

Title

Burden of disease, incidence, and spatial distribution of Schizophrenia in Ecuador from 2011 to 2021 using hospital discharge records

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Annex 1: Parameters for DALY calculation

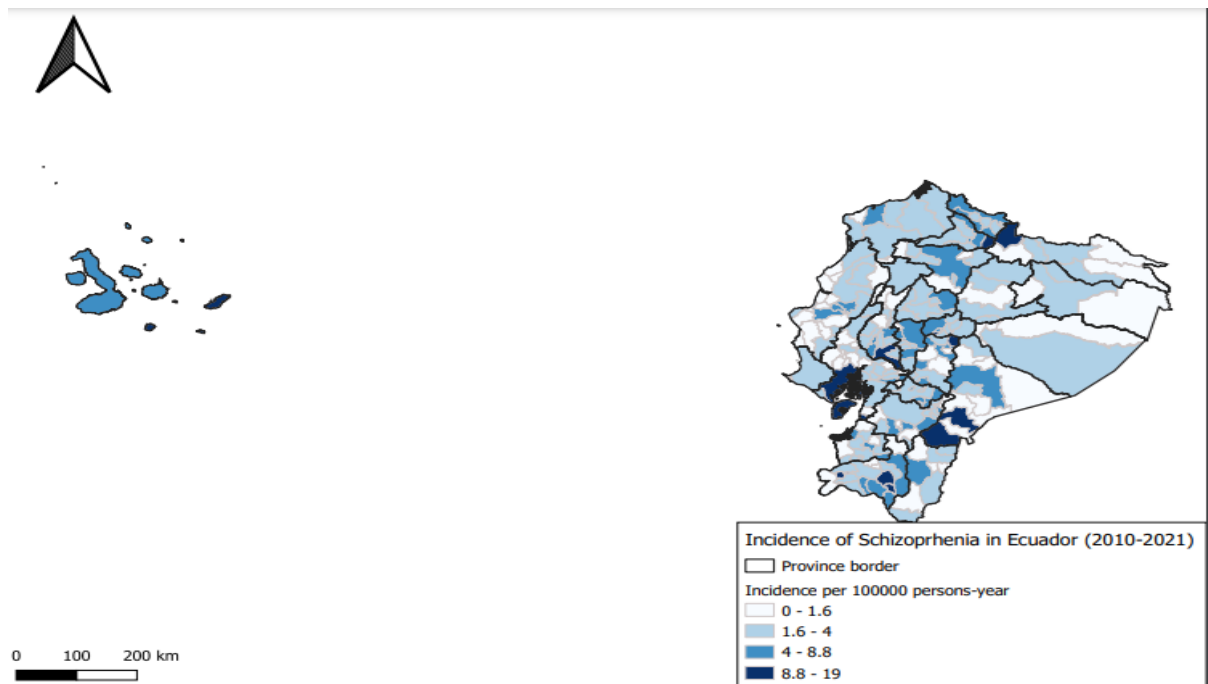
Parameter	Probability distribution	Value range		Source
Population	Fixed by age and sex	15.0 in 2010 – 17.8 million in 2021 inhabitants		INEC (2023a)
Prevalence of Schizophrenia	Fixed	0 to 97 per 100,000 people		Calculated from data consolidated by INEC (2023b and 2023c)
Disability Weight: Weighted average of chronic and acute diagnoses (37% and 63%, respectively).	Fixed	Average DW = 0.714		Calculated from data taken from Ferrari et al. 2012), and Charlson et al. (2018).
Assumed average duration of disability in years (males and females).	Fixed	1 year		Assumed due to unknown duration of illness.
Treatment proportion of male and female	Fixed	1 [range 0 – 1].		Due to the data being used relate entirely to treated cases.
INCIDENCE BY AGE GROUP (per 100,000 in total population)				
		Male	Female	
Age group 0 – 4 years	Fixed	0	0	Calculated from data consolidated by INEC (2023b and 2023c)
Age group 5 – 14 years	Fixed	2	3	Calculated from data consolidated by INEC (2023b and 2023c)
Age group 15 – 44 years	Fixed	89	61	Calculated from data consolidated by INEC (2023b and 2023c)
Age group 45 – 59 years	Fixed	86	97	Calculated from data consolidated by INEC (2023b and 2023c)
Age group 60+ years	Fixed	48	56	Calculated from data consolidated by INEC (2023b and 2023c)

Annex 2. Female cases of Schizophrenia and incidence by year

Year	Number of cases	Persons-time at risk	Incidence rate in 100,000 person-years	Poisson confidence intervals at 95%
2010	556	7568353	7.35	[6.75;7.98]
2011	485	7698755	6.30	[5.75;6.89]
2012	472	7829061	6.03	[5.50;6.60]
2013	290	7958814	3.64	[3.24;4.09]
2014	377	8087914	4.66	[4.20;5.16]
2015	399	8216234	4.86	[4.39;5.36]
2016	305	8343760	3.66	[3.26;4.09]
2017	358	8470420	4.23	[3.80;4.69]
2018	435	8596147	5.06	[4.60;5.56]
2019	441	8720919	5.06	[4.60;5.55]
2020	296	8844706	3.35	[2.98;3.75]
2021	349	8978739	3.89	[3.49;4.32]
Total		4763		
Yearly Mean Incidence			4.80	[4.66;4.93]

Annex 3. Male cases of Schizophrenia and incidence by year

Year	Number of cases	Persons-time at risk	Incidence rate in 100,000 person-years	Poisson confidence intervals at 95%
2010	539	7443875	7.24	[6.64;7.88]
2011	552	7567676	7.29	[6.70;7.93]
2012	483	7691912	6.28	[5.73;6.87]
2013	366	7815935	4.68	[4.22;5.19]
2014	459	7939552	5.78	[5.26;6.34]
2015	435	8062610	5.40	[4.90;5.93]
2016	450	8184970	5.50	[5.00;6.03]
2017	523	8306557	6.30	[5.77;6.86]
2018	528	8427261	6.27	[5.74;6.82]
2019	563	8547067	6.59	[6.05;7.15]
2020	429	8665937	4.95	[4.49;5.44]
2021	452	8870400	5.10	[4.64;5.59]
Total		5779		
Yearly Mean Incidence			5.93	[5.77;6.08]



Annex 4. Incidence of Schizophrenia geographically distributed in Ecuador (2010-2021)

Annex 5. Significant clusters for Schizophrenia in Ecuador

Cluster	Province(s) Location	Radius in Km	Relative Risk	p-value
1	Guayas	Single spot	2.48	< 0.0001
2	Pichincha	Single spot	1.40	< 0.0001
3	Los Ríos	Single spot	2.43	< 0.0001
4	Esmeraldas	Single spot	1.66	< 0.0001
5	Morona Santiago	Single spot	3.42	< 0.0001
6	Chimborazo	Single spot	1.49	< 0.0001
7	Galápagos	Single spot	3.80	0.00049
8	Loja	21.96	2.64	0.027