

Web Appendix W1 *for* Routes of Infection: Exports and HIV Incidence in Sub-Saharan Africa

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This appendix reports raw mortality data (actual mortality and predicted) for the countries used in the sample and one comparison country, the Philippines.

Input Data for Africa, Mortality Rates Actual and Predicted by Country/Year

Country	Year	Actual Death Rate	Pred. Death Rate	Diff, per 100,000
Burkina Faso	1984	0.00309	0.00148	161.27
Burkina Faso	1985	0.00265	0.00152	113.31
Burkina Faso	1986	0.00342	0.00156	186.45
Burkina Faso	1987	0.00219	0.00159	59.71
Burkina Faso	1988	0.00637	0.00162	474.97
Burkina Faso	1989	0.00271	0.00169	101.86
Burkina Faso	1990	0.00358	0.00176	181.38
Burkina Faso	1991	0.00337	0.00184	153.88
Burkina Faso	1992	0.00322	0.00191	131.46
Burkina Faso	1993	0.00439	0.00198	241.42
Burkina Faso	1994	0.00434	0.00210	224.21
Burkina Faso	1995	0.00551	0.00222	328.89
Burkina Faso	1996	0.00485	0.00234	250.76
Burkina Faso	1997	0.00515	0.00246	269.10
Burkina Faso	1998	0.00541	0.00258	282.35
Burkina Faso	1999	0.00433	0.00275	157.33
Burkina Faso	2000	0.00538	0.00292	245.89
Burkina Faso	2001	0.00427	0.00309	117.86
Burkina Faso	2002	0.00561	0.00326	234.89
Burkina Faso	2003	0.00341	0.00343	-1.58
	Average	0.00416	0.00221	195.77
HIV Rate Estimated, 1999		0.0108 (.0070, .0145)		
Cameroon	1985	0.00255	0.00148	107.02
Cameroon	1986	0.00351	0.00152	199.04
Cameroon	1987	0.00306	0.00156	150.16
Cameroon	1988	0.00362	0.00159	202.84
Cameroon	1989	0.00235	0.00162	72.85
Cameroon	1990	0.00220	0.00169	50.75
Cameroon	1991	0.00240	0.00176	63.58
Cameroon	1992	0.00250	0.00184	66.42
Cameroon	1993	0.00240	0.00191	49.32
Cameroon	1994	0.00325	0.00198	126.91
Cameroon	1995	0.00355	0.00210	144.65
Cameroon	1996	0.00369	0.00222	147.43

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Country	Year	Actual Death Rate	Pred. Death Rate	Diff, per 100,000
Cameroon	1997	0.00345	0.00234	110.42
Cameroon	1998	0.00726	0.00246	480.06
Cameroon	1999	0.00715	0.00258	456.26
Cameroon	2000	0.00706	0.00275	430.32
Cameroon	2001	0.00757	0.00292	464.74
Cameroon	2002	0.00787	0.00309	478.02
Cameroon	2003	0.00606	0.00326	279.90
Cameroon	2004	0.00660	0.00343	317.46
	Average	0.00440	0.00221	219.90
HIV Rate Estimated, 2000		0.0290 (.0233, .0345)		
Kenya	1982	0.00163	0.001409	21.74
Kenya	1983	0.00153	0.001438	9.22
Kenya	1984	0.00196	0.00148	48.26
Kenya	1985	0.00123	0.001519	-28.59
Kenya	1986	0.00174	0.001556	18.76
Kenya	1987	0.00100	0.00159	-58.95
Kenya	1988	0.00305	0.001621	142.68
Kenya	1989	0.00124	0.001693	-45.31
Kenya	1990	0.00199	0.001764	23.00
Kenya	1991	0.00163	0.001835	-20.32
Kenya	1992	0.00269	0.001907	78.04
Kenya	1993	0.00287	0.001978	88.99
Kenya	1994	0.00365	0.002099	155.05
Kenya	1995	0.00479	0.002221	256.98
Kenya	1996	0.00491	0.002342	256.84
Kenya	1997	0.00422	0.002463	175.72
Kenya	1998	0.00503	0.002584	244.57
Kenya	1999	0.00566	0.002753	290.76
Kenya	2000	0.00619	0.002922	326.50
Kenya	2001	0.00839	0.003091	529.44
Kenya	2002	0.00747	0.00326	420.81
Kenya	2003	0.00648	0.003429	305.44
	Average	0.00361	0.00213	147.25
HIV Rate Estimated, 1999		0.0323 (.0244, .0391)		
Malawi	1982	0.00469	0.001377	331.45
Malawi	1983	0.00298	0.001409	156.79
Malawi	1984	0.00377	0.001438	233.48
Malawi	1985	0.00348	0.00148	200.31
Malawi	1986	0.00405	0.001519	253.54
Malawi	1987	0.00534	0.001556	378.13
Malawi	1988	0.00511	0.00159	351.58
Malawi	1989	0.00471	0.001621	308.61
Malawi	1990	0.00532	0.001693	362.29
Malawi	1991	0.00550	0.001764	373.39
Malawi	1992	0.00701	0.001835	517.90
Malawi	1993	0.00528	0.001907	336.96
Malawi	1994	0.00617	0.001978	419.25
Malawi	1995	0.00718	0.002099	508.41
Malawi	1996	0.00879	0.002221	657.44
Malawi	1997	0.00963	0.002342	729.29
Malawi	1998	0.01105	0.002463	858.41
Malawi	1999	0.01713	0.002584	1454.51
Malawi	2000	0.00983	0.002753	707.33
Malawi	2001	0.01213	0.002922	920.58
Malawi	2002	0.01356	0.003091	1046.64

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Country	Year	Actual Death Rate	Pred. Death Rate	Diff, per 100,000
Malawi	2003	0.01135	0.00326	808.95
Malawi	2004	0.01001	0.003429	657.87
	Average	0.00757	0.00210	546.65
HIV Rate Estimated, 2000		0.0559 (.0501, .0621)		
Mali	1984	0.00338	0.001556	182.05
Mali	1985	0.00351	0.00159	192.13
Mali	1986	0.00647	0.001621	484.79
Mali	1987	0.00289	0.001693	119.67
Mali	1988	0.00313	0.001764	136.26
Mali	1989	0.00269	0.001835	85.07
Mali	1990	0.00340	0.001907	149.09
Mali	1991	0.00414	0.001978	216.41
Mali	1992	0.00347	0.002099	136.62
Mali	1993	0.00384	0.002221	161.70
Mali	1994	0.00330	0.002342	95.42
Mali	1995	0.00296	0.002463	49.41
Mali	1996	0.00407	0.002584	148.99
Mali	1997	0.00422	0.002753	146.57
Mali	1998	0.00558	0.002922	265.75
Mali	1999	0.00445	0.003091	135.51
Mali	2000	0.00496	0.00326	169.66
Mali	2001	0.00515	0.003429	172.62
	Average	0.00398	0.00228	169.32
HIV Rate Estimated, 1997		0.0143 (.0084, .0203)		
Namibia	1984	0.00382	0.00159	223.30
Namibia	1985	0.00250	0.001621	88.35
Namibia	1986	0.00356	0.001693	186.82
Namibia	1987	0.00433	0.001764	256.35
Namibia	1988	0.00447	0.001835	263.59
Namibia	1989	0.00409	0.001907	218.15
Namibia	1990	0.00557	0.001978	359.30
Namibia	1991	0.00433	0.002099	222.84
Namibia	1992	0.00318	0.002221	95.67
Namibia	1993	0.00269	0.002342	35.30
Namibia	1994	0.00274	0.002463	27.73
Namibia	1995	0.00356	0.002584	97.51
Namibia	1996	0.00479	0.002753	203.26
Namibia	1997	0.00560	0.002922	267.95
Namibia	1998	0.00718	0.003091	409.32
Namibia	1999	0.00764	0.00326	437.55
Namibia	2000	0.00890	0.003429	546.80
	Average	0.00464	0.00233	231.75
HIV Rate Estimated, 1996		0.0425 (.0323, .0522)		
Uganda	1980	0.00590	0.001409	449.44
Uganda	1981	0.00517	0.001438	373.63
Uganda	1982	0.00300	0.00148	151.69
Uganda	1983	0.00480	0.001519	328.02
Uganda	1984	0.00410	0.001556	254.78
Uganda	1985	0.00491	0.00159	331.65
Uganda	1986	0.00532	0.001621	369.99
Uganda	1987	0.00623	0.001693	453.41
Uganda	1988	0.00623	0.001764	446.28
Uganda	1989	0.00608	0.001835	424.67
Uganda	1990	0.00778	0.001907	587.38

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Country	Year	Actual Death Rate	Pred. Death Rate	Diff, per 100,000
Uganda	1991	0.00832	0.001978	634.34
Uganda	1992	0.00829	0.002099	618.61
Uganda	1993	0.01098	0.002221	876.01
Uganda	1994	0.01416	0.002342	1181.85
Uganda	1995	0.01612	0.002463	1365.20
Uganda	1996	0.01031	0.002584	772.31
Uganda	1997	0.01060	0.002753	784.69
Uganda	1998	0.00930	0.002922	638.10
Uganda	1999	0.01343	0.003091	1034.24
Uganda	2000	0.01526	0.00326	1199.81
Uganda	2001	0.01613	0.003429	1269.77
	Average	0.00875	0.00213	661.17
HIV Rate Estimated, 1997		0.1169 (.1039, .1238)		
Zambia	1980	0.00334	0.001409	193.58
Zambia	1981	0.00249	0.001438	105.34
Zambia	1982	0.00336	0.00148	188.09
Zambia	1983	0.00246	0.001519	93.83
Zambia	1984	0.00312	0.001556	156.46
Zambia	1985	0.00396	0.00159	237.38
Zambia	1986	0.00377	0.001621	215.21
Zambia	1987	0.00341	0.001693	171.47
Zambia	1988	0.00344	0.001764	167.67
Zambia	1989	0.00354	0.001835	170.52
Zambia	1990	0.00596	0.001907	405.77
Zambia	1991	0.00620	0.001978	421.83
Zambia	1992	0.00801	0.002099	591.45
Zambia	1993	0.01005	0.002221	783.39
Zambia	1994	0.01114	0.002342	879.55
Zambia	1995	0.01648	0.002463	1402.06
Zambia	1996	0.01176	0.002584	917.52
Zambia	1997	0.01208	0.002753	932.56
Zambia	1998	0.01513	0.002922	1221.00
Zambia	1999	0.01718	0.003091	1409.25
Zambia	2000	0.01584	0.00326	1258.33
Zambia	2001	0.01647	0.003429	1304.57
	Average	0.00815	0.00213	601.21
HIV Rate Estimated, 1997		0.1128 (.1012, .1238)		
Zimbabwe	1983	0.00186	0.001377	48.55
Zimbabwe	1984	0.00284	0.001409	142.99
Zimbabwe	1985	0.00173	0.001438	29.40
Zimbabwe	1986	0.00164	0.00148	15.50
Zimbabwe	1987	0.00133	0.001519	-19.00
Zimbabwe	1988	0.00138	0.001556	-17.59
Zimbabwe	1989	0.00244	0.00159	85.15
Zimbabwe	1990	0.00243	0.001621	81.28
Zimbabwe	1991	0.00255	0.001693	86.09
Zimbabwe	1992	0.00402	0.001764	225.99
Zimbabwe	1993	0.00434	0.001835	250.59
Zimbabwe	1994	0.00549	0.001907	358.33
Zimbabwe	1995	0.00570	0.001978	372.12
Zimbabwe	1996	0.00835	0.002099	625.17
Zimbabwe	1997	0.00978	0.002221	755.90
Zimbabwe	1998	0.01348	0.002342	1114.17
Zimbabwe	1999	0.01008	0.002463	761.90
Zimbabwe	2000	0.01364	0.002584	1106.03

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Country	Year	Actual Death Rate	Pred. Death Rate	Diff, per 100,000
Zimbabwe	2001	0.01234	0.002753	958.27
Zimbabwe	2002	0.01723	0.002922	1431.25
Zimbabwe	2003	0.01895	0.003091	1585.90
Zimbabwe	2004	0.01576	0.00326	1249.98
Zimbabwe	2005	0.01134	0.003429	791.46
	Average	0.00734	0.00210	523.45
HIV Rate Estimated, 2001		0.0849 (.0753, .0923)		

Notes: This table shows the actual (based on sibling mortality histories) and predicted (using the historical data on death rates from other countries) death rates over time in the countries in the sample. This data represents all of the data used to generate HIV incidence and prevalence in Africa.

Mortality Rates Actual and Predicted for Comparison

Year	Actual Death Rate	Pred. Death Rate	Diff, per 100,000
Panel A: 15-25 in 2000			
1989	0.00109	0.00111	-2.10
1990	0.00119	0.00109	10.11
1991	0.00178	0.00107	71.78
1992	0.00124	0.00104	19.66
1993	0.00159	0.00102	56.60
1994	0.00188	0.00112	75.82
1995	0.00144	0.00123	20.88
1996	0.00134	0.00133	0.53
1997	0.00139	0.00144	-4.96
1998	0.00233	0.00154	78.52
1999	0.00146	0.00163	-17.34
2000	0.00136	0.00172	-35.83
2001	0.00189	0.00181	8.66
2002	0.00175	0.00189	-14.66
2003	0.00199	0.00198	0.76
Average	0.00158	0.00140	17.90
HIV Rate Estimated, 1999		0.0014 (0,.003)	
Panel B: 25-35 in 2000			
1989	0.00114	0.00163	-49.42
1990	0.00162	0.00172	-9.64
1991	0.00243	0.00181	62.41
1992	0.00186	0.00189	-2.96
1993	0.00247	0.00198	48.87
1994	0.00227	0.00205	21.55
1995	0.00271	0.00212	58.87
1996	0.00154	0.00219	-65.46
1997	0.00239	0.00227	12.34
1998	0.00158	0.00234	-75.64
1999	0.00196	0.00246	-49.90
2000	0.00191	0.00258	-66.83
2001	0.00311	0.00269	41.32
2002	0.00271	0.00281	-10.60
2003	0.00386	0.00293	92.36
Average	0.00224	0.00223	0.48

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Year	Actual Death Rate	Pred. Death Rate	Diff, per 100,000
HIV Rate Estimated, 1999		0.004 (.0009, .009)	

Notes: This table shows the actual (based on sibling mortality histories) and predicted (using the historical data on death rates from other countries) death rates over time for two age groups in the Philippines. This data represents all of the data used to generate the HIV prevalence reported for the Philippines in Section ??

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