

Epidemiology of epilepsy

Sub-Saharan Africa

Dra. A. Daude

UEM

Mozambique

Sub-Saharan Africa



- 46 countries
- Population : 960 million (2016)
- Young population, > rural regions.
- 36% urban regions, > poverty
- average life expectancy at birth : 46.
- Under 5 infant mortality : 164/1000 infants
- Access to safe water: 46% of rural pop.
- access to sanitation: 55%

Epidemiology of epilepsy SSA

- Epilepsy affects approximately 50 million people worldwide.
- It is more prevalent in children and young adults.
- Over 85% of epilepsy cases are found in Low middle income countries.
- about 70% of people could be seizure-free if treated.
- over 90% of people with epilepsy do not receive treatment.



Incidence

- Data collection is a problem.
- Few incidences studies performed, rates have ranged from 63 to 158 per 100 000 per year.

Table 2: Incidence studies in the African Region

Country	Authors	Year	Population size	Incidence (per 100 000)
Controlled and published studies				
Burkina Faso	Debouverie et al.	1993	16 627	83
Ethiopia	Tekle-Haimanot et al.	1997	61 686	64
Tanzania	Rwiza et al.	1993	16 635	73
Togo	Grunitzky et al.	1991	19 241	119
Uganda	Kaiser et al.	1998	4 389	156
Unpublished reported data				
Algeria	Mait-Kaci	1978	30 000	56

Prevalence

- Is extremely variable
- Rates have ranged from 5,2 to 58%.
- Based on the methodology used
- Median prevalence rate is 11%
- With lowest rate 2,2% in South Africa
- Highest rates over 15% mainly in rural areas

Table 3: Prevalence studies in the African Region

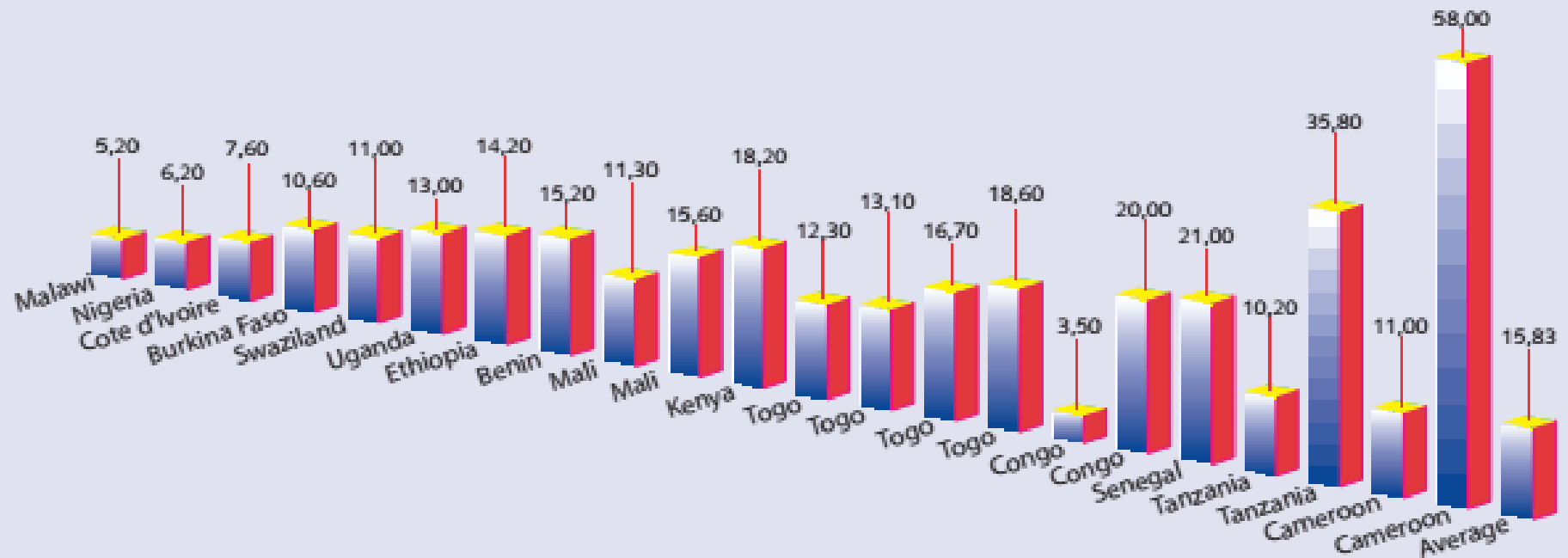
Country	Authors	Year	Population size	Prevalence (per 1000)	Area	Criteria	Method
Algeria	Mait-Kaci	1978	1 998 000	5.6	R/U	?	?
Benin*	Gbenou	1995	530	24.5	R	+	CS
Benin	Avode et al.	1996	1 443	15.2	R	+	CS
Burkina Faso	Debouverie et al.	1993	16 627	10.6	R	+	CS
Cameroon*	Nkwi, Ndongko	1989	72 647	11.0	R	-	MF
Cameroon	Nkwi, Ndongko	1989	500	58	R	-	CS
Cameroon	Dongmo et al.	1998	1 900	58.0	R	+	CS
Congo	Petitjean et al.	1995	1 000	20.0	R	-	GP
Congo	Petitjean et al.	1995	7 000	3.5	R	+	GP
Cote d'Ivoire	Giordano	1976	14 784	6.5	R	-	GP
Cote d'Ivoire	Kouassi	1988	1 176	7.6	R	+	CS
Cote d'Ivoire*	Kouadjo	1990	309	74.0	R	+	CS
Cote d'Ivoire*	Kaudjhis	1995	920	59.0	R	+	CS
Ethiopia*	Giel	1970	370	8.0	R	-	GP
Ethiopia*	Giel	1970	384	5.0	U	-	GP
Ethiopia	Zenebe Gedlie Damtie	2001	71 442	14.2	R	+	CS
Ethiopia	Tekle-Haimanot et al.	1990	60 820	5.2	R	+	CS
Ghana	Haddock	1967	3 912	3.3	R	-	GP
Kenya	Kaamugisha et al.	1988	2 960	18.2	R	+	CS
Liberia	Gerrits	1983	4 406	49.0	R	+	GP
Liberia	Goudsmit et al.	1983	4 436	28.0	R	+	CS
Malawi	Watts	1992	90 000	5.2	U	-	MF
Mali	Farnarier et al.	2000	5 243	15.6	R	+	CS
Mali	Traore et al.	2000	4 074	11.3	U	+	CS
Nigeria	Dada	1970	2 592	3.1	U	-	GP
Nigeria	Izuora, Azubuik	1977	2 288	14.0	U	-	MF
Nigeria*	Osuntokun et al.	1982	903	37.0	R	+	CS
Nigeria	Osuntokun et al.	1987	18 954	5.3	U	+	CS
Nigeria	Longe, Osuntokun	1989	2 925	6.2	R	+	CS
Rwanda	Piroux	1960	15 000	4.5	R	-	GP
Senegal	Ndiaye et al.	1986	7 682	8.3	R	+	CS
Senegal	Diop et al.	1996	2 803	21.0	R	+	CS
South Africa	Hurst et al.	1961	50 000	2.2	R	+	MF
South Africa	Bird et al.	1962	376 000	3.7	R	-	MF
Swaziland	Reis	1994	8 800	11.0	R	+	GP
Tanzania	Jilek, -Aall	1970	10 000	20.1	R	+	MF
Tanzania	Rwiza	1992	18 183	10.2	R	+	CS
Tanzania	Rwiza	1994	20 284	35.8	R	+	CS
Togo	Dumas et al.	1989	5 264	16.7	R	+	CS
Togo	Grunitzky et al.	1991	19 241	12.3	R	+	CS
Togo	Grunitzky et al.	1996	4 182	13.1	R	+	CS
Togo	Balogou et al.	2000	9 143	18.6	R	+	CS
Uganda	Orley	1970	13 174	2.1	R	-	MF
Uganda	Kaiser et al.	1996	4 743	13.0	R	+	CS
Zimbabwe	Levy et al.	1961	17 500	7.4	R	-	GP

Druet-Cabanaç, 2002

*Studies performed on population size under 1,000. GP: General Population. CS: Cross-sectional. MF: Medical Files. U: Urban. R: Rural. Criteria: Epilepsy defined as "recurrent, unprovoked seizures": (+) = yes; (-) = no.

EPILEPSY PREVALENCE/1000

1988 - 2003



[Lancet Neurol.](#) 2014 Oct;13(10):1029-44. doi: 10.1016/S1474-4422(14)70114-0.

Epidemiology, causes, and treatment of epilepsy in sub-Saharan Africa.

[Ba-Diop A](#)¹, [Marin B](#)², [Druet-Cabanac M](#)¹, [Ngoungou EB](#)³, [Newton CR](#)⁴, [Preux PM](#)⁵.

- **SUMMARY:**
- Epilepsy is a common neurological disease in tropical countries, particularly in sub-Saharan Africa. Previous work on epilepsy in sub-Saharan Africa has shown that many cases are severe, partly a result of some specific causes, that it carries a stigma, and that it is not adequately treated in many cases. **Many studies on the epidemiology, aetiology, and management of epilepsy in sub-Saharan Africa have been reported in the past 10 years.** The prevalence estimated from door-to-door studies is almost double that in Asia, Europe, and North America. **The most commonly implicated risk factors are birth trauma, CNS infections, and traumatic brain injury.** About 60% of patients with epilepsy receive no antiepileptic treatment, largely for economic and social reasons. Further epidemiological studies should be a priority to improve understanding of possible risk factors and thereby the prevention of epilepsy in Africa, and action should be taken to improve access to treatment.

Other risk factors

- Cerebrovascular disease
- Cerebral tumors
- Febrile convulsions
- Toxins
- Genetic predisposition
- Metabolic diseases

In Summary: SSA

- The incidence and prevalence is higher
- Most causes of epilepsy are preventable.
- Epilepsy can be treated.
- Causes and cultural attitudes towards epilepsy differ.

Obrigado



www.VisitCapitalCity.com