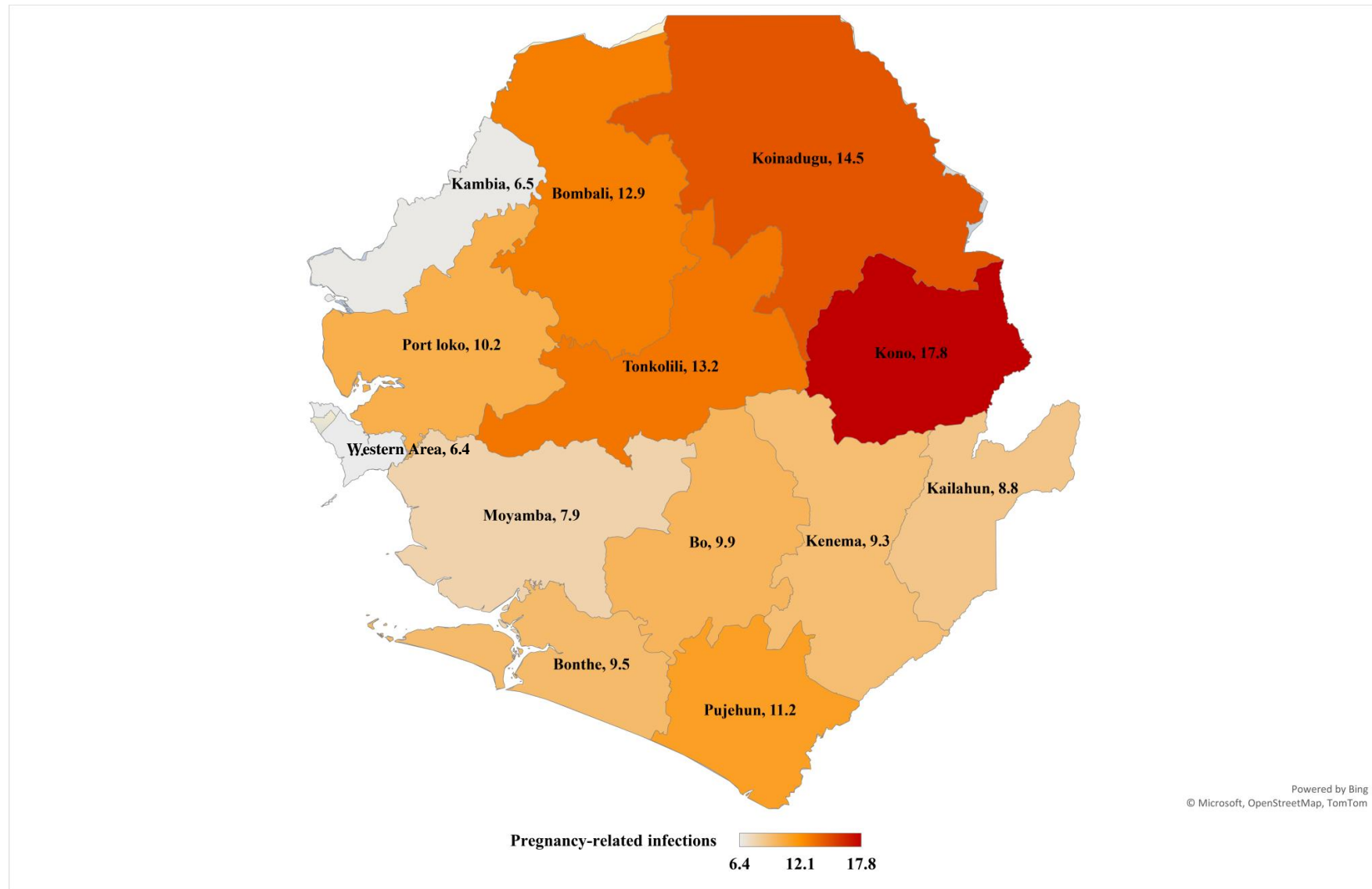
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Figure S1 | Map of proportions of maternal deaths due to hypertensive disorders in pregnancy, childbirth, and the puerperium in each district

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Figure S2 | Map of proportions of maternal deaths due to pregnancy-related infections in each district



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Figure S3 | Map of proportions of maternal deaths due to other obstetric complications in each district

