

Supplementary material

Table supplementary 1. List of parameters obtained because of the maximum likelihood function for each department considered in the case studies.

Departament	Parameter	Definition	Unity	Value
Sucre	ϵ_u	Exposure rate of individuals residing in urban areas.	día-1	1.4e-4
	ϵ_r	Exposure rate of individuals residing in rural areas.	día-1	1.2e-5
	β	Infection rate.	día-1	0.27
	ρ	Recovery rate.	día-1	0.66
	μ	Death rate	día-1	8.9e-4
Caquetá	ϵ_u	Exposure rate of individuals residing in urban areas.	día-1	2.1e-21
	ϵ_r	Exposure rate of individuals residing in rural areas.	día-1	6.2e-4
	β	Infection rate.	día-1	7.6e-2
	ρ	Recovery rate.	día-1	0.99
	μ	Death rate	día-1	2.5e-3
Santander	ϵ_u	Exposure rate of individuals residing in urban areas.	día-1	2.2e-12
	ϵ_r	Exposure rate of individuals residing in rural areas.	día-1	5.1e-5
	β	Infection rate.	día-1	7.8e-2
	ρ	Recovery rate.	día-1	0.99
	μ	Death rate	día-1	1.9e-3
Boyacá	ϵ_u	Exposure rate of individuals residing in urban areas.	día-1	6.8e-3
	ϵ_r	Exposure rate of individuals residing in rural areas.	día-1	9.3e-3
	β	Infection rate.	día-1	4.5e-4
	ρ	Recovery rate.	día-1	0.79
	μ	Death rate	día-1	6.8e-2
Cundinamarca	ϵ_u	Exposure rate of individuals residing in urban areas.	día-1	1.3e-4
	ϵ_r	Exposure rate of individuals residing in rural areas.	día-1	4.2e-5
	β	Infection rate.	día-1	6.1e-2
	ρ	Recovery rate.	día-1	0.98
	μ	Death rate	día-1	1.0e-3