ESTIMATES OF
SAMPLING ERRORS

Appendix **B**

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2004 Malawi Demographic and Health Survey (MDHS) to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2004 MDHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the standard error for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2004 MDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2004 MDHS is the ISSA Sampling Error Module. This module used the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, r = y/x, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_h-1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi} \text{ , and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,

       m_h is the total number of clusters selected in the hth stratum,

       y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum,

       x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum, and

       f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers all but one cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2004 MDHS, there were 522 non-empty clusters. Hence, 521 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 522 clusters,

       $r_{(i)}$ is the estimate computed from the reduced sample of 521 clusters (i^{th} cluster excluded), and

       k is the total number of clusters.

In addition to the standard error, ISSA computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. ISSA also computes the relative error and confidence limits for the estimates.

Sampling errors for the 2004 MDHS are calculated for selected variables considered to be of primary interest for woman's survey and for man's surveys, respectively. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for each of the 11 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.18 present the value of the statistic (R), its standard error (SE), the number of unweighted (N-UNWE) and weighted (N-WEIG) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R ± 2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of

unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to child-bearing.

The confidence interval (e.g., as calculated for children ever born to women aged 40-49) can be interpreted as follows: the overall average from the national sample is 6.550 and its standard error is 0.080. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 6.550 ± 2×0.080. There is a high probability (95 percent) that the true average number of children ever born to all women aged 40 to 49 is between 6.391 and 6.709.

Sampling errors are analyzed for the national woman sample and for two separate groups of estimates: (1) means and proportions, and (2) complex demographic rates. The relative standard errors (SE/R) for the means and proportions range between 0.2 percent and 34.2 percent with an average of 3.47 percent; the highest relative standard errors are for estimates of very low values (e.g., currently using IUD). If estimates of very low values (less than 10 percent) were removed, then the average drops to 1.81 percent. So in general, the relative standard error for most estimates for the country as a whole is small, except for estimates of very small proportions. The relative standard error for the total fertility rate is small, 1.7 percent. However, for the mortality rates, the average relative standard error is much higher, 5.16 percent.

There are differentials in the relative standard error for the estimates of sub-populations. For example, for the variable want no more children, the relative standard errors as a percent of the estimated mean for the whole country and for the urban areas are 1.7 percent and 5.0 percent, respectively.

For the total sample, the value of the design effect (DEFT), averaged over all variables, is 1.351 which means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.351 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Malawi 2004		
Variable	Estimate	Base Population
WOMEN		
Urban residence	Proportion	All women
Literate	Proportion	All women
No education	Proportion	All women
Secondary education or higher	Proportion	All women
Net attendance ratio for primary school	Ratio	Children 7-12 years
Never married	Proportion	All women
Currently married/in union	Proportion	All women
Married before age 20	Proportion	Women age 20-49
Currently pregnant	Proportion	All women
Children ever born	Mean	All women
Children surviving	Mean	All women
Children ever born to women age 40-49	Mean	Women age 40-49
TFR (0-3 years)	Rate	All women
Knows any contraceptive method	Proportion	Currently married women
Ever used any contraceptive method	Proportion	Currently married women
Currently using any contraceptive method	Proportion	Currently married women
Currently using a modern method	Proportion	Currently married women
Currently using pill	Proportion	Currently married women
Currently using IUD	Proportion	Currently married women
Currently using condom	Proportion	Currently married women
Currently using female sterilization	Proportion	Currently married women
Currently using periodic abstinence	Proportion	Currently married women
Obtained method from public sector source	Proportion	Current users of modern methods
Want no more children	Proportion	Currently married women
Want to delay birth at least 2 years	Proportion	Currently married women
Ideal family size	Mean	All women 15-49
Neonatal mortality (0-4 years)	Rate	Children exposed to the risk of mortality
Postneonatal mortality (0-4 years)	Rate	Children exposed to the risk of mortality
Infant mortality (0-4 years)	Rate	Children exposed to the risk of mortality
Infant mortality (5-9 years)	Rate	Children exposed to the risk of mortality
Infant mortality (10-14 years)	Rate	Children exposed to the risk of mortality
Child mortality (0-4 years)	Rate	Children exposed to the risk of mortality
Under five mortality (0-4 years)	Rate	Children exposed to the risk of mortality
Mothers received tetanus injection for last birth	Proportion	Births in last five years
Mothers received medical assistance at delivery	Proportion	Births in last five years
Child has diarrhoea in the 2 weeks prior to survey	Proportion	Children under 5
Treated with oral rehydration salts (ORS)	Proportion	Children with diarrhoea in two weeks before interview
Taken to a health provider	Proportion	Children with diarrhoea in two weeks before interview
Vaccination card seen	Proportion	Children age 12-23 months
Received BCG	Proportion	Children age 12-23 months
Received DPT (3 doses)	Proportion	Children age 12-23 months
Received polio (3 doses)	Proportion	Children age 12-23 months
Received measles	Proportion	Children age 12-23 months
Fully immunized	Proportion	Children age 12-23 months
Height-for-age (below -2SD)	Proportion	Children age 0-59 months
Weight-for-height (below -2SD)	Proportion	Children under 5 who were measured
Weight-for-age (below -2SD)	Proportion	Children under 5 who were measured
BMI <18.5	Proportion	All women 15-49 who were measured
Has heard of HIV/AIDS	Proportion	All women 15-49
Knows condoms reduce HIV/AIDS	Proportion	All women 15-49
Knows limiting partners reduce HIV/AIDS	Proportion	All women 15-49
HIV positive	Proportion	All women 15-49 tested for HIV
MEN		
Urban residence	Proportion	All men 15-54
Literate	Proportion	All men15-54
No education	Proportion	All men15-54
Secondary education or higher	Proportion	All men 15-54
Never married	Proportion	All men15-54
Currently married/in union	Proportion	All men15-54
Married before age 20	Proportion	Men age 20-49
Knows any contraceptive method	Proportion	All men15-54
Want no more children	Proportion	Currently married men15-54
Want to delay birth at least 2 years	Proportion	Currently married men15-54
Ideal family size	Mean	All men 15-54
Has heard of HIV/AIDS	Proportion	All men15-54
Knows condoms reduce HIV/AIDS	Proportion	All men15-54
Knows limiting partners reduce HIV/AIDS	Proportion	All men 15-54
HIV postitive	Proportion	All men 15-49 tested for HIV

Table B.2 Sampling errors: Total sample, Malawi 2004								
			Number of cases				Confidence limits	
		Standard	Un-		Design	Relative		
	Value	Error	weighted	Weighted	Effect	error		
Variable	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	0.178	0.008	11,698	11,698	2.125	0.042	0.162	0.193
Literate	0.624	0.007	11,698	11,698	1.648	0.012	0.609	0.638
No education	0.234	0.006	11,698	11,698	1.499	0.025	0.222	0.245
Secondary education or higher	0.155	0.006	11,698	11,698	1.792	0.039	0.143	0.167
Net attendance ratio for primary school	0.820	0.006	15,035	14,984	1.579	0.007	0.809	0.832
Never married	0.168	0.006	11,698	11,698	1.612	0.033	0.157	0.180
Currently married/in union	0.711	0.007	11,698	11,698	1.658	0.010	0.697	0.724
Married before age 20	0.733	0.006	9,291	9,306	1.219	0.008	0.722	0.745
Currently pregnant	0.121	0.004	11,698	11,698	1.213	0.030	0.113	0.128
Children ever born	3.031	0.032	11,698	11,698	1.279	0.011	2.966	3.095
Children surviving	2.488	0.026	11,698	11,698	1.286	0.011	2.435	2.540
Children ever born to women age 40-49	6.550	0.080	1,710	1,684	1.188	0.012	6.391	6.709
TFR (0-3 years)	6.043	0.101	na	33,006	1.396	0.017	5.841	6.245
Knows any contraceptive method	0.986	0.002	8,385	8,312	1.492	0.002	0.982	0.990
Ever used any contraceptive method	0.603	0.007	8,385	8,312	1.349	0.012	0.588	0.617
Currently using any contraceptive method	0.325	0.007	8,385	8,312	1.359	0.021	0.311	0.339
Currently using a modern method	0.281	0.007	8,385	8,312	1.387	0.024	0.268	0.295
Currently using pill	0.020	0.002	8,385	8,312	1.129	0.087	0.016	0.023
Currently using IUD	0.001	0.000	8,385	8,312	1.083	0.342	0.000	0.002
Currently using condom	0.018	0.002	8,385	8,312	1.297	0.106	0.014	0.021
Currently using female sterilization	0.058	0.003	8,385	8,312	1.311	0.057	0.052	0.065
Currently using periodic abstinence	0.005	0.001	8,385	8,312	1.148	0.183	0.003	0.006
Obtained method from public sector source	0.665	0.014	2,534	2,620	1.540	0.022	0.636	0.694
Want no more children	0.409	0.007	8,385	8,312	1.263	0.017	0.395	0.422
Want to delay birth at least 2 years	0.382	0.006	8,385	8,312	1.122	0.016	0.370	0.394
Ideal family size	4.059	0.025	11,285	11,304	1.504	0.006	4.009	4.108
Neonatal mortality (0-4 years)	27.141	2.024	10,971	10,827	1.182	0.075	23.092	31.190
Postneonatal mortality (0-4 years)	48.997	2.480	11,016	10,872	1.128	0.051	44.037	53.956
Infant mortality (0-4 years)	76.138	3.475	11,018	10,874	1.271	0.046	69.188	83.088
Child mortality (0-4 years)	61.697	3.209	11,192	11,047	1.267	0.052	55.279	68.116
Under 5 mortality (0-4 years)	133.138	4.571	11,241	11,096	1.277	0.034	123.996	142.279
Mothers received tetanus injection for last birth	0.846	0.006	7,309	7,271	1.341	0.007	0.835	0.857
Mothers received medical assistance at delivery	0.570	0.011	10,914	10,771	1.916	0.019	0.549	0.592
Child had diarrhoea in two weeks prior to survey	0.223	0.006	9,858	9,777	1.336	0.025	0.211	0.234
Treated with oral rehydration salts (ORS)	0.611	0.013	2,212	2,177	1.208	0.021	0.585	0.637
Taken to a health provider	0.334	0.013	2,212	2,177	1.227	0.038	0.308	0.359
Vaccination card seen	0.743	0.012	2,233	2,194	1.277	0.016	0.719	0.767
Received BCG	0.914	0.009	2,233	2,194	1.471	0.010	0.896	0.932
Received DPT (3 doses)	0.815	0.013	2,233	2,194	1.502	0.015	0.790	0.841
Received polio (3 doses)	0.777	0.012	2,233	2,194	1.347	0.016	0.752	0.801
Received measles	0.787	0.011	2,233	2,194	1.186	0.013	0.766	0.808
Fully immunized	0.644	0.015	2,233	2,194	1.427	0.023	0.615	0.674
Height-for-age (below -2SD)	0.478	0.008	8,812	8,520	1.356	0.016	0.462	0.493
Weight-for-height (below -2SD)	0.052	0.003	8,812	8,520	1.295	0.062	0.045	0.058
Weight-for-age (below -2SD)	0.220	0.006	8,812	8,520	1.329	0.028	0.208	0.233
BMI <18.5	0.092	0.004	9,432	9,280	1.352	0.044	0.084	0.101
Has heard of HIV/AIDS	0.986	0.002	11,698	11,698	1.478	0.002	0.983	0.989
Knows condoms reduce HIV/AIDS	0.573	0.007	11,698	11,698	1.456	0.012	0.560	0.586
Knows limiting partners reduces HIV/AIDS	0.676	0.007	11,698	11,698	1.508	0.010	0.663	0.689
HIV Positive	0.133	0.007	2,864	2,686	1.099	0.052	0.119	0.147
MEN								
Urban residence	0.205	0.017	3,261	3,261	2.457	0.085	0.170	0.240
Literate	0.793	0.009	3,261	3,261	1.292	0.012	0.775	0.812
No education	0.117	0.008	3,261	3,261	1.344	0.065	0.102	0.133
Secondary education or higher	0.263	0.012	3,261	3,261	1.497	0.044	0.240	0.286
Never married	0.332	0.012	3,261	3,261	1.431	0.036	0.309	0.356
Currently married/in union	0.638	0.012	3,261	3,261	1.419	0.019	0.614	0.661
Married before age 20	0.217	0.009	2,611	2,612	1.132	0.042	0.198	0.235
Knows any contraceptive method	0.988	0.004	2,114	2,079	1.615	0.004	0.981	0.996
Want no more children	0.384	0.013	2,114	2,079	1.221	0.034	0.358	0.410
Want to delay birth at least 2 years	0.396	0.012	2,114	2,079	1.150	0.031	0.372	0.421
Ideal family size	4.007	0.048	3,112	3,119	1.344	0.012	3.911	4.103
Has heard of HIV/AIDS	0.995	0.001	3,261	3,261	1.215	0.001	0.992	0.998
Knows condoms reduce HIV/AIDS	0.751	0.009	3,261	3,261	1.148	0.012	0.733	0.768
Knows limiting partners reduces HIV/AIDS	0.802	0.011	3,261	3,261	1.604	0.014	0.780	0.824
HIV Positive	0.102	0.009	2,272	2,465	1.338	0.083	0.085	0.119
na = Not applicable								

Table B.3 Sampling errors: Urban sample, Malawi 2004								
			Number of cases				Confidence limits	
		Standard	Un-		Design	Relative		
	Value	Error	weighted	Weighted	Effect	error		
Variable	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	1.000	0.000	1,640	2,076	na	0.000	1.000	1.000
Literate	0.840	0.022	1,640	2,076	2.410	0.026	0.797	0.884
No education	0.082	0.012	1,640	2,076	1.821	0.150	0.058	0.107
Secondary education or higher	0.402	0.022	1,640	2,076	1.836	0.055	0.358	0.447
Net attendance ratio for primary school	0.892	0.013	1,671	2,108	1.481	0.014	0.866	0.917
Never married	0.257	0.025	1,640	2,076	2.333	0.098	0.207	0.307
Currently married/in union	0.644	0.030	1,640	2,076	2.504	0.046	0.585	0.703
Married before age 20	0.603	0.018	1,261	1,621	1.295	0.030	0.567	0.638
Currently pregnant	0.089	0.008	1,640	2,076	1.145	0.091	0.073	0.105
Children ever born	2.269	0.087	1,640	2,076	1.497	0.038	2.094	2.444
Children surviving	1.970	0.082	1,640	2,076	1.656	0.042	1.806	2.134
Children ever born to women age 40-49	5.744	0.186	184	230	0.980	0.032	5.372	6.116
TFR (0-3 years)	4.243	0.253	na	5,832	1.546	0.060	3.738	4.748
Knows any contraceptive method	0.993	0.003	1,063	1,337	1.347	0.003	0.986	1.000
Ever used any contraceptive method	0.610	0.015	1,063	1,337	1.018	0.025	0.580	0.640
Currently using any contraceptive method	0.372	0.016	1,063	1,337	1.085	0.043	0.340	0.404
Currently using a modern method	0.347	0.015	1,063	1,337	1.059	0.045	0.316	0.378
Currently using pill	0.032	0.006	1,063	1,337	1.062	0.180	0.020	0.043
Currently using IUD	0.002	0.001	1,063	1,337	0.844	0.574	0.000	0.004
Currently using condom	0.011	0.004	1,063	1,337	1.097	0.314	0.004	0.019
Currently using female sterilization	0.064	0.010	1,063	1,337	1.334	0.157	0.044	0.084
Currently using periodic abstinence	0.006	0.003	1,063	1,337	1.128	0.465	0.000	0.011
Obtained method from public sector source	0.636	0.034	437	552	1.480	0.054	0.568	0.704
Want no more children	0.432	0.021	1,063	1,337	1.412	0.050	0.389	0.475
Want to delay birth at least 2 years	0.354	0.013	1,063	1,337	0.901	0.037	0.327	0.380
Ideal family size	3.410	0.067	1,597	2,015	1.752	0.020	3.276	3.544
Neonatal mortality (0-4 years)	22.387	4.222	2,065	2,575	1.106	0.189	13.943	30.831
Postneonatal mortality (0-4 years)	37.810	5.543	2,067	2,578	1.216	0.147	26.725	48.895
Infant mortality (0-4 years)	60.197	8.006	2,067	2,578	1.333	0.133	44.184	76.210
Child mortality (0-4 years)	59.777	7.794	2,084	2,603	1.190	0.130	44.189	75.364
Under 5 mortality (0-4 years)	116.375	10.632	2,086	2,606	1.209	0.091	95.110	137.640
Mothers received tetanus injection for last birth	0.900	0.010	835	1,041	0.986	0.011	0.879	0.921
Mothers received medical assistance at delivery	0.838	0.022	1,137	1,425	1.701	0.026	0.795	0.881
Child had diarrhoea in two weeks prior to survey	0.175	0.024	1,061	1,341	2.056	0.136	0.127	0.222
Treated with oral rehydration salts (ORS)	0.670	0.036	181	234	1.052	0.054	0.597	0.743
Taken to a health provider	0.378	0.050	181	234	1.397	0.132	0.278	0.479
Vaccination card seen	0.737	0.038	230	274	1.268	0.052	0.661	0.813
Received BCG	0.972	0.013	230	274	1.197	0.014	0.945	0.999
Received DPT (3 doses)	0.898	0.034	230	274	1.677	0.038	0.829	0.967
Received polio (3 doses)	0.817	0.031	230	274	1.192	0.038	0.754	0.880
Received measles	0.868	0.031	230	274	1.331	0.035	0.806	0.929
Fully immunized	0.707	0.040	230	274	1.281	0.056	0.628	0.787
Height-for-age (below -2SD)	0.378	0.023	892	1,071	1.291	0.062	0.332	0.425
Weight-for-height (below -2SD)	0.059	0.008	892	1,071	1.041	0.145	0.042	0.076
Weight-for-age (below -2SD)	0.168	0.019	892	1,071	1.412	0.115	0.130	0.207
BMI <18.5	0.055	0.009	1,321	1,600	1.427	0.166	0.037	0.073
Has heard of HIV/AIDS	0.992	0.003	1,640	2,076	1.544	0.003	0.986	0.999
Knows condoms reduce HIV/AIDS	0.548	0.018	1,640	2,076	1.432	0.032	0.512	0.583
Knows limiting partners reduces HIV/AIDS	0.667	0.016	1,640	2,076	1.374	0.024	0.635	0.699
HIV Positive	0.180	0.017	373	410	0.861	0.095	0.145	0.214
MEN								
Urban residence	1.000	0.000	507	669	na	0.000	1.000	1.000
Literate	0.921	0.010	507	669	0.838	0.011	0.901	0.941
No education	0.052	0.011	507	669	1.096	0.208	0.030	0.073
Secondary education or higher	0.509	0.029	507	669	1.321	0.058	0.450	0.567
Never married	0.436	0.030	507	669	1.339	0.068	0.377	0.495
Currently married/in union	0.531	0.031	507	669	1.394	0.058	0.469	0.593
Married before age 20	0.179	0.019	410	541	0.985	0.104	0.141	0.216
Knows any contraceptive method	0.977	0.018	269	355	2.016	0.019	0.941	1.014
Want no more children	0.385	0.038	269	355	1.264	0.098	0.310	0.461
Want to delay birth at least 2 years	0.317	0.026	269	355	0.929	0.083	0.264	0.370
Ideal family size	3.538	0.090	486	634	1.350	0.026	3.358	3.719
Has heard of HIV/AIDS	0.997	0.003	507	669	1.215	0.003	0.991	1.003
Knows condoms reduce HIV/AIDS	0.735	0.017	507	669	0.880	0.023	0.700	0.769
Knows limiting partners reduces HIV/AIDS	0.803	0.031	507	669	1.735	0.038	0.742	0.864
HIV Positive	0.163	0.030	346	462	1.516	0.185	0.102	0.224

na = Not applicable

Table B.4 Sampling errors: Rural sample, Malawi 2004								
			Number of cases				Confidence limits	
		Standard	Un-		Design	Relative		
	Value	Error	weighted	Weighted	Effect	error		
Variable	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	0.000	0.000	10,058	9,621	na	na	0.000	0.000
Literate	0.577	0.008	10,058	9,621	1.567	0.013	0.561	0.592
No education	0.266	0.007	10,058	9,621	1.493	0.025	0.253	0.280
Secondary education or higher	0.101	0.006	10,058	9,621	2.033	0.060	0.089	0.114
Net attendance ratio for primary school	0.809	0.006	13,364	12,877	1.573	0.008	0.796	0.821
Never married	0.149	0.004	10,058	9,621	1.254	0.030	0.140	0.158
Currently married/in union	0.725	0.006	10,058	9,621	1.305	0.008	0.713	0.737
Married before age 20	0.761	0.006	8,030	7,685	1.261	0.008	0.749	0.773
Currently pregnant	0.128	0.004	10,058	9,621	1.219	0.032	0.119	0.136
Children ever born	3.195	0.034	10,058	9,621	1.249	0.011	3.126	3.264
Children surviving	2.600	0.027	10,058	9,621	1.211	0.010	2.546	2.654
Children ever born to women age 40-49	6.677	0.084	1,526	1,454	1.181	0.013	6.509	6.845
TFR (0-3 years)	6.403	0.094	na	27,174	1.265	0.015	6.215	6.592
Knows any contraceptive method	0.985	0.002	7,322	6,975	1.519	0.002	0.980	0.989
Ever used any contraceptive method	0.601	0.008	7,322	6,975	1.411	0.013	0.585	0.618
Currently using any contraceptive method	0.316	0.008	7,322	6,975	1.401	0.024	0.300	0.331
Currently using a modern method	0.269	0.007	7,322	6,975	1.427	0.027	0.254	0.284
Currently using pill	0.017	0.002	7,322	6,975	1.145	0.101	0.014	0.021
Currently using IUD	0.001	0.000	7,322	6,975	1.150	0.418	0.000	0.002
Currently using condom	0.019	0.002	7,322	6,975	1.333	0.113	0.015	0.023
Currently using female sterilization	0.057	0.004	7,322	6,975	1.295	0.061	0.050	0.064
Currently using periodic abstinence	0.004	0.001	7,322	6,975	1.141	0.198	0.003	0.006
Obtained method from public sector source	0.673	0.016	2,097	2,068	1.576	0.024	0.641	0.705
Want no more children	0.404	0.007	7,322	6,975	1.219	0.017	0.390	0.418
Want to delay birth at least 2 years	0.387	0.007	7,322	6,975	1.173	0.017	0.374	0.400
Ideal family size	4.199	0.026	9,688	9,289	1.446	0.006	4.148	4.251
Neonatal mortality (0-4 years)	39.020	2.127	17,792	16,908	1.261	0.055	34.765	43.275
Postneonatal mortality (0-4 years)	58.517	2.119	17,834	16,941	1.106	0.036	54.279	62.754
Infant mortality (0-4 years)	97.537	2.993	17,836	16,943	1.184	0.031	91.552	103.522
Child mortality (0-4 years)	73.574	2.784	18,024	17,138	1.177	0.038	68.007	79.142
Under 5 mortality (0-4 years)	163.935	3.815	18,070	17,175	1.171	0.023	156.304	171.566
Mothers received tetanus injection for last birth	0.837	0.006	6,474	6,231	1.376	0.008	0.824	0.850
Mothers received medical assistance at delivery	0.530	0.011	9,777	9,347	1.890	0.021	0.507	0.552
Child had diarrhoea in two weeks prior to survey	0.230	0.005	8,797	8,436	1.170	0.023	0.220	0.241
Treated with oral rehydration salts (ORS)	0.604	0.014	2,031	1,943	1.245	0.023	0.576	0.632
Taken to a health provider	0.328	0.013	2,031	1,943	1.232	0.040	0.302	0.355
Vaccination card seen	0.744	0.013	2,003	1,920	1.283	0.017	0.719	0.770
Received BCG	0.906	0.010	2,003	1,920	1.498	0.011	0.886	0.926
Received DPT (3 doses)	0.803	0.013	2,003	1,920	1.490	0.017	0.777	0.830
Received polio (3 doses)	0.771	0.013	2,003	1,920	1.380	0.017	0.745	0.797
Received measles	0.776	0.011	2,003	1,920	1.209	0.015	0.753	0.798
Fully immunized	0.635	0.016	2,003	1,920	1.465	0.025	0.603	0.667
Height-for-age (below -2SD)	0.492	0.008	7,920	7,449	1.324	0.016	0.476	0.508
Weight-for-height (below -2SD)	0.051	0.003	7,920	7,449	1.340	0.068	0.044	0.057
Weight-for-age (below -2SD)	0.228	0.006	7,920	7,449	1.295	0.028	0.215	0.241
BMI <18.5	0.100	0.004	8,111	7,680	1.322	0.044	0.091	0.109
Has heard of HIV/AIDS	0.984	0.002	10,058	9,621	1.485	0.002	0.981	0.988
Knows condoms reduce HIV/AIDS	0.578	0.007	10,058	9,621	1.447	0.012	0.564	0.593
Knows limiting partners reduces HIV/AIDS	0.678	0.007	10,058	9,621	1.528	0.010	0.664	0.693
HIV Positive	0.125	0.008	2,491	2,276	1.138	0.060	0.110	0.140
MEN								
Urban residence	0.000	0.000	2,754	2,593	na	na	0.000	0.000
Literate	0.760	0.011	2,754	2,593	1.292	0.014	0.739	0.781
No education	0.134	0.009	2,754	2,593	1.335	0.065	0.117	0.152
Secondary education or higher	0.200	0.011	2,754	2,593	1.411	0.054	0.179	0.222
Never married	0.306	0.012	2,754	2,593	1.321	0.038	0.283	0.329
Currently married/in union	0.665	0.012	2,754	2,593	1.304	0.018	0.642	0.689
Married before age 20	0.227	0.011	2,201	2,070	1.185	0.047	0.206	0.248
Knows any contraceptive method	0.990	0.003	1,845	1,724	1.167	0.003	0.985	0.996
Want no more children	0.383	0.014	1,845	1,724	1.194	0.035	0.356	0.410
Want to delay birth at least 2 years	0.413	0.014	1,845	1,724	1.185	0.033	0.385	0.440
Ideal family size	4.127	0.052	2,626	2,485	1.276	0.013	4.023	4.231
Has heard of HIV/AIDS	0.995	0.002	2,754	2,593	1.221	0.002	0.991	0.998
Knows condoms reduce HIV/AIDS	0.755	0.010	2,754	2,593	1.215	0.013	0.735	0.775
Knows limiting partners reduces HIV/AIDS	0.802	0.012	2,754	2,593	1.533	0.015	0.778	0.825
HIV Positive	0.088	0.008	1,926	2,003	1.259	0.092	0.072	0.104

na = Not applicable

Table B.5 Sampling errors: Northern Region, Malawi 2004

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.198	0.010	1,597	1,552	0.985	0.050	0.178	0.218
Literate	0.782	0.017	1,597	1,552	1.628	0.022	0.748	0.816
No education	0.087	0.010	1,597	1,552	1.453	0.118	0.066	0.107
Secondary education or higher	0.221	0.020	1,597	1,552	1.911	0.090	0.181	0.260
Net attendance ratio for primary school	0.922	0.007	1,993	1,922	1.092	0.007	0.908	0.936
Never married	0.202	0.012	1,597	1,552	1.182	0.059	0.179	0.226
Currently married/in union	0.700	0.014	1,597	1,552	1.221	0.020	0.672	0.728
Married before age 20	0.754	0.013	1,214	1,181	1.018	0.017	0.729	0.779
Currently pregnant	0.112	0.008	1,597	1,552	1.058	0.075	0.095	0.129
Children ever born	2.934	0.065	1,597	1,552	0.988	0.022	2.803	3.065
Children surviving	2.535	0.057	1,597	1,552	0.999	0.022	2.422	2.649
Children ever born to women age 40-49	6.571	0.140	246	251	0.942	0.021	6.292	6.851
TFR (0-3 years)	5.580	0.188	na	4,312	1.130	0.034	5.204	5.956
Knows any contraceptive method	0.996	0.002	1,109	1,087	1.021	0.002	0.992	1.000
Ever used any contraceptive method	0.760	0.018	1,109	1,087	1.396	0.024	0.724	0.796
Currently using any contraceptive method	0.412	0.020	1,109	1,087	1.335	0.048	0.372	0.451
Currently using a modern method	0.287	0.021	1,109	1,087	1.568	0.074	0.245	0.330
Currently using pill	0.037	0.006	1,109	1,087	1.109	0.169	0.025	0.050
Currently using IUD	0.001	0.001	1,109	1,087	0.877	0.706	0.000	0.003
Currently using condom	0.067	0.011	1,109	1,087	1.467	0.165	0.045	0.089
Currently using female sterilization	0.066	0.008	1,109	1,087	1.061	0.120	0.050	0.082
Currently using periodic abstinence	0.005	0.002	1,109	1,087	1.005	0.437	0.001	0.009
Obtained method from public sector source	0.575	0.055	364	359	2.136	0.096	0.464	0.686
Want no more children	0.381	0.015	1,109	1,087	0.995	0.038	0.352	0.410
Want to delay birth at least 2 years	0.411	0.013	1,109	1,087	0.902	0.032	0.384	0.437
Ideal family size	4.237	0.070	1,554	1,508	1.557	0.017	4.097	4.377
Neonatal mortality (0-4 years)	38.500	4.486	2,459	2,430	1.059	0.117	29.528	47.472
Postneonatal mortality (0-4 years)	43.656	4.861	2,462	2,433	1.098	0.111	33.933	53.379
Infant mortality (0-4 years)	82.156	5.755	2,462	2,433	0.953	0.070	70.647	93.665
Child mortality (0-4 years)	41.279	5.406	2,477	2,448	1.085	0.131	30.467	52.091
Under 5 mortality (0-4 years)	120.044	7.572	2,480	2,452	0.986	0.063	104.900	135.188
Mothers received tetanus injection for last birth	0.854	0.014	934	924	1.254	0.017	0.825	0.883
Mothers received medical assistance at delivery	0.667	0.026	1,349	1,345	1.733	0.038	0.616	0.718
Child had diarrhoea in two weeks prior to survey	0.123	0.011	1,243	1,239	1.238	0.091	0.101	0.146
Treated with oral rehydration salts (ORS)	0.485	0.051	149	153	1.248	0.105	0.384	0.587
Taken to a health provider	0.228	0.036	149	153	1.056	0.156	0.157	0.299
Vaccination card seen	0.788	0.033	253	250	1.288	0.042	0.722	0.854
Received BCG	0.939	0.013	253	250	0.898	0.014	0.912	0.966
Received DPT (3 doses)	0.897	0.023	253	250	1.201	0.026	0.850	0.943
Received polio (3 doses)	0.824	0.032	253	250	1.324	0.039	0.760	0.888
Received measles	0.849	0.023	253	250	1.005	0.027	0.803	0.894
Fully immunized	0.725	0.039	253	250	1.373	0.053	0.648	0.802
Height-for-age (below -2SD)	0.424	0.016	1,212	1,210	1.082	0.038	0.392	0.456
Weight-for-height (below -2SD)	0.059	0.007	1,212	1,210	1.037	0.123	0.044	0.073
Weight-for-age (below -2SD)	0.177	0.010	1,212	1,210	0.845	0.054	0.158	0.196
BMI <18.5	0.088	0.011	1,340	1,309	1.428	0.125	0.066	0.110
Has heard of HIV/AIDS	0.999	0.001	1,597	1,552	0.877	0.001	0.998	1.000
Knows condoms reduce HIV/AIDS	0.637	0.018	1,597	1,552	1.526	0.029	0.600	0.674
Knows limiting partners reduces HIV/AIDS	0.779	0.013	1,597	1,552	1.286	0.017	0.752	0.805
HIV Positive	0.104	0.015	448	403	1.043	0.145	0.074	0.134
MEN								
Urban residence	0.177	0.017	456	423	0.944	0.096	0.143	0.211
Literate	0.843	0.017	456	423	1.017	0.021	0.808	0.878
No education	0.031	0.008	456	423	1.024	0.270	0.014	0.047
Secondary education or higher	0.296	0.023	456	423	1.059	0.076	0.251	0.342
Never married	0.386	0.024	456	423	1.043	0.062	0.338	0.433
Currently married/in union	0.574	0.024	456	423	1.050	0.042	0.525	0.623
Married before age 20	0.176	0.023	364	336	1.157	0.131	0.130	0.222
Knows any contraceptive method	1.000	0.000	267	243	na	0.000	1.000	1.000
Want no more children	0.295	0.031	267	243	1.098	0.104	0.233	0.356
Want to delay birth at least 2 years	0.504	0.029	267	243	0.937	0.057	0.447	0.561
Ideal family size	4.175	0.123	438	410	1.611	0.029	3.929	4.421
Has heard of HIV/AIDS	0.994	0.003	456	423	0.941	0.003	0.988	1.001
Knows condoms reduce HIV/AIDS	0.650	0.024	456	423	1.064	0.037	0.602	0.697
Knows limiting partners reduces HIV/AIDS	0.885	0.015	456	423	1.025	0.017	0.854	0.915
HIV Positive	0.054	0.010	370	348	0.819	0.178	0.035	0.073

na = Not applicable

Table B.6 Sampling errors: Central Region, Malawi 2004								
			Number of cases				Confidence limits	
		Standard	Un-		Design	Relative		
	Value	Error	weighted	Weighted	Effect	error		
Variable	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	0.175	0.014	4,199	4,734	2.348	0.079	0.148	0.203
Literate	0.609	0.011	4,199	4,734	1.459	0.018	0.587	0.631
No education	0.246	0.009	4,199	4,734	1.353	0.037	0.228	0.264
Secondary education or higher	0.158	0.010	4,199	4,734	1.754	0.063	0.138	0.178
Net attendance ratio for primary school	0.806	0.009	5,874	6,470	1.594	0.012	0.787	0.825
Never married	0.185	0.011	4,199	4,734	1.777	0.057	0.164	0.207
Currently married/in union	0.707	0.013	4,199	4,734	1.873	0.019	0.681	0.733
Married before age 20	0.705	0.011	3,339	3,762	1.345	0.015	0.684	0.727
Currently pregnant	0.123	0.006	4,199	4,734	1.141	0.047	0.111	0.134
Children ever born	3.078	0.051	4,199	4,734	1.185	0.017	2.975	3.180
Children surviving	2.509	0.043	4,199	4,734	1.258	0.017	2.422	2.596
Children ever born to women age 40-49	6.892	0.132	599	654	1.179	0.019	6.628	7.156
TFR (0-3 years)	6.429	0.194	na	13,336	1.497	0.030	6.040	6.817
Knows any contraceptive method	0.979	0.004	3,056	3,346	1.606	0.004	0.971	0.988
Ever used any contraceptive method	0.602	0.013	3,056	3,346	1.415	0.021	0.577	0.627
Currently using any contraceptive method	0.332	0.012	3,056	3,346	1.385	0.036	0.308	0.355
Currently using a modern method	0.298	0.011	3,056	3,346	1.382	0.038	0.275	0.321
Currently using pill	0.019	0.003	3,056	3,346	1.161	0.152	0.013	0.025
Currently using IUD	0.001	0.001	3,056	3,346	1.199	0.623	0.000	0.003
Currently using condom	0.014	0.002	3,056	3,346	1.137	0.174	0.009	0.019
Currently using female sterilization	0.068	0.006	3,056	3,346	1.391	0.093	0.056	0.081
Currently using periodic abstinence	0.004	0.001	3,056	3,346	1.114	0.305	0.002	0.007
Obtained method from public sector source	0.692	0.019	914	1,088	1.259	0.028	0.654	0.730
Want no more children	0.450	0.010	3,056	3,346	1.094	0.022	0.431	0.470
Want to delay birth at least 2 years	0.371	0.010	3,056	3,346	1.101	0.026	0.352	0.390
Ideal family size	3.976	0.032	4,017	4,541	1.220	0.008	3.911	4.041
Neonatal mortality (0-4 years)	34.109	3.219	7,496	8,056	1.296	0.094	27.672	40.547
Postneonatal mortality (0-4 years)	55.521	3.392	7,512	8,068	1.146	0.061	48.737	62.306
Infant mortality (0-4 years)	89.631	5.002	7,512	8,068	1.317	0.056	79.626	99.636
Child mortality (0-4 years)	80.007	4.467	7,600	8,172	1.153	0.056	71.072	88.942
Under 5 mortality (0-4 years)	162.467	6.582	7,616	8,184	1.307	0.041	149.304	175.630
Mothers received tetanus injection for last birth	0.842	0.010	2,681	2,959	1.342	0.011	0.823	0.861
Mothers received medical assistance at delivery	0.520	0.019	4,141	4,494	2.012	0.036	0.482	0.558
Child had diarrhoea in two weeks prior to survey	0.266	0.010	3,723	4,071	1.425	0.039	0.245	0.287
Treated with oral rehydration salts (ORS)	0.578	0.020	1,025	1,083	1.196	0.034	0.538	0.618
Taken to a health provider	0.286	0.018	1,025	1,083	1.165	0.062	0.251	0.321
Vaccination card seen	0.686	0.022	859	921	1.346	0.032	0.641	0.730
Received BCG	0.882	0.017	859	921	1.543	0.020	0.847	0.917
Received DPT (3 doses)	0.754	0.024	859	921	1.579	0.032	0.705	0.802
Received polio (3 doses)	0.707	0.020	859	921	1.239	0.028	0.667	0.747
Received measles	0.725	0.019	859	921	1.192	0.026	0.687	0.763
Fully immunized	0.568	0.026	859	921	1.496	0.046	0.516	0.621
Height-for-age (below -2SD)	0.527	0.014	3,237	3,330	1.440	0.027	0.499	0.555
Weight-for-height (below -2SD)	0.036	0.004	3,237	3,330	1.276	0.120	0.027	0.044
Weight-for-age (below -2SD)	0.225	0.011	3,237	3,330	1.346	0.049	0.203	0.247
BMI <18.5	0.072	0.006	3,275	3,532	1.286	0.082	0.061	0.084
Has heard of HIV/AIDS	0.973	0.004	4,199	4,734	1.503	0.004	0.965	0.980
Knows condoms reduce HIV/AIDS	0.522	0.011	4,199	4,734	1.455	0.022	0.499	0.544
Knows limiting partners reduces HIV/AIDS	0.616	0.013	4,199	4,734	1.708	0.021	0.591	0.642
HIV Positive	0.066	0.008	976	1,032	1.064	0.128	0.049	0.083
MEN								
Urban residence	0.198	0.037	1,261	1,370	3.280	0.186	0.124	0.272
Literate	0.781	0.015	1,261	1,370	1.278	0.019	0.751	0.811
No education	0.138	0.015	1,261	1,370	1.539	0.108	0.108	0.168
Secondary education or higher	0.245	0.019	1,261	1,370	1.573	0.078	0.207	0.283
Never married	0.333	0.021	1,261	1,370	1.592	0.063	0.291	0.376
Currently married/in union	0.646	0.021	1,261	1,370	1.560	0.033	0.604	0.688
Married before age 20	0.198	0.016	1,011	1,092	1.254	0.079	0.167	0.230
Knows any contraceptive method	0.994	0.003	845	885	1.087	0.003	0.988	1.000
Want no more children	0.451	0.021	845	885	1.201	0.046	0.410	0.492
Want to delay birth at least 2 years	0.369	0.019	845	885	1.174	0.053	0.330	0.408
Ideal family size	3.917	0.086	1,187	1,287	1.255	0.022	3.745	4.089
Has heard of HIV/AIDS	0.993	0.003	1,261	1,370	1.211	0.003	0.987	0.998
Knows condoms reduce HIV/AIDS	0.775	0.013	1,261	1,370	1.075	0.016	0.750	0.801
Knows limiting partners reduces HIV/AIDS	0.740	0.021	1,261	1,370	1.662	0.028	0.699	0.782
HIV Positive	0.064	0.013	826	994	1.474	0.197	0.039	0.089

na = Not applicable

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Table B.7 Sampling errors: Southern Region, Malawi 2004								
WOMEN								
Urban residence	0.173	0.012	5,902	5,412	2.502	0.071	0.149	0.198
Literate	0.591	0.012	5,902	5,412	1.858	0.020	0.568	0.615
No education	0.265	0.010	5,902	5,412	1.682	0.036	0.246	0.284
Secondary education or higher	0.133	0.008	5,902	5,412	1.828	0.061	0.117	0.149
Net attendance ratio for primary school	0.805	0.009	7,168	6,592	1.588	0.011	0.787	0.822
Never married	0.144	0.007	5,902	5,412	1.513	0.048	0.130	0.158
Currently married/in union	0.717	0.009	5,902	5,412	1.509	0.012	0.699	0.735
Married before age 20	0.752	0.007	4,738	4,363	1.129	0.009	0.738	0.766
Currently pregnant	0.121	0.006	5,902	5,412	1.299	0.045	0.110	0.132
Children ever born	3.017	0.050	5,902	5,412	1.437	0.017	2.917	3.117
Children surviving	2.456	0.039	5,902	5,412	1.372	0.016	2.379	2.533
Children ever born to women age 40-49	6.256	0.124	865	779	1.263	0.020	6.007	6.504
TFR (0-3 years)	5.844	0.129	na	15,358	1.302	0.022	5.587	6.102
Knows any contraceptive method	0.989	0.002	4,220	3,880	1.221	0.002	0.985	0.993
Ever used any contraceptive method	0.559	0.010	4,220	3,880	1.283	0.018	0.540	0.579
Currently using any contraceptive method	0.294	0.009	4,220	3,880	1.308	0.031	0.276	0.313
Currently using a modern method	0.265	0.009	4,220	3,880	1.278	0.033	0.248	0.283
Currently using pill	0.016	0.002	4,220	3,880	1.063	0.130	0.012	0.020
Currently using IUD	0.001	0.001	4,220	3,880	1.002	0.460	0.000	0.002
Currently using condom	0.007	0.001	4,220	3,880	1.085	0.196	0.004	0.010
Currently using female sterilization	0.048	0.004	4,220	3,880	1.251	0.086	0.039	0.056
Currently using periodic abstinence	0.005	0.001	4,220	3,880	1.212	0.266	0.002	0.008
Obtained method from public sector source	0.668	0.020	1,256	1,173	1.511	0.030	0.628	0.708
Want no more children	0.380	0.011	4,220	3,880	1.421	0.028	0.359	0.402
Want to delay birth at least 2 years	0.383	0.009	4,220	3,880	1.175	0.023	0.365	0.401
Ideal family size	4.079	0.041	5,714	5,254	1.730	0.010	3.997	4.160
Neonatal mortality (0-4 years)	38.783	2.891	9,902	8,997	1.259	0.075	33.002	44.565
Postneonatal mortality (0-4 years)	59.249	2.800	9,927	9,018	1.094	0.047	53.650	64.849
Infant mortality (0-4 years)	98.033	4.118	9,929	9,020	1.194	0.042	89.796	106.269
Child mortality (0-4 years)	72.605	3.626	10,031	9,121	1.162	0.050	65.353	79.858
Under 5 mortality (0-4 years)	163.520	4.967	10,060	9,145	1.137	0.030	153.587	173.454
Mothers received tetanus injection for last birth	0.847	0.008	3,694	3,389	1.346	0.009	0.831	0.863
Mothers received medical assistance at delivery	0.590	0.014	5,424	4,933	1.831	0.024	0.561	0.618
Child had diarrhoea in two weeks prior to survey	0.211	0.007	4,892	4,468	1.209	0.034	0.197	0.225
Treated with oral rehydration salts (ORS)	0.670	0.017	1,038	942	1.137	0.026	0.636	0.704
Taken to a health provider	0.406	0.019	1,038	942	1.190	0.046	0.368	0.443
Vaccination card seen	0.784	0.014	1,121	1,023	1.084	0.017	0.757	0.811
Received BCG	0.937	0.010	1,121	1,023	1.296	0.010	0.918	0.957
Received DPT (3 doses)	0.851	0.014	1,121	1,023	1.283	0.016	0.823	0.879
Received polio (3 doses)	0.827	0.016	1,121	1,023	1.403	0.019	0.795	0.860
Received measles	0.828	0.013	1,121	1,023	1.113	0.016	0.802	0.854
Fully immunized	0.693	0.017	1,121	1,023	1.233	0.025	0.658	0.727
Height-for-age (below -2SD)	0.453	0.010	4,363	3,980	1.292	0.022	0.433	0.473
Weight-for-height (below -2SD)	0.063	0.005	4,363	3,980	1.389	0.085	0.052	0.073
Weight-for-age (below -2SD)	0.230	0.009	4,363	3,980	1.401	0.040	0.211	0.248
BMI <18.5	0.110	0.006	4,817	4,439	1.383	0.057	0.097	0.122
Has heard of HIV/AIDS	0.993	0.001	5,902	5,412	1.104	0.001	0.991	0.996
Knows condoms reduce HIV/AIDS	0.600	0.009	5,902	5,412	1.425	0.015	0.581	0.618
Knows limiting partners reduces HIV/AIDS	0.699	0.007	5,902	5,412	1.216	0.010	0.685	0.714
HIV Positive	0.198	0.011	1,440	1,251	1.079	0.057	0.176	0.220
MEN								
Urban residence	0.220	0.018	1,544	1,468	1.751	0.084	0.183	0.256
Literate	0.791	0.014	1,544	1,468	1.372	0.018	0.762	0.819
No education	0.124	0.010	1,544	1,468	1.151	0.078	0.104	0.143
Secondary education or higher	0.271	0.018	1,544	1,468	1.557	0.065	0.236	0.306
Never married	0.316	0.016	1,544	1,468	1.333	0.050	0.285	0.348
Currently married/in union	0.648	0.017	1,544	1,468	1.367	0.026	0.615	0.681
Married before age 20	0.245	0.013	1,236	1,183	1.032	0.052	0.220	0.270
Knows any contraceptive method	0.980	0.008	1,002	951	1.783	0.008	0.964	0.996
Want no more children	0.344	0.018	1,002	951	1.216	0.053	0.307	0.380
Want to delay birth at least 2 years	0.394	0.018	1,002	951	1.174	0.046	0.358	0.431
Ideal family size	4.040	0.059	1,487	1,422	1.343	0.015	3.922	4.159
Has heard of HIV/AIDS	0.998	0.002	1,544	1,468	1.293	0.002	0.995	1.000
Knows condoms reduce HIV/AIDS	0.757	0.014	1,544	1,468	1.242	0.018	0.730	0.784
Knows limiting partners reduces HIV/AIDS	0.836	0.014	1,544	1,468	1.458	0.016	0.808	0.863
HIV Positive	0.151	0.014	1,076	1,122	1.255	0.091	0.124	0.178

na = Not applicable

Variable	Value (R)	Standard Error (SE)	Un-weighted (N)	Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	R+2SE
Table B.8 Sampling errors: Blantyre District, Malawi 2004								
				Number of cases			**Confidence limits**	
WOMEN								
Urban residence	0.577	0.042	703	914	2.238	0.072	0.493	0.660
Literate	0.750	0.018	703	914	1.130	0.025	0.713	0.787
No education	0.129	0.014	703	914	1.099	0.108	0.101	0.157
Secondary education or higher	0.283	0.026	703	914	1.505	0.090	0.232	0.334
Net attendance ratio for primary school	0.865	0.018	785	1,021	1.283	0.021	0.829	0.901
Never married	0.187	0.025	703	914	1.719	0.135	0.136	0.238
Currently married/in union	0.703	0.030	703	914	1.759	0.043	0.642	0.764
Married before age 20	0.670	0.019	550	727	0.967	0.029	0.631	0.709
Currently pregnant	0.119	0.015	703	914	1.224	0.126	0.089	0.148
Children ever born	2.547	0.152	703	914	1.654	0.060	2.243	2.850
Children surviving	2.109	0.109	703	914	1.484	0.052	1.891	2.326
Children ever born to women age 40-49	5.423	0.470	74	94	1.435	0.087	4.483	6.362
TFR (0-3 years)	4.753	0.318	na	2,600	1.378	0.067	4.116	5.389
Knows any contraceptive method	0.980	0.007	487	643	1.172	0.008	0.965	0.995
Ever used any contraceptive method	0.683	0.012	487	643	0.549	0.017	0.660	0.707
Currently using any contraceptive method	0.365	0.021	487	643	0.952	0.057	0.323	0.406
Currently using a modern method	0.337	0.023	487	643	1.084	0.069	0.290	0.383
Currently using pill	0.021	0.005	487	643	0.747	0.230	0.012	0.031
Currently using IUD	0.002	0.002	487	643	0.887	0.975	0.000	0.005
Currently using condom	0.012	0.006	487	643	1.139	0.474	0.001	0.023
Currently using female sterilization	0.062	0.014	487	643	1.245	0.220	0.035	0.089
Currently using periodic abstinence	0.009	0.005	487	643	1.100	0.528	0.000	0.018
Obtained method from public sector source	0.615	0.044	186	249	1.227	0.071	0.528	0.703
Want no more children	0.413	0.021	487	643	0.922	0.050	0.372	0.455
Want to delay birth at least 2 years	0.367	0.014	487	643	0.663	0.040	0.338	0.396
Ideal family size	3.476	0.081	689	900	1.553	0.023	3.313	3.638
Neonatal mortality (0-4 years)	46.322	11.835	1,003	1,331	1.278	0.255	22.652	69.992
Postneonatal mortality (0-4 years)	43.435	6.484	1,005	1,334	0.957	0.149	30.467	56.404
Infant mortality (0-4 years)	89.757	13.679	1,005	1,334	1.170	0.152	62.398	117.116
Child mortality (0-4 years)	69.413	10.468	1,013	1,348	1.106	0.151	48.476	90.349
Under 5 mortality (0-4 years)	152.940	16.214	1,015	1,351	1.152	0.106	120.512	185.367
Mothers received tetanus injection for last birth	0.842	0.028	395	520	1.523	0.033	0.786	0.897
Mothers received medical assistance at delivery	0.780	0.029	547	724	1.411	0.038	0.721	0.839
Child had diarrhoea in two weeks prior to survey	0.170	0.014	504	670	0.842	0.083	0.142	0.198
Treated with oral rehydration salts (ORS)	0.687	0.041	85	114	0.812	0.059	0.606	0.768
Taken to a health provider	0.477	0.051	85	114	0.967	0.108	0.374	0.580
Vaccination card seen	0.786	0.036	109	147	0.901	0.046	0.714	0.857
Received BCG	0.959	0.026	109	147	1.410	0.027	0.907	1.012
Received DPT (3 doses)	0.957	0.022	109	147	1.148	0.023	0.913	1.001
Received polio (3 doses)	0.929	0.026	109	147	1.093	0.028	0.877	0.982
Received measles	0.930	0.022	109	147	0.845	0.024	0.885	0.975
Fully immunized	0.837	0.040	109	147	1.107	0.048	0.756	0.917
Height-for-age (below -2SD)	0.402	0.027	436	579	1.119	0.068	0.348	0.456
Weight-for-height (below -2SD)	0.048	0.009	436	579	0.952	0.198	0.029	0.066
Weight-for-age (below -2SD)	0.170	0.021	436	579	1.103	0.121	0.129	0.211
BMI <18.5	0.086	0.018	575	761	1.535	0.207	0.050	0.122
Has heard of HIV/AIDS	0.997	0.002	703	914	0.958	0.002	0.994	1.001
Knows condoms reduce HIV/AIDS	0.609	0.028	703	914	1.514	0.046	0.553	0.665
Knows limiting partners reduces HIV/AIDS	0.728	0.016	703	914	0.933	0.022	0.696	0.759
HIV Positive	0.225	0.027	152	211	0.804	0.121	0.170	0.281
MEN								
Urban residence	0.600	0.054	208	316	1.585	0.090	0.493	0.708
Literate	0.908	0.031	208	316	1.537	0.034	0.847	0.970
No education	0.050	0.015	208	316	0.969	0.294	0.020	0.079
Secondary education or higher	0.432	0.055	208	316	1.594	0.127	0.322	0.542
Never married	0.318	0.039	208	316	1.194	0.122	0.240	0.395
Currently married/in union	0.631	0.047	208	316	1.410	0.075	0.536	0.725
Married before age 20	0.168	0.022	178	276	0.766	0.128	0.125	0.211
Knows any contraceptive method	0.993	0.007	128	199	0.935	0.007	0.980	1.000
Want no more children	0.309	0.047	128	199	1.152	0.153	0.215	0.404
Want to delay birth at least 2 years	0.280	0.032	128	199	0.805	0.115	0.215	0.344
Ideal family size	3.605	0.156	202	305	1.479	0.043	3.294	3.917
Has heard of HIV/AIDS	1.000	0.000	208	316	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.758	0.034	208	316	1.159	0.045	0.689	0.827
Knows limiting partners reduces HIV/AIDS	0.874	0.043	208	316	1.861	0.049	0.788	0.960
HIV Positive	0.221	0.038	151	247	1.119	0.172	0.143	0.298
na = Not applicable								

Table B.9 Sampling errors: Kasungu District, Malawi 2004

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.068	0.030	897	497	3.512	0.435	0.009	0.127
Literate	0.604	0.033	897	497	2.041	0.055	0.538	0.671
No education	0.203	0.023	897	497	1.690	0.112	0.157	0.248
Secondary education or higher	0.139	0.028	897	497	2.402	0.199	0.084	0.195
Net attendance ratio for primary school	0.875	0.016	1,223	674	1.542	0.019	0.842	0.908
Never married	0.163	0.021	897	497	1.664	0.126	0.122	0.204
Currently married/in union	0.776	0.021	897	497	1.487	0.027	0.734	0.817
Married before age 20	0.805	0.023	717	397	1.572	0.029	0.758	0.851
Currently pregnant	0.125	0.012	897	497	1.118	0.099	0.100	0.149
Children ever born	3.475	0.132	897	497	1.347	0.038	3.210	3.739
Children surviving	2.720	0.090	897	497	1.194	0.033	2.541	2.900
Children ever born to women age 40-49	7.360	0.185	126	74	0.811	0.025	6.991	7.729
TFR (0-3 years)	6.964	0.340	na	1,390	1.257	0.049	6.285	7.644
Knows any contraceptive method	0.980	0.005	695	385	0.888	0.005	0.970	0.989
Ever used any contraceptive method	0.683	0.022	695	385	1.247	0.032	0.639	0.727
Currently using any contraceptive method	0.384	0.019	695	385	1.039	0.050	0.345	0.422
Currently using a modern method	0.273	0.025	695	385	1.484	0.092	0.223	0.324
Currently using pill	0.030	0.007	695	385	1.070	0.229	0.016	0.044
Currently using IUD	0.000	0.000	695	385	na	na	0.000	0.000
Currently using condom	0.016	0.007	695	385	1.529	0.452	0.002	0.031
Currently using female sterilization	0.059	0.010	695	385	1.165	0.177	0.038	0.080
Currently using periodic abstinence	0.007	0.004	695	385	1.128	0.506	0.000	0.014
Obtained method from public sector source	0.756	0.040	201	111	1.307	0.052	0.677	0.836
Want no more children	0.419	0.022	695	385	1.168	0.052	0.375	0.462
Want to delay birth at least 2 years	0.413	0.023	695	385	1.235	0.056	0.366	0.459
Ideal family size	4.157	0.078	851	468	1.341	0.019	4.000	4.314
Neonatal mortality (0-4 years)	56.217	8.640	1,785	978	1.357	0.154	38.938	73.496
Postneonatal mortality (0-4 years)	61.265	6.593	1,792	983	1.103	0.108	48.079	74.451
Infant mortality (0-4 years)	117.482	12.250	1,792	983	1.453	0.104	92.981	141.983
Child mortality (0-4 years)	84.888	7.519	1,814	994	0.817	0.089	69.851	99.926
Under 5 mortality (0-4 years)	192.398	13.655	1,821	999	1.265	0.071	165.087	219.708
Mothers received tetanus injection for last birth	0.779	0.019	602	330	1.121	0.024	0.741	0.817
Mothers received medical assistance at delivery	0.430	0.039	968	525	2.006	0.090	0.352	0.507
Child had diarrhoea in two weeks prior to survey	0.278	0.013	866	471	0.842	0.046	0.252	0.303
Treated with oral rehydration salts (ORS)	0.483	0.039	245	131	1.144	0.080	0.406	0.560
Taken to a health provider	0.229	0.033	245	131	1.192	0.146	0.163	0.296
Vaccination card seen	0.746	0.043	207	116	1.428	0.058	0.660	0.832
Received BCG	0.846	0.042	207	116	1.700	0.050	0.761	0.931
Received DPT (3 doses)	0.754	0.035	207	116	1.150	0.046	0.685	0.824
Received polio (3 doses)	0.727	0.038	207	116	1.223	0.052	0.650	0.803
Received measles	0.646	0.045	207	116	1.355	0.070	0.556	0.737
Fully immunized	0.534	0.052	207	116	1.514	0.098	0.429	0.639
Height-for-age (below -2SD)	0.561	0.016	816	447	0.886	0.029	0.528	0.594
Weight-for-height (below -2SD)	0.040	0.006	816	447	0.915	0.154	0.028	0.052
Weight-for-age (below -2SD)	0.213	0.020	816	447	1.329	0.095	0.172	0.253
BMI <18.5	0.086	0.017	742	410	1.615	0.194	0.052	0.119
Has heard of HIV/AIDS	0.990	0.003	897	497	0.976	0.003	0.984	0.997
Knows condoms reduce HIV/AIDS	0.496	0.013	897	497	0.764	0.026	0.471	0.522
Knows limiting partners reduces HIV/AIDS	0.707	0.021	897	497	1.403	0.030	0.664	0.749
HIV Positive	0.055	0.014	233	116	0.940	0.257	0.026	0.083
MEN								
Urban residence	0.077	0.037	313	156	2.441	0.478	0.003	0.151
Literate	0.800	0.021	313	156	0.937	0.027	0.757	0.842
No education	0.103	0.016	313	156	0.915	0.153	0.072	0.135
Secondary education or higher	0.183	0.028	313	156	1.285	0.153	0.127	0.240
Never married	0.314	0.031	313	156	1.167	0.098	0.253	0.375
Currently married/in union	0.658	0.031	313	156	1.151	0.047	0.596	0.720
Married before age 20	0.247	0.024	250	125	0.886	0.098	0.199	0.296
Knows any contraceptive method	0.997	0.003	207	103	0.811	0.003	0.991	1.000
Want no more children	0.406	0.045	207	103	1.316	0.111	0.316	0.496
Want to delay birth at least 2 years	0.485	0.045	207	103	1.296	0.093	0.395	0.576
Ideal family size	4.171	0.134	289	141	1.160	0.032	3.902	4.439
Has heard of HIV/AIDS	0.994	0.004	313	156	0.985	0.004	0.985	1.000
Knows condoms reduce HIV/AIDS	0.816	0.030	313	156	1.388	0.037	0.755	0.877
Knows limiting partners reduces HIV/AIDS	0.878	0.020	313	156	1.078	0.023	0.838	0.918
HIV Positive	0.028	0.011	238	116	1.059	0.405	0.005	0.051

na = Not applicable

Table B.10 Sampling errors: Machinga District, Malawi 2004								
			Number of cases				Confidence limits	
		Standard	Un-		Design	Relative		
	Value	Error	weighted	Weighted	Effect	error		
Variable	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	0.086	0.016	772	427	1.551	0.182	0.054	0.117
Literate	0.513	0.023	772	427	1.268	0.045	0.467	0.558
No education	0.386	0.021	772	427	1.201	0.055	0.344	0.428
Secondary education or higher	0.083	0.018	772	427	1.771	0.212	0.048	0.119
Net attendance ratio for primary school	0.790	0.016	1,013	572	1.112	0.021	0.757	0.823
Never married	0.122	0.011	772	427	0.971	0.094	0.099	0.145
Currently married/in union	0.742	0.014	772	427	0.919	0.020	0.713	0.771
Married before age 20	0.765	0.024	621	344	1.415	0.032	0.716	0.813
Currently pregnant	0.106	0.007	772	427	0.638	0.067	0.092	0.121
Children ever born	3.301	0.124	772	427	1.273	0.038	3.053	3.548
Children surviving	2.760	0.097	772	427	1.183	0.035	2.566	2.954
Children ever born to women age 40-49	6.197	0.274	119	66	1.066	0.044	5.649	6.744
TFR (0-3 years)	7.009	0.286	na	1,198	1.261	0.041	6.437	7.580
Knows any contraceptive method	0.996	0.003	574	317	1.190	0.003	0.990	1.002
Ever used any contraceptive method	0.495	0.027	574	317	1.290	0.054	0.441	0.549
Currently using any contraceptive method	0.280	0.020	574	317	1.079	0.072	0.239	0.320
Currently using a modern method	0.238	0.021	574	317	1.156	0.087	0.196	0.279
Currently using pill	0.003	0.003	574	317	1.313	1.007	0.000	0.009
Currently using IUD	0.004	0.003	574	317	1.159	0.726	0.000	0.011
Currently using condom	0.015	0.006	574	317	1.167	0.393	0.003	0.027
Currently using female sterilization	0.037	0.008	574	317	1.041	0.223	0.020	0.053
Currently using periodic abstinence	0.001	0.001	574	317	0.924	1.002	0.000	0.004
Obtained method from public sector source	0.824	0.033	156	84	1.089	0.040	0.757	0.890
Want no more children	0.321	0.019	574	317	0.979	0.060	0.282	0.359
Want to delay birth at least 2 years	0.413	0.025	574	317	1.232	0.061	0.362	0.464
Ideal family size	4.376	0.113	743	411	1.706	0.026	4.150	4.602
Neonatal mortality (0-4 years)	32.744	4.761	1,435	793	0.970	0.145	23.223	42.266
Postneonatal mortality (0-4 years)	44.796	4.992	1,435	792	0.904	0.111	34.812	54.780
Infant mortality (0-4 years)	77.540	5.538	1,436	793	0.773	0.071	66.465	88.616
Child mortality (0-4 years)	57.029	6.602	1,450	800	0.968	0.116	43.824	70.233
Under 5 mortality (0-4 years)	130.147	7.515	1,452	802	0.793	0.058	115.117	145.178
Mothers received tetanus injection for last birth	0.824	0.026	513	284	1.557	0.032	0.771	0.876
Mothers received medical assistance at delivery	0.550	0.034	799	441	1.653	0.062	0.482	0.618
Child had diarrhoea in two weeks prior to survey	0.193	0.015	732	405	1.019	0.076	0.164	0.222
Treated with oral rehydration salts (ORS)	0.570	0.044	136	78	1.061	0.078	0.481	0.658
Taken to a health provider	0.303	0.039	136	78	1.002	0.129	0.224	0.381
Vaccination card seen	0.833	0.028	174	97	1.006	0.034	0.776	0.889
Received BCG	0.873	0.025	174	97	0.978	0.028	0.823	0.922
Received DPT (3 doses)	0.814	0.025	174	97	0.847	0.031	0.764	0.864
Received polio (3 doses)	0.800	0.033	174	97	1.098	0.042	0.733	0.866
Received measles	0.727	0.035	174	97	1.019	0.048	0.657	0.796
Fully immunized	0.611	0.032	174	97	0.868	0.053	0.546	0.676
Height-for-age (below -2SD)	0.448	0.027	677	376	1.326	0.060	0.394	0.501
Weight-for-height (below -2SD)	0.060	0.008	677	376	0.789	0.128	0.045	0.076
Weight-for-age (below -2SD)	0.214	0.017	677	376	1.022	0.080	0.180	0.248
BMI <18.5	0.114	0.012	643	356	0.965	0.106	0.090	0.139
Has heard of HIV/AIDS	0.995	0.003	772	427	1.279	0.003	0.988	1.001
Knows condoms reduce HIV/AIDS	0.549	0.024	772	427	1.327	0.043	0.501	0.596
Knows limiting partners reduces HIV/AIDS	0.563	0.017	772	427	0.930	0.029	0.530	0.597
HIV Positive	0.149	0.023	194	99	0.901	0.155	0.102	0.196
MEN								
Urban residence	0.104	0.022	198	114	1.013	0.211	0.060	0.148
Literate	0.773	0.032	198	114	1.077	0.042	0.709	0.837
No education	0.180	0.030	198	114	1.095	0.166	0.120	0.240
Secondary education or higher	0.224	0.055	198	114	1.863	0.247	0.113	0.334
Never married	0.352	0.038	198	114	1.119	0.108	0.276	0.429
Currently married/in union	0.616	0.037	198	114	1.054	0.059	0.543	0.689
Married before age 20	0.155	0.022	153	85	0.748	0.142	0.111	0.199
Knows any contraceptive method	0.987	0.014	129	70	1.381	0.014	0.959	1.015
Want no more children	0.407	0.048	129	70	1.100	0.117	0.311	0.503
Want to delay birth at least 2 years	0.345	0.046	129	70	1.085	0.132	0.254	0.437
Ideal family size	4.000	0.112	177	103	0.957	0.028	3.776	4.224
Has heard of HIV/AIDS	0.996	0.004	198	114	0.901	0.004	0.988	1.000
Knows condoms reduce HIV/AIDS	0.768	0.038	198	114	1.276	0.050	0.691	0.845
Knows limiting partners reduces HIV/AIDS	0.854	0.034	198	114	1.366	0.040	0.786	0.923
HIV Positive	0.082	0.026	144	86	1.118	0.312	0.030	0.135
na = Not applicable								

Table B.11 Sampling errors: Mangochi District, Malawi 2004								
			Number of cases				Confidence limits	
		Standard	Un-		Design	Relative		
	Value	Error	weighted	Weighted	Effect	error		
Variable	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	0.083	0.018	774	599	1.842	0.220	0.046	0.119
Literate	0.427	0.033	774	599	1.869	0.078	0.360	0.493
No education	0.436	0.030	774	599	1.705	0.070	0.376	0.497
Secondary education or higher	0.080	0.016	774	599	1.613	0.196	0.049	0.112
Net attendance ratio for primary school	0.677	0.029	1,075	855	1.593	0.043	0.618	0.735
Never married	0.116	0.019	774	599	1.633	0.162	0.078	0.153
Currently married/in union	0.730	0.018	774	599	1.108	0.024	0.695	0.766
Married before age 20	0.779	0.018	632	485	1.104	0.023	0.743	0.816
Currently pregnant	0.100	0.012	774	599	1.096	0.118	0.077	0.124
Children ever born	3.321	0.139	774	599	1.438	0.042	3.043	3.598
Children surviving	2.714	0.107	774	599	1.307	0.039	2.499	2.928
Children ever born to women age 40-49	6.525	0.394	112	85	1.408	0.060	5.738	7.312
TFR (0-3 years)	7.178	0.410	na	1,720	1.213	0.057	6.358	7.998
Knows any contraceptive method	0.971	0.007	568	437	0.996	0.007	0.957	0.985
Ever used any contraceptive method	0.465	0.025	568	437	1.208	0.054	0.415	0.516
Currently using any contraceptive method	0.205	0.023	568	437	1.383	0.114	0.158	0.252
Currently using a modern method	0.171	0.016	568	437	0.995	0.092	0.140	0.203
Currently using pill	0.023	0.007	568	437	1.139	0.309	0.009	0.038
Currently using IUD	0.002	0.002	568	437	0.997	0.987	0.000	0.005
Currently using condom	0.006	0.004	568	437	1.127	0.626	0.000	0.013
Currently using female sterilization	0.020	0.005	568	437	0.848	0.247	0.010	0.030
Currently using periodic abstinence	0.007	0.005	568	437	1.369	0.666	0.000	0.017
Obtained method from public sector source	0.629	0.047	108	88	1.000	0.074	0.536	0.723
Want no more children	0.287	0.025	568	437	1.298	0.086	0.238	0.336
Want to delay birth at least 2 years	0.431	0.024	568	437	1.157	0.056	0.383	0.480
Ideal family size	4.527	0.128	736	570	1.483	0.028	4.271	4.783
Neonatal mortality (0-4 years)	45.084	8.711	1,456	1,134	1.411	0.193	27.661	62.506
Postneonatal mortality (0-4 years)	59.337	5.161	1,461	1,137	0.824	0.087	49.016	69.659
Infant mortality (0-4 years)	104.421	9.366	1,461	1,137	1.086	0.090	85.690	123.152
Child mortality (0-4 years)	69.626	7.424	1,474	1,146	0.999	0.107	54.778	84.473
Under 5 mortality (0-4 years)	166.776	10.594	1,479	1,149	1.012	0.064	145.588	187.964
Mothers received tetanus injection for last birth	0.903	0.014	529	411	1.104	0.016	0.875	0.932
Mothers received medical assistance at delivery	0.522	0.045	820	636	2.212	0.087	0.431	0.612
Child had diarrhoea in two weeks prior to survey	0.250	0.014	735	566	0.847	0.055	0.223	0.278
Treated with oral rehydration salts (ORS)	0.595	0.047	174	142	1.250	0.079	0.500	0.689
Taken to a health provider	0.298	0.050	174	142	1.373	0.167	0.198	0.397
Vaccination card seen	0.686	0.032	182	138	0.909	0.046	0.622	0.750
Received BCG	0.925	0.021	182	138	1.057	0.023	0.883	0.967
Received DPT (3 doses)	0.825	0.027	182	138	0.955	0.033	0.770	0.879
Received polio (3 doses)	0.738	0.037	182	138	1.112	0.050	0.664	0.812
Received measles	0.769	0.040	182	138	1.270	0.052	0.688	0.850
Fully immunized	0.595	0.041	182	138	1.098	0.069	0.514	0.677
Height-for-age (below -2SD)	0.483	0.028	647	512	1.358	0.059	0.426	0.540
Weight-for-height (below -2SD)	0.025	0.006	647	512	0.938	0.228	0.014	0.037
Weight-for-age (below -2SD)	0.236	0.020	647	512	1.172	0.087	0.195	0.277
BMI <18.5	0.125	0.016	644	500	1.248	0.130	0.092	0.157
Has heard of HIV/AIDS	0.971	0.006	774	599	1.074	0.007	0.959	0.984
Knows condoms reduce HIV/AIDS	0.534	0.024	774	599	1.326	0.045	0.487	0.582
Knows limiting partners reduces HIV/AIDS	0.557	0.026	774	599	1.440	0.046	0.505	0.608
HIV Positive	0.214	0.039	185	136	1.287	0.182	0.135	0.294
MEN								
Urban residence	0.100	0.015	190	150	0.679	0.148	0.070	0.130
Literate	0.728	0.038	190	150	1.186	0.053	0.651	0.805
No education	0.202	0.037	190	150	1.266	0.183	0.128	0.276
Secondary education or higher	0.238	0.048	190	150	1.553	0.202	0.142	0.334
Never married	0.230	0.043	190	150	1.403	0.186	0.145	0.316
Currently married/in union	0.707	0.034	190	150	1.038	0.049	0.638	0.776
Married before age 20	0.266	0.029	155	125	0.822	0.110	0.207	0.324
Knows any contraceptive method	0.910	0.035	129	106	1.386	0.039	0.840	0.980
Want no more children	0.386	0.058	129	106	1.357	0.151	0.269	0.503
Want to delay birth at least 2 years	0.292	0.035	129	106	0.883	0.122	0.221	0.362
Ideal family size	4.181	0.169	174	138	1.199	0.040	3.844	4.518
Has heard of HIV/AIDS	0.996	0.004	190	150	0.837	0.004	0.989	1.000
Knows condoms reduce HIV/AIDS	0.789	0.028	190	150	0.946	0.036	0.732	0.845
Knows limiting partners reduces HIV/AIDS	0.851	0.029	190	150	1.128	0.034	0.792	0.909
HIV Positive	0.199	0.045	108	108	1.173	0.228	0.106	0.292
na = Not applicable								

Table B.12 Sampling errors: Mzimba District, Malawi 2004

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.212	0.015	953	778	1.115	0.070	0.182	0.241
Literate	0.827	0.014	953	778	1.115	0.017	0.799	0.854
No education	0.082	0.014	953	778	1.601	0.173	0.054	0.111
Secondary education or higher	0.226	0.017	953	778	1.267	0.076	0.192	0.261
Net attendance ratio for primary school	0.931	0.006	1,143	949	0.738	0.006	0.920	0.943
Never married	0.193	0.015	953	778	1.177	0.078	0.162	0.223
Currently married/in union	0.733	0.022	953	778	1.520	0.030	0.689	0.776
Married before age 20	0.783	0.016	726	596	1.044	0.020	0.751	0.815
Currently pregnant	0.117	0.010	953	778	0.951	0.085	0.097	0.137
Children ever born	2.964	0.076	953	778	0.880	0.025	2.813	3.115
Children surviving	2.556	0.063	953	778	0.869	0.025	2.430	2.682
Children ever born to women age 40-49	6.711	0.152	139	121	0.812	0.023	6.407	7.015
TFR (0-3 years)	5.528	0.264	na	2,179	1.114	0.048	5.000	6.056
Knows any contraceptive method	0.994	0.004	676	570	1.135	0.004	0.986	1.001
Ever used any contraceptive method	0.755	0.023	676	570	1.411	0.031	0.708	0.802
Currently using any contraceptive method	0.393	0.025	676	570	1.345	0.064	0.342	0.443
Currently using a modern method	0.278	0.022	676	570	1.297	0.080	0.234	0.323
Currently using pill	0.029	0.007	676	570	1.069	0.236	0.016	0.043
Currently using IUD	0.003	0.002	676	570	0.946	0.706	0.000	0.006
Currently using condom	0.067	0.012	676	570	1.214	0.175	0.043	0.090
Currently using female sterilization	0.065	0.009	676	570	0.979	0.143	0.047	0.084
Currently using periodic abstinence	0.006	0.003	676	570	1.106	0.555	0.000	0.012
Obtained method from public sector source	0.515	0.070	219	175	2.078	0.136	0.375	0.656
Want no more children	0.395	0.019	676	570	0.998	0.048	0.357	0.432
Want to delay birth at least 2 years	0.385	0.018	676	570	0.948	0.046	0.350	0.421
Ideal family size	4.061	0.064	929	753	1.129	0.016	3.934	4.188
Neonatal mortality (0-4 years)	38.272	7.234	1,478	1,246	1.261	0.189	23.803	52.741
Postneonatal mortality (0-4 years)	41.269	6.794	1,478	1,246	1.184	0.165	27.680	54.857
Infant mortality (0-4 years)	79.541	9.059	1,478	1,246	1.133	0.114	61.423	97.658
Child mortality (0-4 years)	35.526	6.160	1,488	1,255	1.072	0.173	23.206	47.847
Under 5 mortality (0-4 years)	112.241	11.107	1,488	1,255	1.137	0.099	90.028	134.454
Mothers received tetanus injection for last birth	0.850	0.020	553	464	1.332	0.023	0.810	0.890
Mothers received medical assistance at delivery	0.659	0.029	799	676	1.532	0.044	0.602	0.717
Child had diarrhoea in two weeks prior to survey	0.157	0.017	743	630	1.294	0.106	0.123	0.190
Treated with oral rehydration salts (ORS)	0.415	0.056	104	99	1.212	0.135	0.303	0.527
Taken to a health provider	0.132	0.026	104	99	0.847	0.199	0.080	0.184
Vaccination card seen	0.811	0.034	153	129	1.074	0.041	0.744	0.878
Received BCG	0.943	0.022	153	129	1.182	0.023	0.899	0.986
Received DPT (3 doses)	0.921	0.028	153	129	1.229	0.031	0.865	0.977
Received polio (3 doses)	0.843	0.041	153	129	1.377	0.049	0.760	0.925
Received measles	0.828	0.036	153	129	1.160	0.043	0.757	0.900
Fully immunized	0.723	0.050	153	129	1.393	0.070	0.622	0.823
Height-for-age (below -2SD)	0.468	0.018	717	614	0.923	0.039	0.432	0.504
Weight-for-height (below -2SD)	0.041	0.008	717	614	1.102	0.203	0.024	0.057
Weight-for-age (below -2SD)	0.179	0.014	717	614	0.994	0.081	0.150	0.208
BMI <18.5	0.084	0.012	802	653	1.255	0.147	0.059	0.109
Has heard of HIV/AIDS	0.998	0.001	953	778	0.956	0.001	0.995	1.001
Knows condoms reduce HIV/AIDS	0.703	0.016	953	778	1.089	0.023	0.671	0.735
Knows limiting partners reduces HIV/AIDS	0.869	0.017	953	778	1.541	0.019	0.836	0.903
HIV Positive	0.064	0.018	245	178	1.127	0.277	0.028	0.099
MEN								
Urban residence	0.219	0.028	274	212	1.106	0.127	0.163	0.274
Literate	0.812	0.027	274	212	1.148	0.033	0.757	0.866
No education	0.030	0.010	274	212	0.991	0.341	0.010	0.051
Secondary education or higher	0.301	0.028	274	212	1.018	0.094	0.244	0.357
Never married	0.369	0.028	274	212	0.964	0.076	0.313	0.425
Currently married/in union	0.607	0.032	274	212	1.083	0.053	0.543	0.671
Married before age 20	0.184	0.030	219	168	1.135	0.162	0.124	0.243
Knows any contraceptive method	1.000	0.000	165	129	na	0.000	1.000	1.000
Want no more children	0.354	0.030	165	129	0.800	0.084	0.294	0.414
Want to delay birth at least 2 years	0.499	0.031	165	129	0.784	0.061	0.438	0.560
Ideal family size	3.993	0.115	260	204	1.171	0.029	3.763	4.224
Has heard of HIV/AIDS	0.993	0.005	274	212	0.971	0.005	0.984	1.000
Knows condoms reduce HIV/AIDS	0.619	0.034	274	212	1.172	0.056	0.550	0.688
Knows limiting partners reduces HIV/AIDS	0.877	0.024	274	212	1.205	0.027	0.829	0.925
HIV Positive	0.039	0.013	216	157	0.999	0.337	0.012	0.066

na = Not applicable

Table B.13 Sampling errors: Salima District, Malawi 2004

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.125	0.027	703	303	2.168	0.217	0.071	0.179
Literate	0.509	0.020	703	303	1.035	0.038	0.470	0.548
No education	0.340	0.021	703	303	1.152	0.061	0.299	0.381
Secondary education or higher	0.113	0.016	703	303	1.339	0.141	0.081	0.146
Net attendance ratio for primary school	0.788	0.020	1,084	465	1.353	0.026	0.747	0.828
Never married	0.139	0.017	703	303	1.325	0.125	0.104	0.173
Currently married/in union	0.761	0.021	703	303	1.333	0.028	0.718	0.803
Married before age 20	0.721	0.016	582	252	0.847	0.022	0.690	0.753
Currently pregnant	0.150	0.012	703	303	0.910	0.082	0.125	0.174
Children ever born	3.137	0.100	703	303	1.008	0.032	2.936	3.338
Children surviving	2.583	0.077	703	303	0.943	0.030	2.430	2.736
Children ever born to women age 40-49	6.495	0.284	95	40	0.989	0.044	5.927	7.063
TFR (0-3 years)	6.815	0.382	na	864	1.233	0.056	6.050	7.580
Knows any contraceptive method	0.984	0.004	532	230	0.770	0.004	0.976	0.993
Ever used any contraceptive method	0.441	0.027	532	230	1.256	0.061	0.387	0.495
Currently using any contraceptive method	0.207	0.017	532	230	0.975	0.083	0.173	0.242
Currently using a modern method	0.196	0.018	532	230	1.040	0.091	0.160	0.231
Currently using pill	0.009	0.003	532	230	0.741	0.336	0.003	0.015
Currently using IUD	0.004	0.004	532	230	1.344	0.962	0.000	0.011
Currently using condom	0.011	0.003	532	230	0.688	0.285	0.005	0.017
Currently using female sterilization	0.042	0.008	532	230	0.930	0.193	0.026	0.058
Currently using periodic abstinence	0.003	0.002	532	230	0.964	0.755	0.000	0.008
Obtained method from public sector source	0.690	0.045	122	50	1.073	0.065	0.599	0.780
Want no more children	0.402	0.023	532	230	1.081	0.057	0.356	0.448
Want to delay birth at least 2 years	0.411	0.023	532	230	1.069	0.056	0.365	0.456
Ideal family size	4.335	0.070	668	288	1.097	0.016	4.194	4.476
Neonatal mortality (0-4 years)	24.942	5.672	1,308	567	1.164	0.227	13.598	36.287
Postneonatal mortality (0-4 years)	59.139	10.117	1,313	569	1.391	0.171	38.906	79.373
Infant mortality (0-4 years)	84.082	12.517	1,313	569	1.420	0.149	59.047	109.116
Child mortality (0-4 years)	76.079	9.026	1,322	573	0.927	0.119	58.027	94.131
Under 5 mortality (0-4 years)	153.764	14.852	1,327	575	1.285	0.097	124.061	183.467
Mothers received tetanus injection for last birth	0.919	0.020	462	199	1.587	0.022	0.879	0.959
Mothers received medical assistance at delivery	0.459	0.035	716	312	1.561	0.076	0.390	0.529
Child had diarrhoea in two weeks prior to survey	0.288	0.025	647	281	1.416	0.088	0.238	0.339
Treated with oral rehydration salts (ORS)	0.659	0.030	188	81	0.827	0.045	0.600	0.719
Taken to a health provider	0.409	0.041	188	81	1.066	0.100	0.327	0.490
Vaccination card seen	0.603	0.045	159	69	1.163	0.075	0.512	0.694
Received BCG	0.941	0.018	159	69	0.941	0.019	0.906	0.976
Received DPT (3 doses)	0.713	0.040	159	69	1.103	0.056	0.633	0.793
Received polio (3 doses)	0.674	0.056	159	69	1.496	0.083	0.563	0.785
Received measles	0.772	0.036	159	69	1.080	0.047	0.700	0.844
Fully immunized	0.511	0.060	159	69	1.495	0.117	0.392	0.630
Height-for-age (below -2SD)	0.493	0.019	603	264	0.888	0.038	0.455	0.530
Weight-for-height (below -2SD)	0.052	0.009	603	264	0.960	0.165	0.035	0.069
Weight-for-age (below -2SD)	0.206	0.018	603	264	1.005	0.089	0.169	0.242
BMI <18.5	0.081	0.011	561	241	0.950	0.135	0.059	0.103
Has heard of HIV/AIDS	0.977	0.006	703	303	1.100	0.006	0.965	0.990
Knows condoms reduce HIV/AIDS	0.628	0.015	703	303	0.817	0.024	0.599	0.658
Knows limiting partners reduces HIV/AIDS	0.653	0.024	703	303	1.358	0.037	0.604	0.702
HIV Positive	0.095	0.023	194	74	1.100	0.245	0.048	0.142
MEN								
Urban residence	0.176	0.061	182	78	2.167	0.349	0.053	0.299
Literate	0.750	0.032	182	78	0.995	0.043	0.686	0.814
No education	0.102	0.023	182	78	1.011	0.223	0.056	0.147
Secondary education or higher	0.179	0.028	182	78	0.999	0.159	0.122	0.236
Never married	0.207	0.035	182	78	1.159	0.169	0.137	0.276
Currently married/in union	0.742	0.035	182	78	1.067	0.047	0.672	0.811
Married before age 20	0.270	0.033	150	65	0.905	0.122	0.204	0.336
Knows any contraceptive method	0.993	0.007	135	58	0.968	0.007	0.979	1.000
Want no more children	0.328	0.047	135	58	1.150	0.142	0.235	0.422
Want to delay birth at least 2 years	0.368	0.053	135	58	1.283	0.145	0.262	0.475
Ideal family size	4.455	0.120	173	75	0.821	0.027	4.216	4.694
Has heard of HIV/AIDS	1.000	0.000	182	78	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.834	0.028	182	78	0.997	0.033	0.779	0.889
Knows limiting partners reduces HIV/AIDS	0.887	0.026	182	78	1.118	0.030	0.834	0.939
HIV Positive	0.082	0.020	136	59	0.843	0.242	0.042	0.123

na = Not applicable

Table B.14 Sampling errors: Thyolo District, Malawi 2004

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.031	0.002	820	618	0.322	0.063	0.027	0.035
Literate	0.561	0.026	820	618	1.475	0.046	0.510	0.612
No education	0.283	0.023	820	618	1.438	0.080	0.238	0.328
Secondary education or higher	0.093	0.015	820	618	1.491	0.163	0.062	0.123
Net attendance ratio for primary school	0.843	0.015	1,000	765	1.226	0.018	0.812	0.874
Never married	0.137	0.016	820	618	1.319	0.116	0.105	0.168
Currently married/in union	0.700	0.024	820	618	1.495	0.034	0.653	0.748
Married before age 20	0.780	0.017	657	497	1.047	0.022	0.746	0.814
Currently pregnant	0.144	0.013	820	618	1.069	0.091	0.117	0.170
Children ever born	3.067	0.125	820	618	1.369	0.041	2.816	3.317
Children surviving	2.436	0.108	820	618	1.464	0.044	2.221	2.652
Children ever born to women age 40-49	6.088	0.371	112	86	1.233	0.061	5.346	6.830
TFR (0-3 years)	5.727	0.294	na	1,738	1.128	0.051	5.139	6.314
Knows any contraceptive method	0.999	0.001	565	433	0.905	0.001	0.996	1.001
Ever used any contraceptive method	0.561	0.035	565	433	1.656	0.062	0.492	0.630
Currently using any contraceptive method	0.305	0.032	565	433	1.641	0.104	0.242	0.369
Currently using a modern method	0.282	0.031	565	433	1.653	0.111	0.220	0.345
Currently using pill	0.013	0.005	565	433	1.103	0.409	0.002	0.023
Currently using IUD	0.000	0.000	565	433	na	na	0.000	0.000
Currently using condom	0.011	0.004	565	433	0.962	0.378	0.003	0.020
Currently using female sterilization	0.061	0.011	565	433	1.119	0.185	0.038	0.083
Currently using periodic abstinence	0.006	0.003	565	433	1.039	0.579	0.000	0.012
Obtained method from public sector source	0.536	0.048	201	150	1.369	0.090	0.440	0.633
Want no more children	0.403	0.022	565	433	1.063	0.054	0.359	0.447
Want to delay birth at least 2 years	0.418	0.021	565	433	0.991	0.049	0.377	0.460
Ideal family size	4.138	0.085	797	599	1.411	0.020	3.969	4.308
Neonatal mortality (0-4 years)	42.674	6.344	1,412	1,079	1.108	0.149	29.987	55.361
Postneonatal mortality (0-4 years)	76.131	7.699	1,419	1,085	1.049	0.101	60.733	91.530
Infant mortality (0-4 years)	118.806	10.151	1,419	1,085	1.098	0.085	98.504	139.107
Child mortality (0-4 years)	77.421	9.624	1,430	1,093	1.133	0.124	58.173	96.670
Under 5 mortality (0-4 years)	187.029	11.258	1,437	1,099	0.965	0.060	164.513	209.545
Mothers received tetanus injection for last birth	0.808	0.019	505	386	1.104	0.024	0.770	0.847
Mothers received medical assistance at delivery	0.512	0.042	749	575	1.919	0.082	0.428	0.595
Child had diarrhoea in two weeks prior to survey	0.274	0.019	670	514	1.110	0.070	0.236	0.312
Treated with oral rehydration salts (ORS)	0.802	0.040	181	141	1.365	0.050	0.722	0.882
Taken to a health provider	0.514	0.040	181	141	1.076	0.078	0.434	0.595
Vaccination card seen	0.747	0.038	146	116	1.092	0.051	0.671	0.824
Received BCG	0.979	0.013	146	116	1.086	0.013	0.954	1.004
Received DPT (3 doses)	0.884	0.037	146	116	1.431	0.042	0.810	0.958
Received polio (3 doses)	0.872	0.037	146	116	1.373	0.042	0.798	0.946
Received measles	0.870	0.028	146	116	1.021	0.032	0.815	0.926
Fully immunized	0.748	0.045	146	116	1.278	0.060	0.658	0.837
Height-for-age (below -2SD)	0.481	0.022	549	414	1.003	0.046	0.437	0.525
Weight-for-height (below -2SD)	0.087	0.017	549	414	1.357	0.195	0.053	0.121
Weight-for-age (below -2SD)	0.222	0.013	549	414	0.727	0.059	0.196	0.249
BMI <18.5	0.089	0.011	640	486	0.953	0.120	0.067	0.110
Has heard of HIV/AIDS	0.996	0.002	820	618	1.069	0.002	0.991	1.001
Knows condoms reduce HIV/AIDS	0.672	0.019	820	618	1.148	0.028	0.635	0.710
Knows limiting partners reduces HIV/AIDS	0.768	0.014	820	618	0.966	0.019	0.739	0.796
HIV Positive	0.231	0.038	200	145	1.280	0.166	0.154	0.309
MEN								
Urban residence	0.055	0.004	211	169	0.255	0.073	0.047	0.063
Literate	0.705	0.045	211	169	1.418	0.063	0.616	0.794
No education	0.125	0.025	211	169	1.096	0.200	0.075	0.176
Secondary education or higher	0.230	0.038	211	169	1.312	0.166	0.154	0.306
Never married	0.297	0.031	211	169	0.987	0.105	0.235	0.359
Currently married/in union	0.684	0.035	211	169	1.087	0.051	0.614	0.753
Married before age 20	0.351	0.040	169	137	1.086	0.114	0.271	0.431
Knows any contraceptive method	1.000	0.000	140	116	na	0.000	1.000	1.000
Want no more children	0.496	0.046	140	116	1.081	0.092	0.404	0.587
Want to delay birth at least 2 years	0.261	0.047	140	116	1.270	0.181	0.166	0.355
Ideal family size	4.044	0.152	210	168	1.257	0.038	3.740	4.347
Has heard of HIV/AIDS	1.000	0.000	211	169	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.762	0.036	211	169	1.228	0.047	0.689	0.834
Knows limiting partners reduces HIV/AIDS	0.854	0.017	211	169	0.717	0.020	0.819	0.889
HIV Positive	0.186	0.035	140	126	1.058	0.188	0.115	0.257

na = Not applicable

Table B.15 Sampling errors: Zomba District, Malawi 2004

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
WOMEN								
Urban residence	0.139	0.008	806	637	0.688	0.060	0.122	0.156
Literate	0.681	0.021	806	637	1.296	0.031	0.639	0.724
No education	0.153	0.021	806	637	1.666	0.138	0.111	0.195
Secondary education or higher	0.170	0.019	806	637	1.454	0.113	0.132	0.209
Net attendance ratio for primary school	0.888	0.023	869	712	1.869	0.025	0.843	0.933
Never married	0.168	0.017	806	637	1.311	0.103	0.133	0.202
Currently married/in union	0.684	0.019	806	637	1.149	0.028	0.647	0.722
Married before age 20	0.754	0.022	639	505	1.283	0.029	0.710	0.798
Currently pregnant	0.121	0.012	806	637	1.046	0.099	0.097	0.145
Children ever born	2.786	0.098	806	637	1.079	0.035	2.590	2.981
Children surviving	2.291	0.090	806	637	1.217	0.039	2.111	2.471
Children ever born to women age 40-49	6.064	0.301	111	87	1.076	0.050	5.461	6.667
TFR (0-3 years)	5.306	0.372	na	1,806	1.382	0.070	4.561	6.050
Knows any contraceptive method	0.997	0.003	560	436	1.203	0.003	0.992	1.003
Ever used any contraceptive method	0.585	0.032	560	436	1.528	0.054	0.521	0.649
Currently using any contraceptive method	0.320	0.025	560	436	1.285	0.079	0.269	0.370
Currently using a modern method	0.282	0.027	560	436	1.408	0.095	0.229	0.336
Currently using pill	0.014	0.005	560	436	1.035	0.365	0.004	0.024
Currently using IUD	0.000	0.000	560	436	na	na	0.000	0.000
Currently using condom	0.008	0.004	560	436	1.157	0.542	0.000	0.017
Currently using female sterilization	0.036	0.010	560	436	1.262	0.277	0.016	0.056
Currently using periodic abstinence	0.003	0.003	560	436	1.382	1.002	0.000	0.010
Obtained method from public sector source	0.828	0.035	183	143	1.256	0.042	0.758	0.898
Want no more children	0.382	0.019	560	436	0.934	0.050	0.343	0.420
Want to delay birth at least 2 years	0.361	0.019	560	436	0.929	0.052	0.323	0.399
Ideal family size	3.944	0.070	802	634	1.161	0.018	3.803	4.085
Neonatal mortality (0-4 years)	30.707	5.564	1,241	972	0.986	0.181	19.578	41.836
Postneonatal mortality (0-4 years)	53.053	6.698	1,243	973	0.990	0.126	39.658	66.448
Infant mortality (0-4 years)	83.760	10.460	1,243	973	1.209	0.125	62.839	104.680
Child mortality (0-4 years)	65.892	8.765	1,258	988	1.026	0.133	48.362	83.423
Under 5 mortality (0-4 years)	144.133	15.363	1,260	989	1.335	0.107	113.407	174.858
Mothers received tetanus injection for last birth	0.881	0.016	497	389	1.081	0.018	0.850	0.913
Mothers received medical assistance at delivery	0.655	0.029	699	544	1.435	0.044	0.598	0.713
Child had diarrhoea in two weeks prior to survey	0.240	0.017	639	498	0.983	0.069	0.207	0.273
Treated with oral rehydration salts (ORS)	0.689	0.045	156	120	1.171	0.066	0.598	0.780
Taken to a health provider	0.433	0.063	156	120	1.490	0.145	0.307	0.559
Vaccination card seen	0.810	0.032	141	108	0.937	0.040	0.746	0.875
Received BCG	0.934	0.027	141	108	1.264	0.029	0.880	0.988
Received DPT (3 doses)	0.913	0.028	141	108	1.178	0.031	0.856	0.970
Received polio (3 doses)	0.881	0.027	141	108	0.970	0.030	0.828	0.935
Received measles	0.847	0.032	141	108	0.995	0.037	0.784	0.911
Fully immunized	0.729	0.033	141	108	0.860	0.046	0.663	0.796
Height-for-age (below -2SD)	0.423	0.031	596	476	1.456	0.073	0.361	0.485
Weight-for-height (below -2SD)	0.076	0.013	596	476	1.191	0.176	0.049	0.103
Weight-for-age (below -2SD)	0.220	0.027	596	476	1.527	0.122	0.166	0.273
BMI <18.5	0.114	0.019	679	535	1.554	0.167	0.076	0.152
Has heard of HIV/AIDS	0.995	0.003	806	637	1.055	0.003	0.990	1.000
Knows condoms reduce HIV/AIDS	0.565	0.018	806	637	1.034	0.032	0.529	0.601
Knows limiting partners reduces HIV/AIDS	0.699	0.021	806	637	1.289	0.030	0.657	0.741
HIV Positive	0.246	0.037	188	134	1.179	0.151	0.171	0.322
MEN								
Urban residence	0.191	0.031	209	159	1.137	0.162	0.129	0.253
Literate	0.727	0.041	209	159	1.330	0.056	0.645	0.809
No education	0.142	0.027	209	159	1.119	0.191	0.088	0.196
Secondary education or higher	0.262	0.027	209	159	0.902	0.105	0.207	0.317
Never married	0.320	0.033	209	159	1.009	0.102	0.255	0.385
Currently married/in union	0.628	0.034	209	159	1.027	0.055	0.560	0.697
Married before age 20	0.271	0.037	166	125	1.071	0.137	0.197	0.345
Knows any contraceptive method	1.000	0.000	131	100	na	0.000	1.000	1.000
Want no more children	0.286	0.023	131	100	0.571	0.079	0.241	0.331
Want to delay birth at least 2 years	0.414	0.043	131	100	1.005	0.105	0.328	0.501
Ideal family size	3.859	0.179	198	150	1.173	0.046	3.500	4.218
Has heard of HIV/AIDS	1.000	0.000	209	159	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.804	0.046	209	159	1.685	0.058	0.711	0.897
Knows limiting partners reduces HIV/AIDS	0.808	0.025	209	159	0.905	0.031	0.759	0.857
HIV Positive	0.105	0.028	154	124	1.116	0.264	0.048	0.161

na = Not applicable

Table B.16 Sampling errors: Lilongwe District, Malawi 2004								
			Number of cases				Confidence limits	
		Standard	Un-		Design	Relative		
	Value	Error	weighted	Weighted	Effect	error		
Variable	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	0.434	0.029	710	1,705	1.548	0.066	0.377	0.492
Literate	0.679	0.018	710	1,705	1.044	0.027	0.643	0.716
No education	0.215	0.017	710	1,705	1.085	0.078	0.182	0.249
Secondary education or higher	0.237	0.020	710	1,705	1.235	0.083	0.197	0.276
Net attendance ratio for primary school	0.820	0.021	953	2,260	1.484	0.025	0.778	0.861
Never married	0.204	0.027	710	1,705	1.806	0.134	0.149	0.258
Currently married/in union	0.689	0.033	710	1,705	1.912	0.048	0.622	0.755
Married before age 20	0.649	0.025	566	1,372	1.228	0.038	0.600	0.698
Currently pregnant	0.104	0.011	710	1,705	0.948	0.105	0.082	0.125
Children ever born	2.830	0.112	710	1,705	1.124	0.040	2.607	3.054
Children surviving	2.339	0.099	710	1,705	1.250	0.043	2.140	2.538
Children ever born to women age 40-49	6.535	0.310	98	209	1.121	0.047	5.915	7.154
TFR (0-3 years)	5.664	0.419	na	4,809	1.355	0.074	4.827	6.502
Knows any contraceptive method	0.971	0.011	497	1,175	1.415	0.011	0.950	0.993
Ever used any contraceptive method	0.604	0.023	497	1,175	1.050	0.038	0.558	0.651
Currently using any contraceptive method	0.363	0.024	497	1,175	1.107	0.066	0.315	0.411
Currently using a modern method	0.343	0.022	497	1,175	1.032	0.064	0.299	0.387
Currently using pill	0.024	0.007	497	1,175	0.994	0.286	0.010	0.037
Currently using IUD	0.000	0.000	497	1,175	na	na	0.000	0.000
Currently using condom	0.014	0.004	497	1,175	0.823	0.307	0.006	0.023
Currently using female sterilization	0.073	0.014	497	1,175	1.157	0.185	0.046	0.101
Currently using periodic abstinence	0.003	0.002	497	1,175	0.898	0.719	0.000	0.008
Obtained method from public sector source	0.623	0.039	189	449	1.108	0.063	0.545	0.702
Want no more children	0.459	0.017	497	1,175	0.779	0.038	0.424	0.494
Want to delay birth at least 2 years	0.342	0.019	497	1,175	0.887	0.055	0.304	0.379
Ideal family size	3.627	0.067	680	1,632	1.076	0.018	3.493	3.760
Neonatal mortality (0-4 years)	20.681	5.078	1,109	2,633	0.989	0.246	10.526	30.837
Postneonatal mortality (0-4 years)	52.314	6.726	1,110	2,634	0.903	0.129	38.863	65.765
Infant mortality (0-4 years)	72.996	9.071	1,110	2,634	0.996	0.124	54.854	91.137
Child mortality (0-4 years)	77.747	9.925	1,129	2,677	1.043	0.128	57.898	97.597
Under 5 mortality (0-4 years)	145.068	13.248	1,130	2,678	1.023	0.091	118.571	171.564
Mothers received tetanus injection for last birth	0.853	0.019	412	1,013	1.128	0.023	0.814	0.892
Mothers received medical assistance at delivery	0.547	0.040	613	1,489	1.697	0.074	0.466	0.627
Child had diarrhoea in two weeks prior to survey	0.244	0.026	565	1,376	1.477	0.105	0.193	0.296
Treated with oral rehydration salts (ORS)	0.595	0.035	142	336	0.832	0.059	0.525	0.665
Taken to a health provider	0.249	0.034	142	336	0.941	0.137	0.180	0.317
Vaccination card seen	0.590	0.060	125	292	1.335	0.101	0.471	0.710
Received BCG	0.858	0.044	125	292	1.404	0.052	0.769	0.947
Received DPT (3 doses)	0.690	0.068	125	292	1.617	0.098	0.554	0.826
Received polio (3 doses)	0.653	0.042	125	292	0.962	0.064	0.569	0.736
Received measles	0.707	0.038	125	292	0.926	0.054	0.630	0.784
Fully immunized	0.525	0.062	125	292	1.369	0.119	0.400	0.649
Height-for-age (below -2SD)	0.523	0.039	400	952	1.464	0.075	0.444	0.601
Weight-for-height (below -2SD)	0.047	0.012	400	952	1.153	0.256	0.023	0.071
Weight-for-age (below -2SD)	0.245	0.030	400	952	1.320	0.122	0.185	0.305
BMI <18.5	0.060	0.012	478	1,119	1.087	0.199	0.036	0.084
Has heard of HIV/AIDS	0.962	0.009	710	1,705	1.220	0.009	0.944	0.979
Knows condoms reduce HIV/AIDS	0.439	0.025	710	1,705	1.328	0.056	0.390	0.489
Knows limiting partners reduces HIV/AIDS	0.563	0.026	710	1,705	1.413	0.047	0.510	0.615
HIV Positive	0.016	0.011	246	352	1.403	0.692	0.000	0.039
MEN								
Urban residence	0.444	0.069	228	542	2.094	0.156	0.306	0.582
Literate	0.811	0.030	228	542	1.161	0.037	0.750	0.871
No education	0.131	0.030	228	542	1.329	0.227	0.072	0.191
Secondary education or higher	0.325	0.038	228	542	1.211	0.116	0.250	0.400
Never married	0.390	0.044	228	542	1.358	0.113	0.302	0.478
Currently married/in union	0.594	0.045	228	542	1.367	0.075	0.505	0.683
Married before age 20	0.155	0.032	182	431	1.170	0.203	0.092	0.218
Knows any contraceptive method	0.994	0.006	136	322	0.896	0.006	0.982	1.000
Want no more children	0.534	0.042	136	322	0.987	0.079	0.450	0.619
Want to delay birth at least 2 years	0.277	0.035	136	322	0.914	0.127	0.207	0.348
Ideal family size	3.506	0.076	213	503	0.963	0.022	3.354	3.657
Has heard of HIV/AIDS	0.993	0.005	228	542	0.900	0.005	0.983	1.000
Knows condoms reduce HIV/AIDS	0.724	0.017	228	542	0.585	0.024	0.689	0.759
Knows limiting partners reduces HIV/AIDS	0.645	0.034	228	542	1.078	0.053	0.577	0.714
HIV Positive	0.055	0.025	96	398	1.066	0.455	0.004	0.106

na = Not applicable

Variable	Value (R)	Standard Error (SE)	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Table B.17 Sampling errors: Mulanje District, Malawi 2004								
WOMEN								
Urban residence	0.062	0.010	777	512	1.182	0.165	0.041	0.082
Literate	0.592	0.030	777	512	1.679	0.050	0.533	0.652
No education	0.222	0.018	777	512	1.190	0.080	0.187	0.258
Secondary education or higher	0.104	0.016	777	512	1.457	0.154	0.072	0.136
Net attendance ratio for primary school	0.829	0.019	865	569	1.294	0.023	0.791	0.867
Never married	0.135	0.014	777	512	1.172	0.107	0.106	0.164
Currently married/in union	0.702	0.018	777	512	1.089	0.025	0.667	0.738
Married before age 20	0.788	0.017	631	416	1.070	0.022	0.753	0.823
Currently pregnant	0.136	0.016	777	512	1.308	0.118	0.104	0.168
Children ever born	3.161	0.096	777	512	0.994	0.030	2.969	3.354
Children surviving	2.440	0.071	777	512	0.929	0.029	2.299	2.582
Children ever born to women age 40-49	5.986	0.230	146	95	1.007	0.038	5.527	6.445
TFR (0-3 years)	5.565	0.285	na	1,432	1.141	0.051	4.996	6.135
Knows any contraceptive method	0.993	0.004	549	359	1.200	0.004	0.984	1.001
Ever used any contraceptive method	0.611	0.035	549	359	1.657	0.056	0.542	0.680
Currently using any contraceptive method	0.285	0.028	549	359	1.439	0.097	0.230	0.341
Currently using a modern method	0.246	0.022	549	359	1.169	0.087	0.203	0.289
Currently using pill	0.009	0.004	549	359	0.920	0.414	0.002	0.016
Currently using IUD	0.000	0.000	549	359	na	na	0.000	0.000
Currently using condom	0.005	0.003	549	359	0.933	0.577	0.000	0.010
Currently using female sterilization	0.072	0.012	549	359	1.071	0.164	0.049	0.096
Currently using periodic abstinence	0.004	0.002	549	359	0.896	0.590	0.000	0.009
Obtained method from public sector source	0.524	0.049	152	101	1.196	0.093	0.427	0.622
Want no more children	0.443	0.019	549	359	0.894	0.043	0.405	0.481
Want to delay birth at least 2 years	0.317	0.019	549	359	0.949	0.060	0.279	0.354
Ideal family size	4.027	0.058	724	477	1.011	0.014	3.911	4.143
Neonatal mortality (0-4 years)	55.462	8.236	1,257	828	1.077	0.148	38.990	71.934
Postneonatal mortality (0-4 years)	89.191	9.777	1,261	831	1.088	0.110	69.637	108.744
Infant mortality (0-4 years)	144.652	14.033	1,262	831	1.170	0.097	116.587	172.717
Child mortality (0-4 years)	89.182	8.654	1,278	842	0.997	0.097	71.874	106.490
Under 5 mortality (0-4 years)	220.934	13.169	1,284	846	1.017	0.060	194.596	247.272
Mothers received tetanus injection for last birth	0.834	0.025	448	296	1.413	0.030	0.785	0.884
Mothers received medical assistance at delivery	0.598	0.044	661	437	1.979	0.073	0.511	0.686
Child had diarrhoea in two weeks prior to survey	0.221	0.018	568	375	1.028	0.083	0.184	0.258
Treated with oral rehydration salts (ORS)	0.575	0.056	125	83	1.230	0.098	0.462	0.688
Taken to a health provider	0.290	0.057	125	83	1.339	0.195	0.176	0.403
Vaccination card seen	0.859	0.025	128	81	0.803	0.029	0.809	0.910
Received BCG	0.944	0.023	128	81	1.102	0.024	0.898	0.990
Received DPT (3 doses)	0.839	0.049	128	81	1.483	0.059	0.740	0.937
Received polio (3 doses)	0.832	0.041	128	81	1.218	0.049	0.750	0.914
Received measles	0.812	0.049	128	81	1.385	0.060	0.714	0.910
Fully immunized	0.685	0.057	128	81	1.348	0.083	0.571	0.798
Height-for-age (below -2SD)	0.505	0.036	498	329	1.559	0.071	0.434	0.577
Weight-for-height (below -2SD)	0.060	0.014	498	329	1.253	0.228	0.032	0.087
Weight-for-age (below -2SD)	0.265	0.028	498	329	1.332	0.106	0.209	0.321
BMI <18.5	0.134	0.010	615	403	0.742	0.076	0.114	0.155
Has heard of HIV/AIDS	0.994	0.002	777	512	0.912	0.002	0.989	0.999
Knows condoms reduce HIV/AIDS	0.752	0.010	777	512	0.651	0.013	0.732	0.772
Knows limiting partners reduces HIV/AIDS	0.788	0.017	777	512	1.140	0.021	0.754	0.821
HIV Positive	0.233	0.038	184	117	1.214	0.163	0.155	0.310
MEN								
Urban residence	0.080	0.016	178	114	0.773	0.197	0.049	0.112
Literate	0.817	0.033	178	114	1.126	0.040	0.751	0.882
No education	0.073	0.027	178	114	1.356	0.362	0.020	0.126
Secondary education or higher	0.220	0.045	178	114	1.458	0.207	0.129	0.310
Never married	0.313	0.047	178	114	1.349	0.150	0.219	0.407
Currently married/in union	0.653	0.047	178	114	1.317	0.072	0.559	0.747
Married before age 20	0.300	0.037	138	88	0.953	0.124	0.225	0.375
Knows any contraceptive method	0.987	0.009	115	74	0.855	0.009	0.968	1.000
Want no more children	0.414	0.074	115	74	1.612	0.180	0.265	0.563
Want to delay birth at least 2 years	0.382	0.058	115	74	1.274	0.152	0.266	0.498
Ideal family size	4.130	0.110	178	114	0.894	0.027	3.910	4.351
Has heard of HIV/AIDS	1.000	0.000	178	114	na	0.000	1.000	1.000
Knows condoms reduce HIV/AIDS	0.544	0.034	178	114	0.908	0.062	0.477	0.612
Knows limiting partners reduces HIV/AIDS	0.766	0.037	178	114	1.151	0.048	0.693	0.839
HIV Positive	0.151	0.030	122	86	0.927	0.200	0.089	0.212

na = Not applicable

Table B.18 Sampling errors: Other Districts, Malawi 2004

Variable	Value (R)	Standard Error (SE)	Un-weighted (N)	Weighted (WN)	Design Effect (DEFT)	Relative error (SE/R)	R-2SE	R+2SE
WOMEN								
Urban residence	0.074	0.007	3,783	4,708	1.620	0.093	0.060	0.087
Literate	0.594	0.014	3,783	4,708	1.790	0.024	0.565	0.622
No education	0.248	0.011	3,783	4,708	1.519	0.043	0.227	0.270
Secondary education or higher	0.120	0.011	3,783	4,708	2.034	0.089	0.099	0.142
Net attendance ratio for primary school	0.804	0.009	5,025	6,144	1.441	0.011	0.785	0.822
Never married	0.169	0.007	3,783	4,708	1.076	0.039	0.156	0.182
Currently married/in union	0.707	0.009	3,783	4,708	1.179	0.012	0.689	0.724
Married before age 20	0.739	0.008	2,970	3,715	1.051	0.011	0.722	0.755
Currently pregnant	0.125	0.006	3,783	4,708	1.205	0.052	0.112	0.138
Children ever born	3.107	0.050	3,783	4,708	1.098	0.016	3.007	3.208
Children surviving	2.558	0.041	3,783	4,708	1.087	0.016	2.477	2.640
Children ever born to women age 40-49	6.816	0.116	578	726	1.021	0.017	6.585	7.047
TFR (0-3 years)	6.317	0.150	na	13,323	1.247	0.024	6.016	6.617
Knows any contraceptive method	0.989	0.002	2,682	3,326	1.100	0.002	0.985	0.994
Ever used any contraceptive method	0.598	0.012	2,682	3,326	1.308	0.021	0.573	0.622
Currently using any contraceptive method	0.321	0.011	2,682	3,326	1.261	0.035	0.298	0.343
Currently using a modern method	0.279	0.011	2,682	3,326	1.298	0.040	0.256	0.301
Currently using pill	0.020	0.003	2,682	3,326	1.028	0.140	0.014	0.025
Currently using IUD	0.001	0.001	2,682	3,326	1.134	0.609	0.000	0.003
Currently using condom	0.017	0.003	2,682	3,326	1.363	0.198	0.011	0.024
Currently using female sterilization	0.061	0.005	2,682	3,326	1.183	0.090	0.050	0.071
Currently using periodic abstinence	0.004	0.001	2,682	3,326	1.054	0.320	0.001	0.007
Obtained method from public sector source	0.711	0.026	817	1,019	1.649	0.037	0.658	0.763
Want no more children	0.417	0.013	2,682	3,326	1.369	0.031	0.390	0.443
Want to delay birth at least 2 years	0.388	0.011	2,682	3,326	1.146	0.028	0.367	0.410
Ideal family size	4.222	0.044	3,666	4,571	1.542	0.010	4.133	4.310
Neonatal mortality (0-4 years)	36.054	2.988	6,373	7,922	1.160	0.083	30.078	42.031
Postneonatal mortality (0-4 years)	54.915	3.419	6,384	7,936	1.107	0.062	48.077	61.752
Infant mortality (0-4 years)	90.969	4.489	6,384	7,936	1.128	0.049	81.991	99.947
Child mortality (0-4 years)	73.747	4.381	6,452	8,024	1.109	0.059	64.984	82.509
Under 5 mortality (0-4 years)	158.007	5.879	6,463	8,037	1.118	0.037	146.249	169.765
Mothers received tetanus injection for last birth	0.842	0.009	2,393	2,981	1.193	0.011	0.824	0.860
Mothers received medical assistance at delivery	0.559	0.017	3,543	4,414	1.755	0.031	0.524	0.593
Child had diarrhoea in two weeks prior to survey	0.214	0.008	3,189	3,992	1.158	0.039	0.197	0.231
Treated with oral rehydration salts (ORS)	0.613	0.024	676	854	1.226	0.039	0.565	0.661
Taken to a health provider	0.350	0.021	676	854	1.110	0.060	0.308	0.392
Vaccination card seen	0.767	0.017	709	901	1.072	0.023	0.732	0.801
Received BCG	0.917	0.012	709	901	1.161	0.013	0.892	0.942
Received DPT (3 doses)	0.809	0.016	709	901	1.049	0.019	0.778	0.841
Received polio (3 doses)	0.770	0.021	709	901	1.319	0.028	0.728	0.813
Received measles	0.792	0.017	709	901	1.105	0.022	0.758	0.826
Fully immunized	0.649	0.022	709	901	1.240	0.035	0.604	0.693
Height-for-age (below -2SD)	0.475	0.011	2,873	3,557	1.162	0.024	0.453	0.498
Weight-for-height (below -2SD)	0.051	0.006	2,873	3,557	1.313	0.109	0.040	0.063
Weight-for-age (below -2SD)	0.225	0.010	2,873	3,557	1.233	0.044	0.205	0.246
BMI <18.5	0.093	0.007	3,053	3,817	1.307	0.074	0.079	0.107
Has heard of HIV/AIDS	0.988	0.002	3,783	4,708	1.208	0.002	0.983	0.992
Knows condoms reduce HIV/AIDS	0.573	0.011	3,783	4,708	1.363	0.019	0.551	0.595
Knows limiting partners reduces HIV/AIDS	0.672	0.010	3,783	4,708	1.313	0.015	0.652	0.692
HIV Positive	0.126	0.011	995	1,124	1.020	0.085	0.105	0.148
MEN								
Urban residence	0.072	0.011	1,070	1,250	1.342	0.147	0.051	0.093
Literate	0.783	0.013	1,070	1,250	1.037	0.017	0.757	0.809
No education	0.130	0.012	1,070	1,250	1.190	0.094	0.106	0.154
Secondary education or higher	0.218	0.015	1,070	1,250	1.170	0.068	0.188	0.248
Never married	0.334	0.017	1,070	1,250	1.187	0.051	0.300	0.368
Currently married/in union	0.642	0.017	1,070	1,250	1.160	0.027	0.607	0.676
Married before age 20	0.222	0.016	851	986	1.118	0.072	0.190	0.254
Knows any contraceptive method	0.989	0.008	699	802	1.985	0.008	0.973	1.005
Want no more children	0.338	0.018	699	802	1.018	0.054	0.302	0.375
Want to delay birth at least 2 years	0.484	0.022	699	802	1.174	0.046	0.440	0.529
Ideal family size	4.253	0.094	1,038	1,218	1.249	0.022	4.065	4.442
Has heard of HIV/AIDS	0.993	0.003	1,070	1,250	1.170	0.003	0.987	0.999
Knows condoms reduce HIV/AIDS	0.774	0.015	1,070	1,250	1.155	0.019	0.744	0.804
Knows limiting partners reduces HIV/AIDS	0.809	0.019	1,070	1,250	1.594	0.024	0.771	0.848
HIV Positive	0.087	0.012	767	958	1.160	0.136	0.064	0.110

na = Not applicable