

Online Supplementary Document

Paul et al. An estimate of the prevalence of epilepsy in sub-Saharan Africa: A systematic review
Journal of Global Health 2012;2:020405

Table w1. Prevalence data extracted for epilepsy in sub-Saharan Africa

Study	Study size	Age range (years)	Mean age	Active prevalence (/1000)	Total prevalence (/1000)	Active epilepsy cases	Total epilepsy cases	Size of specific age group	Source of data
Almu et al (2006)	1154	0+	22	29.5	33.8	34	39		UNPD
Andriantseho et al (2004)	925	9+	30	27		25			UNPD
Avode et al (2003)	1400								
		<20	9.5		5.3		6	1147	Paper
		20-39	28		20.2		5	248	UNPD
Balogou et al (2007)	6249	0+	22	14.7	15.7		98		UNPD
Balagou et al (2001)	9155								
		0-9	4.5	16.2		63		3895	Paper
		10-19	14.5	22.9		48		2087	Paper
		20-29	24.5	19.4		21		1082	Paper
		30-39	34.5	22.7		18		792	Paper
		40-49	44.5	29.2		10		520	Paper
		50-59	54.5	9.7		3		309	Paper
		60-69	64.5	11.8		3		254	Paper
		70+	76	13.9		4		216	UNPD
Birbeck et al (2004)	55000	0+	21	14.4		793			UNPD
Burton et al (2012)	38523	6-14	10	2.91		112			Paper

Christianson et al (2002)	6692								
		2-5	3.5	5.3	5.6			3575	Paper
		6-9	7.5	8.3	9.3			3117	Paper
Coleman et al (2002)	16200								
		<15	8.5	2.4		18		7500	Paper
		15-24	19.5	6.6		20		3030	Paper
		25-34	29.5	7.2		11		1528	Paper
		35-44	39.5	7.5		11		1467	Paper
		45-54	49.5	1.8		2		1111	Paper
		55-64	59.5	4.7		4		851	Paper
		65-74	69.5	4.3		3		698	Paper
Debrock et al (2000)	3134	0+	21.5		33.5		105		Paper
Dent et al (2005)	4905								
		0-9	4.5	7.7		12		1554	Paper
		10-19	14.5	16.4		17		1038	Paper
		20-29	24.5	7.5		6		797	Paper
		30-39	34.5	9.7		5		516	Paper
		40-49	44.5	3.3		1		346	Paper
		50-59	54.5	0		0		304	Paper
		60-69	64.5	6.1		1		281	Paper
		70+	76	0		0		207	Paper
Dozie (2006)	4854	0+	22	12		58			UNPD
Duggan (2010)	193126	<15	6.5		2.04		395		UNPD
Dumas et al (1989)	5264	15-74	34		16.7		88		UNPD
Edwards et al (2008)	151408								
		6-12	9	3		124		41727	Paper
		13-17	15	3.7		93		25281	Paper

		18-28	23	3.7		117		31989	Paper
		29-49	39	2.1		72		34050	Paper
		50+	61.5	2.1		39		18361	Paper
Goudsmit et al (1983)	4436	0+	21	27.7		123			UNPD
Kaamugisha et al (1988)	2960	0+	19.5	18.2		54			UNPD
Kabore et al (1996)	1062	>15	33		15.1		16		UNPD
Kaiser et al (1996)	4743								
		<10	5	6		10		1793	Paper
		10-19	14.5	36		41		1128	Paper
		20-29	24.5	7		5		717	Paper
		30+	46	4.5		5		1105	Paper
Kanobana et al (2011)	943	0+	21	12.7	14.8	12	14		UNPD
Longe et al (1989)	2925								
		0-9	4.5	6.5		7		1066	Paper
		10-19	14.5	4.1		3		733	Paper
		20-29	24.5	7.5		3		398	Paper
		30-39	34.5	13.6		4		237	Paper
		40-49	44.5	4.9		1		204	Paper
		50-59	54.5	0		0		105	Paper
		60+	67	0		0		182	Paper
Mung'ala-Odera et al (2008)	10218								
		6	6	8.7	35.8	10	33	2940	Paper
		7	7	12.6	31.7	9	24	2493	Paper
		8	8	11.9	42	8	28	2391	Paper
		9	9	8	43.5	8	25	2394	Paper

Ndoye et al (2004)	4500	0+	21	14.2		64			UNPD
Ngoungou et al (2009)	6259	0+	24.5		9.2		58		UNPD
Nitiema (in press)	888	0+	20.5	38.3	43.9	34	39		UNPD
Njamanshi et al (2007)	1898	0+	22		49		93		UNPD
Osuntokun et al (1987)	18954								
		0-9	4.5	5.8		35		6003	Paper
		10-19	14.5	6.2		31		4975	Paper
		20+	38.5	4.4		35		7976	UNPD
Rwiza et al (1992)	18183								
		0-9	4.5	3.5		23		6522	Paper
		10-19	14.5	11.1		50		4501	Paper
		20-29	24.5	18.5		46		2482	Paper
		30-39	34.5	15.8		25		1583	Paper
		40-49	44.5	12.1		15		1243	Paper
		50-59	54.5	16.1		16		996	Paper
		60+	67	12.1		10		826	UNPD
Simms et al (2008)	6757								
		0-5	2.5	6		9		1520	Paper
		6-14	10	9		16		1692	Paper
		15-50	32.5	7		19		2898	Paper
		51+	61	5		3		647	UNPD
Tekle-Haimanot et al (1990)	60820								
		0-4	2		2.5		27	10790	Paper
		5-9	7		4.2		46	11086	Paper
		10-14	12		7.3		63	8616	Paper

		15-19	17		8.9		50	5604	Paper
		20-24	22		7.3		24	3297	Paper
		25-29	27		6.1		21	3439	Paper
		30-34	32		7.5		26	3455	Paper
		35-39	37		4.8		16	3343	Paper
		40-44	42		4.5		12	2672	Paper
		45-59	52		4.6		9	1938	Paper
		60+	67		2.9		19	6668	UNPD
Winkler et al (2009)	7399								
		0-9	4.5	4.4		11		2,495	Paper
		10-19	14.5	11.5		21		1,821	Paper
		20-34	27	13.6		21		1,550	Paper
		35-54	44.5	8.6		8		936	Paper
		>54	65	6		3		502	UNPD
Yemadje et al (in press)	13044								
		15-19	17	14.34		34		2371	Paper
		20-24	22	9.86		18		1826	Paper
		25-29	27	7.18		14		1950	Paper
		30-34	32	7.07		11		1555	Paper
		35-39	37	3.74		5		1338	Paper
		40-44	42	6.33		6		948	Paper
		45-49	47	7.3		5		685	Paper
		50-54	52	5.22		3		575	Paper
		55-59	57	4.58		2		437	Paper
		60-64	62	9.13		4		438	Paper
		65-70	67	3.26		3		921	Paper

Table w2. Prevalence data extracted for men with epilepsy in sub-Saharan Africa

Study	Study size	Age range (years)	Mean age	Active prevalence (/1000)	Total prevalence (/1000)	Active epilepsy cases	Total epilepsy cases	Size of specific age group	Source of data
Andriantseho et al (2004)	407	10+	30	19.7		8			UNPD
Avode et al (2003)	854	5-39	18.5		3.5		3		UNPD
Balagou et al (2007)	3206	0+	22		17.8		57		UNPD
Balagou et al (2001)	4338								
		0-9	4.5	19.7		38		1932	Paper
		10-19	14.5	19.5		22		1130	Paper
		20-29	24.5	24.2		10		413	Paper
		30-39	34.5	33.5		9		269	Paper
		40-49	44.5	14.6		3		205	Paper
		50-59	54.5	15.3		2		131	Paper
		60-69	64.5	24.6		3		122	Paper
		70+	75.5	22.1		4		136	UNPD
Burton et al (2012)	19493	10	10	2.92		57			Paper
Dent et al (2005)	2194								
		0-9	4.5	11.1		8		718	Paper
		10-19	14.5	15.8		8		506	Paper
		20-29	24.5	6.3		2		315	Paper
		30-39	34.5	8.8		2		227	Paper
		40-49	44.5	0		0		141	Paper
		50-59	54.5	0		0		127	Paper
		60-69	64.5	14.5		1		130	Paper
		70+	75.5	0		0		92	UNPD

Dozie et al (2006)	2267	0+	22	11		25			UNPD
Dumas et al (1987)	2063	15-74	33.5		26.2		54		UNPD
Edwards et al (2008)	70024								
		6-12	9	3.4		71		21165	Paper
		13-17	15	3.4		45		13383	Paper
		18-28	23	4		55		13912	Paper
		29-49	39	2.4		33		13490	Paper
		50+	61	2.6		21		8074	UNPD
Kaiser et al (1996)	2466	0+	20	11.4		28			UNPD
Longe et al (1987)	1459								
		0-9	4.5	8.9		5		560	Paper
		10-19	14.5	5.4		2		369	Paper
		20-29	24.5	0		0		199	Paper
		30-39	34.5	0		0		96	Paper
		40-49	44.5	0		0		87	Paper
		50-59	54.5	0		0		60	Paper
		60+	67	0		0		88	UNPD
Mung'ala-Odera et al (2008)	5160	6-9	7.5	3.3	10.5	17	54		Paper
Osuntokun et al (1987)	9441								
		0-9	4.5	3.29		15		3096	Paper
		10-19	14.5	5		13		2605	Paper
		20+	38	5.4		20		3740	UNPD
Rwiza et al (1992)	8731								
		0-9	4.5	3		10		3297	Paper
		10-19	14.5	12.6		28		2224	Paper
		20-29	24.5	19.7		20		1015	Paper
		30-39	34.5	13.8		9		615	Paper
		40-49	44.5	7		4		570	Paper

		50-59	54.5	8		4		499	Paper
		60+	67.5	10.5		5		475	UNPD
Simms et al (2008)	3000	0+	21	7		21			UNPD
Tekle-Haimanot (1990)	29908								
		0-4	2		3.7		20	5405	Paper
		5-9	7		4.1		23	5610	Paper
		10-14	12		9.7		43	4433	Paper
		15-19	17		8.6		26	3023	Paper
		20-24	22		8.9		14	1573	Paper
		25-29	27		7.8		10	1282	Paper
		30-34	32		7.3		11	1507	Paper
		35-39	37		5.4		8	1482	Paper
		40-44	42		5.3		7	1321	Paper
		45-59	52		3.2		3	938	Paper
		60+	67		2.4		8	3334	UNPD
Winkler et al (2009)	3673								
		0-9	4.5	6.2		8		1296	Paper
		10-19	14.5	8.7		8		923	Paper
		20-34	27	9.6		7		728	Paper
		35-54	44.5	4.2		2		472	Paper
		55+	64.5	3.9		1		254	UNPD
Yemadje et al (in press)	5527	15+	33.5	9.77		54			UNPD

Table w3. Prevalence data extracted for women with epilepsy in Sub-Saharan Africa

Study	Study size	Age range (years)	Mean age	Active prevalence (/1000)	Total prevalence (/1000)	Active epilepsy cases	Total epilepsy cases	Size of specific age group	Source of data
Andriantseh-eno et al (2004)	518	10+	30	32.8		17			UNDP
Avode et al (2003)	546	5-39	18.5		14.7		8		UNDP
Balagou et al (2007)	3043	0+	22		13.5		41		UNDP
Balagou et al (2001)	4817								
		0-9	4.5	12.7		25		1963	Paper
		10-19	14.5	27.1		26		957	Paper
		20-29	24.5	16.4		11		669	Paper
		30-39	34.5	17.2		9		523	Paper
		40-49	44.5	22.2		7		315	Paper
		50-59	54.5	5.6		1		178	Paper
		60-69	64.5	0		0		132	Paper
		70+	76	0		0		80	UNDP
Burton et al (2012)	19030	10	10	2.89		55			Paper
Dent et al (2005)	2711								
		0-9	4.5	4.8		4		836	Paper
		10-19	14.5	16.9		9		532	Paper
		20-29	24.5	8.3		4		482	Paper
		30-39	34.5	10.4		3		289	Paper
		40-49	44.5	4.9		1		205	Paper
		50-59	54.5	0		0		177	Paper
		60-69	64.5	0		0		151	Paper
		70+	76	0		0		115	UNDP
Dozie (2006)	2587	0+	22.5	12.8		33			UNDP

Dumas et al (1987)	3162	15-74	34		10.8		34		UNDP
Edwards et al (2008)	81384								
		6-12	9	2.6		53		20562	Paper
		13-17	15	4		48		11898	Paper
		18-28	23	3.4		62		18077	Paper
		29-49	39	1.9		39		20560	Paper
		50+	61.5	1.7		18		10287	UNDP
Kaiser et al (1996)	2277	0+	20.5	14.5		33			UNDP
Longe et al (1987)	2925								
		0-9	4.5	3.9		2		506	Paper
		10-19	14.5	2.7		1		364	Paper
		20-29	24.5	15.1		3		199	Paper
		30-39	34.5	28.4		4		141	Paper
		40-49	44.5	8.5		1		117	Paper
		50-59	54.5	0		0		45	Paper
		60+	67	0		0		94	UNDP
Mung'ala-Odera et al (2008)	5058	6-9	7.5	3.6	11.1	18	56		Paper
Osuntokun et al (1987)	9513								
		0-9	4.5	6.9		20		2907	Paper
		10-19	14.5	7.6		18		2370	Paper
		20+	39	5.2		22		4236	UNDP
Rwiza et al (1992)	9452								
		0-9	4.5	4		13		3255	Paper
		10-19	14.5	9.7		22		2277	Paper
		20-29	24.5	17.7		26		1467	Paper

		30-39	34.5	17.2		16		932	Paper
		40-49	44.5	16.3		11		673	Paper
		50-59	54.5	22.1		12		497	Paper
		60+	68	14.2		5		351	UNDP
Simms et al (2008)	3751	0+	22	6.9		26			UNDP
Tekle-Haimanot et al (1990)	31000								
		0-4	2		1.3		7	5385	Paper
		5-9	7		4.2		23	5476	Paper
		10-14	12		5.5		23	4183	Paper
		15-19	17		9.3		24	2581	Paper
		20-24	22		5.8		10	1724	Paper
		25-29	27		5.1		11	2157	Paper
		30-34	32		7.7		15	1948	Paper
		35-39	37		4.3		8	1861	Paper
		40-44	42		3.7		5	1351	Paper
		45-59	52		6		6	1000	Paper
		60+	67		3.3		11	3334	UNDP
Winkler et al (2009)	3631								
		0-9	4.5	2.5		3		1,199	Paper
		10-19	14.5	14.5		13		898	Paper
		20-34	27	17		14		822	Paper
		35-54	44.5	12.9		6		464	Paper
		55+	65	8.1		2		248	UNDP
Yemadje et al (in press)	7517	15+	34.5	6.79		51			UNDP

Table w4. Calculated weighted mean of the prevalence of active epilepsy per age group for men and women

Men					Women				
Age range	Mean age	Number of data points	Weighted mean of the prevalence	95% CI	Age range	Mean age	Number of data points	Weighted mean of the prevalence	95% CI
0-9	4.5	8	4.52	4.03819	0-9	4.5	8	3.82	2.32785
10-19..	14.5	8	4.52	4.27653	10-19..	14.5	8	5	5.87015
20-29	24.5	9	6.94	4.93464	20-29	24.5	9	6.97	3.30833
30-39	34.5	8	5.501	7.49476	30-39	34.5	8	4.64	7.691
40-49	44.5	5	6.08	5.3077	40-49	44.5	5	14.63	5.3883
50-59	54.5	4	7.34	7.20953	50-59	54.5	4	13.36	10.2461
60+	69.5	8	3.72	6.78767	60+	69.5	8	2.14	3.68672

Table w5. Lower limit, mean and upper limits of the estimations of the number of women with active epilepsy in Sub-Saharan Africa

Age range	Lower limit	Mean	Upper limit	Total population (thousands)
0-9	154687	396008	637329	103667
10-19.	0	388830	845328	77766
20-29	204654	389560	574466	55891
30-39	0	173457	460970	37383
40-49	239730	379502	519275	25940
50-59	54920	235630	416341	17637
60+	0	37437	101933	17494
Total	653991	2000424	3555642	335778

Table w6. Lower limit, mean and upper limits of the estimations of the number of men with active epilepsy in Sub-Saharan Africa

Age range	Lower limit	Mean	Upper limit	Total population (thousands)
0-9	50920	477692	904464	105684
10-19.	19178	356031	692885	78768
20-29	112122	388022	663923	55911
30-39	0	203323	480336	36961
40-49	19167	150893	282620	24818
50-59	2142	120479	238816	16414
60+	0	55023	155419	14791
Total	203529	1751463	3418463	333347

Table w7. Calculated weighted mean of the prevalence of lifetime epilepsy per age group for men and women

Men					Women				
Age range	Mean age	Number of data points	Weighted mean of the prevalence	95% CI	Age range	Mean age	Number of data points	Weighted mean of the prevalence	95% CI
0-9	4.5	3	6.01	5.2882 7	0-9	4.5	3	5.41	5.6966 4
10-19..	14.5	3	8.66	3.7433 7	10-19..	14.5	3	7.53	5.2314 7
20-29	24.5	3	13.38	6.2051 8	20-29	24.5	3	8.97	4.0853 2
30-39	34.5	3	14.46	13.012 91	30-39	34.5	3	8.2	3.6789 6
40-49	44.5	1	5.3	0	40-49	44.5	1	3.7	0
50-59	54.5	1	3.2	0	50-59	54.5	1	6	0
60+	64.5	1	2.4	0	60+	64.5	1	3.3	0

Table w8. Lower limit, mean and upper limits of the estimations of the number of women with lifetime epilepsy in Sub-Saharan Africa

Age range	Lower limit	Mean	Upper limit	Total population (thousands)
0-9	0	560839	1151392	103667
10-19.	178748	585578	992409	77766
20-29	273010	501342	729675	55891
30-39	169010	306541	44071	37383
40-49	-	95978	-	25940
50-59	-	105822	-	17637
60+	-	57730	-	17494
Total	620768	2213830	2917547	335778

Table w9. Lower limit, mean and upper limits of the estimations of the number of men with lifetime epilepsy in Sub-Saharan Africa

Age range	Lower limit	Mean	Upper limit	Total population (thousands)
0-9	76275	635161	1194046	105684
10-19.	387273	682131	976989	78768
20-29	401151	748089	1095027	55911
30-39	53486	534456	1015426	36961
40-49	-	131535	-	24818
50-59	-	52525	-	16414
60+	-	35498	-	14791
Total	918185	2819395	4281488	333347

Table w10. Percentage of people with epilepsy who experience each seizure type

Generalised	56.7%
Tonic	0.4%
Tonic clonic	32.7%
Absence	0.9%
Myoclonic	0.3%
Atonic	1.1%
Partial	36.3%
Simple	8.9%
Complex	4.9%
Secondary generalisation	13.8%
Unclassified to generalised or partial	7.1%
Unclassified to subtype	36.9%