

Bayesian Spatiotemporal Modeling of Routinely Collected Data to Assess the Effect of Health Programs in Malaria Incidence During Pregnancy in Burkina Faso

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Supplementary Information 2

Table S2. Malaria in pregnancy high burden Community in Burkina Faso between 2015 – 2017: Communities specific risks related to National risk computed from Model without covariates and Model with covariates and space-time interaction.

Region	Commune	Model without covariates	Model with covariates and space-time interaction
		RR (95% CrI)	RR (95% CrI)
Boucle du Mouhoun	Sami	1.16 (1.01, 1.31)	
	Solenzo	1.16 (1.08, 1.25)	
	Bourasso	1.21 (1.07, 1.37)	1.20 (1.05, 1.38)
	Doumbala	1.14 (1.03, 1.27)	1.14 (1.01, 1.28)
	Bondokuy	1.18 (1.08, 1.28)	1.20 (1.09, 1.31)
	Tchériba	1.14 (1.04, 1.25)	1.18 (1.07, 1.30)
	Ye	1.13 (1.02, 1.24)	1.17 (1.05, 1.29)
Cascades	Mangodara	1.36 (1.22, 1.51)	1.30 (1.16, 1.43)
	Niangoloko	1.48 (1.35, 1.62)	1.31 (1.19, 1.44)
	Sidéradougou	1.38 (1.27, 1.50)	1.35 (1.23, 1.48)
	Tiéfora	1.46 (1.34, 1.59)	1.44 (1.31, 1.58)
Center-East	Bagre	1.49 (1.36, 1.63)	1.46 (1.31, 1.62)
	Bane	1.42 (1.28, 1.57)	1.44 (1.30, 1.61)
	Beguedo	1.19 (1.06, 1.34)	1.21 (1.07, 1.38)
	Bittou	1.27 (1.17, 1.38)	1.16 (1.05, 1.29)
	Boussouma	1.27 (1.15, 1.41)	1.30 (1.17, 1.44)

Region	Commune	Model without covariates	Model with covariates and space-time interaction
		RR (95% CrI)	RR (95% CrI)
Center-North	Garango	1.19 (1.10, 1.29)	1.11 (1.01, 1.22)
	Tenkodogo	1.46 (1.35, 1.59)	1.31 (1.19, 1.44)
	Zabré	1.35 (1.23, 1.48)	1.37 (1.24, 1.51)
	Zonsé	1.37 (1.23, 1.53)	1.40 (1.24, 1.56)
	Sangha	1.15 (1.04, 1.27)	
	Soudougui	1.13 (1.03, 1.24)	
	Yargatenga	1.40 (1.27, 1.56)	1.35 (1.20, 1.51)
	Yondé	1.22 (1.10, 1.35)	1.18 (1.05, 1.33)
	Dialgayé	1.26 (1.13, 1.39)	1.28 (1.15, 1.43)
	Koupéla	1.16 (1.06, 1.26)	
	Pouytenga	1.26 (1.14, 1.39)	1.23 (1.09, 1.39)
	Bourzanga	1.23 (1.12, 1.34)	1.23 (1.11, 1.36)
	Guibare	1.20 (1.08, 1.34)	1.20 (1.06, 1.34)
	Kongoussi	1.10 (1.01, 1.20)	
	Boulsa	1.15 (1.06, 1.25)	
	Pensa	1.19 (1.07, 1.32)	1.26 (1.12, 1.40)
	Koudougou	1.44 (1.32, 1.57)	1.33 (1.18, 1.49)
	Nanoro	1.21 (1.09, 1.34)	1.25 (1.08, 1.44)
	Sabou	1.16 (1.05, 1.27)	
	Center	Bieha	1.30 (1.17, 1.43)
Silly		1.15 (1.04, 1.27)	1.13 (1.01, 1.27)
Cassou		1.13 (1.02, 1.24)	
Sapouy		1.30 (1.19, 1.41)	1.14 (1.02, 1.27)
Guiaro		1.20 (1.06, 1.35)	1.21 (1.07, 1.36)
Komki-Ipala		1.27 (1.14, 1.42)	1.30 (1.15, 1.46)
Komsilga		1.44 (1.32, 1.57)	1.46 (1.28, 1.66)
Koubri		1.40 (1.28, 1.52)	1.43 (1.30, 1.57)
Saaba		1.73 (1.58, 1.89)	1.75 (1.53, 2.00)
Tanghin-Dassouri		1.17 (1.07, 1.28)	1.19 (1.07, 1.32)
Bogandé		1.22 (1.13, 1.32)	1.14 (1.03, 1.26)
Mani		1.19 (1.09, 1.31)	1.25 (1.14, 1.38)
Fada N'gourma		1.44 (1.33, 1.56)	1.34 (1.23, 1.46)
East	Matiacoali	1.39 (1.28, 1.51)	1.44 (1.31, 1.58)
	Foutouri	1.29 (1.15, 1.45)	1.35 (1.19, 1.53)
	Gayéri	1.14 (1.04, 1.25)	
	Kompienga	1.50 (1.34, 1.69)	1.52 (1.35, 1.71)
	Madjoari	1.51 (1.33, 1.71)	1.54 (1.35, 1.77)
	Pama	1.62 (1.48, 1.77)	1.49 (1.34, 1.66)
	Kantchari	1.12 (1.02, 1.23)	1.18 (1.06, 1.31)
	Logobou	1.14 (1.04, 1.24)	1.16 (1.04, 1.31)
	Namounou	1.42 (1.25, 1.60)	1.44 (1.27, 1.64)
	Tansarga	1.35 (1.22, 1.49)	1.40 (1.24, 1.58)

Region	Commune	Model without covariates	Model with covariates and space-time interaction
		RR (95% CrI)	RR (95% CrI)
Hauts-Bassins	Karankasso-Vigué	1.19 (1.10, 1.29)	1.19 (1.09, 1.29)
	Kalsaka	1.11 (1.01, 1.22)	1.16 (1.05, 1.28)
North	Ouahigouya	1.28 (1.19, 1.38)	1.21 (1.08, 1.36)
	Rambo	1.14 (1.03, 1.26)	1.20 (1.08, 1.33)
	Seguenega	1.23 (1.13, 1.34)	1.29 (1.18, 1.40)
	Bassi	1.23 (1.10, 1.36)	1.22 (1.08, 1.37)
	Gourcy	1.14 (1.05, 1.23)	
	Boudry	1.21 (1.11, 1.31)	1.24 (1.14, 1.36)
Plateau-Central	Mogtédo	1.17 (1.07, 1.29)	1.21 (1.09, 1.33)
	Salogo	1.13 (1.01, 1.27)	1.17 (1.04, 1.32)
	Zam	1.22 (1.10, 1.34)	1.25 (1.13, 1.39)
	Nagreongo	1.19 (1.06, 1.33)	1.22 (1.09, 1.37)
Sahel	Dori	1.13 (1.04, 1.22)	
	Seytenga		1.15 (1.03, 1.29)
	Boundore	1.17 (1.04, 1.31)	1.23 (1.09, 1.39)
	Sebba	1.22 (1.10, 1.35)	
	Titabe	1.42 (1.28, 1.57)	1.49 (1.34, 1.66)
	Bondigui	1.40 (1.25, 1.56)	1.34 (1.19, 1.50)
	Diebougou	1.15 (1.04, 1.26)	
	Gueguere	1.47 (1.34, 1.61)	1.47 (1.33, 1.62)
	Iolonioro	1.21 (1.08, 1.36)	1.16 (1.03, 1.32)
	Dano	1.38 (1.27, 1.51)	1.26 (1.14, 1.40)
	Dissin	1.20 (1.09, 1.33)	1.20 (1.06, 1.35)
	Koper	1.28 (1.14, 1.43)	1.27 (1.12, 1.44)
	Niego	1.38 (1.20, 1.58)	1.37 (1.19, 1.58)
	Oronkua	1.28 (1.15, 1.43)	1.29 (1.15, 1.45)
Ouessa	1.91 (1.70, 2.13)	1.90 (1.68, 2.15)	
South-west	Zambo	1.16 (1.03, 1.30)	
	Batié	1.14 (1.02, 1.26)	
	Boussoukoula	1.96 (1.72, 2.22)	1.79 (1.55, 2.07)
	Kpouéré	1.72 (1.48, 1.98)	1.55 (1.33, 1.83)
	Legmoin	1.35 (1.19, 1.53)	1.24 (1.08, 1.42)
	Midebdo	1.44 (1.28, 1.62)	1.33 (1.17, 1.52)
	Djigouè	1.43 (1.28, 1.60)	1.39 (1.23, 1.57)
	Gaoua	1.12 (1.02, 1.22)	
	Kampti	1.36 (1.23, 1.50)	1.31 (1.19, 1.45)
	Loropeni	1.35 (1.23, 1.47)	1.33 (1.21, 1.46)
Nako	1.23 (1.11, 1.37)	1.23 (1.10, 1.39)	

RR: Relative risk, 95% CrI: 95% credible intervals

Example, a RR value of 1.23 corresponds to a 23% increased risk of malaria in pregnancy