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SOCIO-ECONOMIC DIFFERENCES
IN
HEALTH, NUTRITION, AND POPULATION

MALAWI
1992, 2000

Davidson R. Gwatkin, Shea Rutstein, Kiersten Johnson, Eldaw Suliman, Adam Wagstaff, and Agbessi Amouzou

TABLE OF CONTENTS

Foreword	**I**
Introduction	**III**
Part I. Basic Tables, 2000	**1**
A. Total Population	3
B. Female and Male Populations	9
C. Rural and Urban Populations	13
Part II. Basic Tables, 1992	**19**
A. Total Population	21
B. Female and Male Populations	27
C. Rural and Urban Populations	31
Part III. Technical Notes	**37**
A. Indicator Definitions	39
B. Data and Methods	53
C. Discussion	57
Part IV. Supporting Tables, 2000	**63**
A. Sample Sizes	65
B. Standard Errors	71
C. Asset Distribution and Weights	77
Part V. Supporting Tables, 1992	**79**
A. Sample Sizes	81
B. Standard Errors	87
C. Asset Distribution and Weights	93

Part VI. Annexes **95**

A. Sources of Additional Information **97**

B. Use of Information from this Report to Monitor the Economic Status of People Served by HNP Programs **99**

C. Countries Covered by the HNP-Poverty Report Project **105**

FOREWORD

The World Bank shares the desire of its member states and client countries to ensure that the poor partake fully in the health gains that the countries achieve. To assist in this, the Bank, in cooperation with the Dutch and Swedish Governments, has sponsored the set of reports providing basic information about health inequalities within countries to which this document belongs.

The information shows clearly that disparities in both health conditions and health service use are unacceptably large. As countries and the Bank work to reduce important inequalities among regions and countries, there is a clear need for equally vigorous efforts to lessen the inequity represented by intra-country differences among socio-economic groups.

My colleagues and I hope that all concerned with equity in health will find this information useful in making the case for effective actions to improve the health of the poor, and in designing programs to achieve this crucial objective.

Joy Phumaphi
Vice President
Human Development Network
The World Bank

INTRODUCTION

This report is one in a series that provides basic information about health, nutrition, and population (hnp) inequalities within fifty-six developing countries.

The series to which the report belongs is an expanded and updated version of a set covering forty-five countries that was published in 2000. The fifty-six reports in the current series cover almost all DHS surveys undertaken during the period beginning in 1990 and ending with the date of the last survey for which data were publicly available as of June 2006.[1]

The report's contents are intended to facilitate preparation of country analyses and the development of activities to benefit poor people. To this end, the report presents data about hnp status, service use, and related matters among individuals belonging to different socio-economic classes. The principal focus is on differences among groups of individuals defined in terms of the wealth or assets of the households where they reside. The source of data is the Demographic and Health Survey (DHS) program, a large, multi-country household survey project.

The figures in this and the other reports in the series draw on responses to questions about household wealth or assets included in the DHS questionnaire, which were similar for all the surveys covered. These responses served as the basis for the construction of a wealth index, which was used to rank individuals according to the index value for the household to which they belonged. The individuals were then divided into quintiles, and the mean value for each of up to approximately 120 indicators was calculated for each quintile.

The report is organized in four principal parts:

- Parts one and two, which constitute the report's core, consist of tables presenting quintile-specific data for each hnp indicator covered from the two most recent DHS surveys available at the time of the report's publication. In each part there are three sets of tables: the first provides quintile-specific information for the total population; the second presents data separately for quintiles of females and males; the third features quintile-specific information presented separately for rural and urban residents. Each of these sets is divided into four sections: one dealing with hnp status, the second with the use of hnp services, the third with hnp-related behavior, and the fourth with other hnp status determinants.

- Part three provides supplementary technical information designed to help readers understand the data presented in parts one and two. This information deals with such issues as how the covered hnp indicators were defined and how the quintile-specific estimates were derived.

- Parts four and five present supporting tables that deal with three of the technical matters covered in part three: the size of the sample for each indicator covered; the standard error

[1] The average interval of approximately two years between data collection and availability means that the latest surveys covered were conducted in 2005.

for each quintile-specific estimate in the total population; and the items used in constructing the wealth index, along with the weight assigned to each.

An additional, sixth part consists of three annexes, for readers interested in applying the approach used in the report or in learning more about the other reports in this series. The first annex is an annotated bibliography containing further information about the technical issues concerning the approach used in the report, and about employing that approach to examine additional issues using DHS or other data sets. The second shows how the report's approach can be applied to monitor the distribution of benefits from other hnp programs, and provides a tool for doing so. The third annex is a list of all fifty-six countries for which reports are available, along with an indication of how to obtain copies of the reports dealing with them.

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PART I. BASIC TABLES, 2000

A. TOTAL POPULATION

B. FEMALE AND MALE POPULATIONS

C. RURAL AND URBAN POPULATIONS

Notes:

– Each of the three sections referred to above consists of four divisions, presenting data for: I) hnp status; II) hnp service use; III) hnp-related individual and household behavior; and IV) other, underlying determinants of hnp status.

– Full definitions of all indicators covered in the tables are provided in section A of the technical notes found in part II.

—- "na" appears in the table cells when data are not available, usually because the DHS survey concerned did not collect information about the indicator(s) in question.

—- Figures in the tables shown within parentheses indicate the absence of adequate observations to produce acceptably reliable values. Asterisks appear when the number of observations was too small to justify the presentation even of figures within parentheses. (For further information, see the section on "Sampling Errors" in the presentation of data and methods in part II.B.) Asterisks also will be found in columns showing statistical indices of inequality when the amount of quintile-specific information available is inadequate to permit computation of the value for the index concerned.

—- Female/male tables include only indicators relevant for both sexes; those pertaining to only one sex (e.g., fertility, women's nutritional status, antenatal care, attended deliveries) have been omitted.

Malawi

2000 - TOTAL POPULATION

Part I: HNP STATUS

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Childhood illness and mortality										
Infant mortality rate	131.5	110.7	117.4	109.1	86.4	112.5	1.52	45.10	-0.0437	0.0006
Under-five mortality rate	230.8	206.7	218.5	194.8	149.0	202.7	1.55	81.80	-0.0537	0.0005
Prevalence of fever	43.5	42.6	44.6	41.7	34.3	41.6	1.27	9.20	-0.0414	0.0067
Prevalence of diarrhea	18.8	19.0	18.4	17.3	13.8	17.6	1.36	5.00	-0.0671	0.0119
Prevalence of acute respiratory infection (ARI)	29.1	26.8	30.9	26.1	19.0	26.7	1.53	10.10	-0.0537	0.0091
B. Fertility										
Total fertility rate	7.1	7.0	6.4	6.2	4.8	6.3	1.48	2.30	-0.0649	0.0002
Adolescent fertility rate	192.0	170.0	176.0	186.0	140.0	172.0	1.37	52.00	-0.0250	0.0004
C. Nutritional status (%)										
Children:										
Moderate stunting	25.8	24.8	24.2	25.2	22.6	24.6	1.14	3.20	-0.0251	0.0106
Severe stunting	32.0	26.9	27.1	21.6	10.9	24.4	2.94	21.10	-0.1447	0.0098
Moderate underweight	23.9	21.9	20.9	18.5	10.5	19.6	2.28	13.40	-0.1183	0.0117
Severe underweight	8.7	7.4	5.7	4.0	2.3	5.9	3.78	6.40	-0.2134	0.0228
Mild anemia	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na
Women:										
Malnutrition	10.4	9.5	10.2	8.1	6.0	8.8	1.73	4.40	-0.1108	0.0179
Mild anemia	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na
D. Female circumcision (%)										
Prevalence of circumcision:										
Girls	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na
Prevalence of occlusion:										
Girls	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na
E. Sexually transmitted disease										
Prevalence of genital discharge:										
Women	5.0	5.1	5.3	5.2	3.5	4.8	1.43	1.50	-0.0087	0.0220
Men	3.9	4.2	2.8	2.8	5.5	4.0	0.71	1.60	0.0061	0.0560
Prevalence of genital ulcer:										
Women	7.2	8.9	8.7	9.3	6.4	8.1	1.13	0.80	0.0266	0.0168
Men	3.6	3.8	4.5	5.0	5.4	4.4	0.67	1.80	0.0590	0.0511

Malawi

2000 - TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Childhood immunization										
BCG coverage	92.6	90.2	91.6	91.1	97.1	92.4	0.95	4.50	0.0120	0.0032
Measles coverage	79.8	80.1	83.0	84.7	90.4	83.2	0.88	10.60	0.0243	0.0052
DPT coverage	79.4	81.0	81.8	88.0	93.3	84.2	0.85	13.90	na	na
Full basic coverage	65.4	65.0	69.1	72.5	81.4	70.1	0.80	16.00	0.0473	0.0080
No basic coverage	3.0	4.2	2.9	2.5	0.9	2.8	3.33	2.10	-0.1639	0.0648
Hepatitis B coverage	na	na	na	na	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood illnesses										
Treatment of fever:										
Medical treatment of fever	10.3	10.7	12.1	13.0	18.7	12.4	0.55	8.40	0.1156	0.0253
Treatment in a public facility	8.0	7.7	8.7	8.6	9.5	8.4	0.84	1.50	0.0614	0.0313
Treatment in a private facility	2.0	2.9	3.3	4.2	9.0	3.9	0.22	7.00	0.2287	0.0467
Treatment of acute respiratory infection (ARI):										
Medical treatment of ARI	17.9	25.7	23.2	32.0	45.4	26.7	0.39	27.50	0.1608	0.0188
Treatment in a public facility	14.5	17.0	16.4	21.2	25.0	18.0	0.58	10.50	0.1262	0.0249
Treatment in a private facility	2.9	8.7	6.3	10.3	19.4	8.3	0.15	16.50	0.2356	0.0372
Treatment of diarrhea:										
Use of oral rehydration therapy	57.4	60.7	62.0	67.1	67.4	62.1	0.85	10.00	0.0489	0.0107
Medical treatment of diarrhea	25.0	26.8	26.6	34.7	31.5	28.3	0.79	6.50	0.0489	0.0215
Treatment in a public facility	19.2	20.9	19.7	26.4	17.7	20.7	1.08	1.50	0.0085	0.0265
Treatment in a private facility	5.3	4.9	6.6	7.7	13.6	7.0	0.39	8.30	0.1510	0.0481
C. Antenatal and delivery care										
Antenatal care visits:										
To a medically trained person	89.3	91.2	90.7	95.3	97.6	92.5	0.91	8.30	0.0168	0.0018
To a doctor	7.5	8.6	7.5	9.0	8.6	8.2	0.87	1.10	0.0711	0.0219
To a nurse or trained midwife	81.8	82.5	83.3	86.3	88.9	84.3	0.92	7.10	0.0129	0.0027
Multiple visits to a medically trained perso	76.9	78.3	78.4	82.2	85.7	80.0	0.90	8.80	0.0228	0.0032
Antenatal care content:										
Tetanus toxoid	78.8	81.2	80.2	82.9	85.5	81.5	0.92	6.70	0.0179	0.0030
Prophylactic antimalarial treatment	60.7	63.6	65.7	72.0	82.6	68.3	0.73	21.90	0.0615	0.0042
Iron supplementation	64.2	65.8	65.0	71.7	71.3	67.3	0.90	7.10	0.0259	0.0045
Delivery attendance:										
By a medically trained person	43.0	49.4	50.9	58.5	83.0	55.6	0.52	40.00	0.1338	0.0044
By a doctor	3.9	5.2	3.9	5.7	8.9	5.4	0.44	5.00	0.1949	0.0258
By a nurse or trained midwife	39.0	44.1	46.9	52.8	74.0	50.2	0.53	35.00	0.1272	0.0051
In a public facility	32.3	36.2	36.3	42.5	57.7	40.2	0.56	25.40	0.1217	0.0065
In a private facility	10.4	12.8	14.5	15.5	25.0	15.2	0.42	14.60	0.1672	0.0129
At home	56.2	49.5	47.8	41.1	16.6	43.6	3.39	39.60	-0.1679	0.0057
D. Contraceptive services										
Contraceptive prevalence:										
Women	19.9	23.4	22.9	25.8	39.6	26.1	0.50	19.70	0.1402	0.0100
Men	20.9	27.5	27.0	24.5	31.6	26.7	0.66	10.67	0.0714	0.0292

Malawi

2000 - TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE (Cont.)

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
D. Contraceptive services (cont.)										
Source of contraception - public sector:										
Women	73.1	74.1	72.5	73.3	60.7	69.7	1.20	12.40	-0.0451	0.0081
Men	na	na	na	na	na	na	na	na	na	na
Source of contraception - private sector:										
Women	26.2	25.6	26.5	26.4	38.9	29.8	0.67	12.70	0.1120	0.0202
Men	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses										
Treatment of genital discharge, ulcer, sore:										
Women	13.0	19.2	17.3	22.6	44.1	22.2	0.29	31.10	0.2242	0.0314
Men	(12.4)	17.4	(21.6)	(41.4)	42.9	28.4	0.29	55.30	0.2377	0.0584
Treatment of genital discharge, ulcer, sore in public facilities:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
Voluntary counseling and testing for HIV/AIDS:										
Women	4.5	5.5	6.3	9.6	16.4	8.5	0.27	11.90	0.2629	0.0175
Men	10.9	11.5	14.6	19.1	20.2	15.2	0.54	9.30	0.1727	0.0251

Malawi

2000 - TOTAL POPULATION

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Hygienic practices										
Disposal of children's stools:										
Sanitary disposal	70.4	82.2	82.5	86.5	89.7	81.6	0.78	19.30	0.0491	0.0035
Handwashing:										
Wash hands prior to preparing food	96.5	97.7	97.1	97.9	98.6	97.5	0.98	2.10	0.0031	0.0008
Handwashing facilities in household	7.4	10.1	10.2	13.4	22.2	12.4	0.33	14.80	0.2607	0.0155
B. Bednet ownership and use										
Bednet ownership:										
Bednet ownership	4.1	7.7	7.6	13.9	34.4	13.0	0.12	30.30	0.3719	0.0151
Treated bednet ownership	0.9	1.0	1.7	1.9	8.0	2.6	0.11	7.10	0.5962	0.0396
Bednet use:										
By children	na	na	na	na	na	na	na	na	na	na
By pregnant women	2.6	5.7	5.1	7.5	17.8	7.2	0.15	15.20	0.3663	0.0705
C. Breastfeeding										
Exclusive breastfeeding	52.7	62.8	62.4	65.6	71.7	62.7	0.74	19.00	0.0663	0.0151
Timely complementary feeding	95.3	93.5	91.5	91.2	95.2	93.4	1.00	0.10	0.0006	0.0053
Bottle-feeding	0.6	2.0	1.2	2.4	9.8	2.9	0.06	9.20	0.4629	0.0810
D. Micronutrient consumption										
Iodized salt:										
Availability of iodized salt in household	46.9	48.4	50.7	54.4	65.0	53.0	0.72	18.10	0.0633	0.0047
Vitamin A:										
Children	68.9	70.7	71.8	75.2	66.5	70.6	1.04	2.40	0.0025	0.0041
Women	37.9	39.5	42.9	43.8	45.7	41.7	0.83	7.80	0.0497	0.0076
E. Tobacco and alcohol use										
Tobacco:										
Women	4.0	2.7	2.4	2.2	0.8	2.4	5.00	3.20	-0.2464	0.0314
Men	31.1	25.0	22.3	21.7	19.6	24.0	1.59	11.50	-0.1201	0.0179
Alcohol:										
Women	2.5	1.6	1.6	1.7	1.5	1.8	1.67	1.00	-0.0453	0.0391
Men	25.4	19.9	19.0	19.3	25.0	22.0	1.02	0.40	-0.0221	0.0205
F. Sexual practices										
Non-regular sexual partnerships:										
Women	0.3	0.5	0.5	0.5	0.5	0.5	0.60	0.20	0.0371	0.0702
Men	8.3	6.4	9.4	8.9	12.6	9.2	0.66	4.30	0.0967	0.0332
Condom usage with non-regular partner:										
Women	*	*	*	*	*	24.1	*	*	*	*
Men	31.0	47.5	29.2	62.5	53.4	45.7	0.58	22.40	0.0960	0.0386
G. Domestic violence										
Ever experienced violence	na	na	na	na	na	na	na	na	na	na
Experienced violence in past year	na	na	na	na	na	na	na	na	na	na

Malawi

2000 - TOTAL POPULATION

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Education										
School completion:										
Women	25.6	32.2	33.9	44.5	73.7	42.1	0.35	48.10	0.2294	0.0054
Men	42.9	51.7	53.6	65.2	83.2	61.2	0.52	40.30	0.1326	0.0036
School participation:										
Girls	61.7	70.9	70.4	79.4	89.7	74.0	0.69	28.00	0.0737	0.0045
Boys	55.3	65.9	68.2	76.9	88.7	70.7	0.62	33.40	0.0885	0.0050
B. Exposure to mass media										
Newspaper readership:										
Women	3.2	5.6	5.0	8.1	26.4	9.8	0.12	23.20	0.5082	0.0191
Men	10.2	11.4	14.2	19.9	47.2	21.5	0.22	37.00	0.3369	0.0215
Radio listenership:										
Women	17.6	50.4	50.0	68.5	77.7	52.3	0.23	60.10	0.2386	0.0042
Men	37.7	75.2	74.5	75.8	84.7	69.7	0.45	47.00	0.1270	0.0067
Television viewership:										
Women	0.2	0.7	0.8	1.4	15.2	3.8	0.01	15.00	0.8369	0.0428
Men	2.7	3.9	4.3	6.1	22.5	8.5	0.12	19.80	0.5203	0.0467
C. Knowledge and attitudes about HIV/AIDS										
Knowledge about sexual transmission of HIV/AIDS:										
Women	90.0	92.1	93.3	95.5	98.3	93.8	0.92	8.30	0.0234	0.0014
Men	96.7	97.3	98.6	98.1	98.2	97.7	0.98	1.50	0.0064	0.0018
Knowledge about mother-to-child transmission of HIV/AIDS:										
Women	67.9	66.7	69.1	72.6	80.9	70.4	0.84	13.00	0.0506	0.0031
Men	73.7	75.6	71.1	75.5	80.0	74.7	0.92	6.30	0.0238	0.0060
Attitudes toward HIV/AIDS:										
Women	50.4	50.6	50.2	47.0	30.6	46.9	1.65	19.80	-0.1055	0.0052
Men	48.6	47.1	50.8	48.3	25.4	43.7	1.91	23.20	-0.1307	0.0113
D. Status of women										
Household decisionmaking:										
Can seek own health care	30.3	21.9	26.1	22.0	27.2	25.6	1.11	3.10	-0.0367	0.0090
Can seek children's health care	92.8	93.6	95.3	96.3	97.8	95.0	0.95	5.00	0.0103	0.0015
Can make daily household purchases	36.3	28.9	31.0	30.2	42.0	33.9	0.86	5.70	0.0255	0.0073
Can make large household purchases	25.7	17.5	21.2	18.6	28.3	22.4	0.91	2.60	0.0156	0.0100
Can make meal-related decisions	48.0	39.9	41.4	39.2	39.5	41.7	1.22	8.50	-0.0446	0.0061
Freedom of movement:										
Can travel to visit family, relatives	30.9	20.3	24.6	21.4	22.4	24.1	1.38	8.50	-0.0690	0.0093
Other decisionmaking, attitudes:										
Can decide how to spend own money	41.3	37.9	49.8	52.9	64.2	51.0	0.64	22.90	0.0932	0.0097
Can decide whether to have sex	70.2	71.9	71.9	72.5	60.7	69.3	1.16	9.50	-0.0253	0.0035
Justifies domestic violence	39.7	38.0	39.5	35.8	25.6	35.7	1.55	14.10	-0.0684	0.0068
E. Orphanhood										
Paternal orphan prevalence	8.9	6.5	7.7	8.4	10.5	8.3	0.85	1.60	0.0344	0.0123
Maternal orphan prevalence	3.7	4.2	4.6	5.5	6.7	4.9	0.55	3.00	0.0965	0.0158
Double orphan prevalence	1.3	1.4	1.6	2.4	2.7	1.8	0.48	1.40	0.1354	0.0260

Malawi

2000 - FEMALE / MALE POPULATIONS

Part I: HNP STATUS

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood mortality and morbidity												
Infant mortality rate	129.2	105.7	117.2	101.9	75.7	107.8	133.9	115.7	117.7	116.5	96.5	117.1
Under-five mortality rate	229.1	202.4	211.5	192.7	142.6	198.8	232.6	210.7	225.8	197.1	155.0	206.6
Prevalence of fever	43.7	42.8	43.4	42.3	33.8	41.5	43.2	42.3	45.6	41.1	34.8	41.7
Prevalence of diarrhea	18.3	18.2	17.1	16.2	13.6	16.9	19.2	19.9	19.6	18.4	13.9	18.4
Prevalence of acute respiratory infection (ARI)	30.1	26.9	31.4	27.9	19.8	27.5	28.1	26.8	30.4	24.4	18.2	25.8
B. Nutritional status												
Children:												
Moderate stunting	25.1	25.3	23.8	25.6	22.9	24.6	26.6	24.3	24.5	24.9	22.3	24.6
Severe stunting	29.4	27.7	23.7	20.2	10.1	23.0	34.7	26.0	30.2	23.0	11.7	25.8
Moderate underweight	23.3	22.3	20.0	19.0	10.0	19.4	24.5	21.4	21.8	18.0	11.1	19.7
Severe underweight	7.7	7.3	5.2	4.9	2.1	5.7	9.8	7.6	6.1	3.1	2.4	6.0
Mild anemia	na	na	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na	na	na
C. Sexually transmitted disease												
Prevalence of genital discharge:												
Women	5.0	5.1	5.3	5.2	3.5	4.8						
Men							3.9	4.2	2.8	2.8	5.5	4.0
Prevalence of genital ulcer:												
Women	7.2	8.9	8.7	9.3	6.4	8.1						
Men							3.6	3.8	4.5	5.0	5.4	4.4

Malawi

2000 - FEMALE / MALE POPULATIONS

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood immunization												
BCG coverage	91.5	89.5	93.2	91.1	97.0	92.1	93.9	91.1	90.0	91.1	97.2	92.7
Measles coverage	79.8	77.9	85.0	85.5	92.0	83.2	79.7	82.8	81.2	83.9	89.0	83.2
DPT coverage	80.6	80.9	84.2	86.4	95.9	84.7	78.0	81.2	79.5	89.5	91.3	83.6
Full basic coverage	64.3	64.9	71.1	73.8	84.6	70.5	66.7	65.1	67.3	71.2	78.9	69.7
No basic coverage	3.8	3.8	1.2	3.5	0.7	2.8	2.2	4.6	4.5	1.6	1.0	2.8
Hepatitis B coverage	na	na	na	na	na	na	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood illnesses												
Treatment of fever:												
Medical treatment of fever	8.6	11.6	12.1	14.8	17.3	12.3	12.1	9.5	12.0	11.1	20.1	12.6
Treatment in a public facility	6.3	9.1	8.1	8.9	8.9	8.1	9.8	6.2	9.2	8.3	10.0	8.7
Treatment in a private facility	1.8	2.6	4.1	5.9	8.1	4.0	2.3	3.4	2.6	2.5	9.8	3.7
Treatment of acute respiratory infection (ARI):												
Medical treatment of ARI	16.9	27.1	24.2	33.3	47.6	27.4	19.2	24.1	22.2	30.5	43.0	25.9
Treatment in a public facility	12.8	19.0	17.0	21.1	24.7	18.0	16.4	14.7	15.8	21.3	25.2	17.9
Treatment in a private facility	3.0	8.1	7.0	11.8	21.6	8.9	2.8	9.4	5.6	8.5	17.1	7.6
Treatment of diarrhea:												
Use of oral rehydration therapy	58.9	61.5	64.2	66.9	72.4	63.8	55.8	59.7	60.2	67.3	62.7	60.5
Medical treatment of diarrhea	25.8	27.5	24.0	38.0	35.1	29.2	24.2	26.1	28.7	31.8	28.2	27.5
Treatment in a public facility	19.2	21.8	17.6	28.7	25.8	22.0	19.2	19.9	21.4	24.3	10.0	19.5
Treatment in a private facility	5.5	5.0	6.4	8.1	9.2	6.5	5.0	4.8	6.8	7.4	17.8	7.5
C. Contraceptive services												
Contraceptive prevalence:												
Women	19.9	23.4	22.9	25.8	39.6	26.1						
Men							19.9	18.3	19.8	24.0	29.4	22.2
Source of contraception - public sector:												
Women	73.1	74.1	72.5	73.3	60.7	69.7						
Men							na	na	na	na	na	na
Source of contraception - private sector:												
Women	26.2	25.6	26.5	26.4	38.9	29.8						
Men							na	na	na	na	na	na
D. Treatment of adult illnesses												
Treatment of genital discharge, ulcer, sore:												
Women	13.0	19.2	17.3	22.6	44.1	22.2						
Men							(12.4)	17.4	(21.6)	(41.4)	42.9	0.0
Treatment of genital discharge, ulcer, sore in public facilities:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
Voluntary counseling and testing for HIV/AIDS:												
Women	4.5	5.5	6.3	9.6	16.4	8.5						
Men							10.9	11.5	14.6	19.1	20.2	15.2

Malawi

2000 - FEMALE / MALE POPULATIONS

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Hygienic practices												
Disposal of children's stools:												
Sanitary disposal	70.4	82.2	82.5	86.5	89.7	81.6						
Handwashing:												
Wash hands prior to preparing food	96.5	97.7	97.1	97.9	98.6	97.5						
Handwashing facilities in household	7.4	10.1	10.2	13.4	22.2	12.4						
B. Bednet ownership and use												
Bednet use:												
By children	na	na	na	na	na	na						
C. Breastfeeding												
Exclusive breastfeeding	51.2	64.2	69.5	66.6	68.7	63.8	54.1	61.4	55.3	64.7	74.6	61.6
Timely complementary feeding	97.4	95.2	89.3	88.0	94.1	93.2	93.0	91.8	93.1	94.3	96.3	93.6
Bottle-feeding	0.6	1.5	1.5	2.8	8.1	2.7	0.6	2.5	0.9	1.9	11.6	3.1
D. Micronutrient consumption												
Vitamin A:												
Children	67.6	73.7	71.5	75.3	64.7	70.6	70.2	67.2	72.2	75.1	68.2	70.6
E. Tobacco and alcohol use												
Tobacco:												
Women	4.0	2.7	2.4	2.2	0.8	2.4						
Men							31.1	25.0	22.3	21.7	19.6	24.0
Alcohol:												
Women	2.5	1.6	1.6	1.7	1.5	1.8						
Men							25.4	19.9	19.0	19.3	25.0	22.0
F. Sexual practices												
Non-regular sexual partnerships:												
Women	0.3	0.5	0.5	0.5	0.5	0.5						
Men							8.3	6.4	9.4	8.9	12.6	9.2
Condom usage with non-regular partner:												
Women	*	*	*	*	*	24.1						
Men							31.0	47.5	29.2	62.5	53.4	45.7

Malawi

2000 - FEMALE / MALE POPULATIONS

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Education												
School completion:												
Women	25.6	32.2	33.9	44.5	73.7	42.1						
Men							42.9	51.7	53.6	65.2	83.2	61.2
School participation:												
Girls	61.7	70.9	70.4	79.4	89.7	74.0						
Boys							55.3	65.9	68.2	76.9	88.7	70.7
B. Exposure to mass media												
Newspaper readership:												
Women	3.2	5.6	5.0	8.1	26.4	9.8						
Men							10.2	11.4	14.2	19.9	47.2	21.5
Radio listenership:												
Women	17.6	50.4	50.0	68.5	77.7	52.3						
Men							37.7	75.2	74.5	75.8	84.7	69.7
Television viewership:												
Women	0.2	0.7	0.8	1.4	15.2	3.8						
Men							2.7	3.9	4.3	6.1	22.5	8.5
C. Knowledge and attitudes about HIV/AIDS												
Knowledge about sexual transmission of HIV/AIDS:												
Women	90.0	92.1	93.3	95.5	98.3	93.8						
Men							96.7	97.3	98.6	98.1	98.2	97.7
Knowledge about mother-to-child transmission of HIV/AIDS:												
Women	67.9	66.7	69.1	72.6	80.9	70.4						
Men							73.7	75.6	71.1	75.5	80.0	74.7
Attitudes toward HIV/AIDS:												
Women	50.4	50.6	50.2	47.0	30.6	46.9						
Men							48.6	47.1	50.8	48.3	25.4	43.7
D. Orphanhood												
Paternal orphan prevalence	9.1	6.1	8.1	8.2	10.4	8.3	8.6	7.0	7.4	8.5	10.6	8.4
Maternal orphan prevalence	3.8	4.4	5.4	5.7	7.1	5.2	3.7	3.9	3.7	5.3	6.3	4.5
Double orphan prevalence	1.3	1.3	1.7	2.5	2.6	1.9	1.3	1.6	1.4	2.2	2.8	1.8

Malawi

2000 - RURAL / URBAN POPULATIONS

Part I: HNP STATUS

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood illness and mortality												
Infant mortality rate	131.6	110.5	118.0	114.4	91.6	116.7	*	*	(110.1)	71.0	81.3	82.5
Under-five mortality rate	230.9	207.0	222.0	202.6	149.6	210.3	*	*	*	138.7	148.5	147.9
Prevalence of fever	43.4	42.6	44.6	43.0	39.1	43.0	*	38.9	43.0	33.2	30.1	31.9
Prevalence of diarrhea	18.8	18.9	18.5	17.6	14.1	18.1	*	26.7	16.0	15.3	13.5	14.3
Prevalence of acute respiratory infection	29.1	26.8	31.6	26.8	24.8	28.3	*	26.5	14.2	21.5	13.8	15.7
B. Fertility												
Total fertility rate	7.1	7.0	6.4	6.3	5.7	6.7	*	*	*	*	4.1	4.5
Adolescent fertility rate	193.0	171.0	176.0	194.0	152.0	180.0	*	*	*	*	133.0	133.8
C. Nutritional status												
Children:												
Moderate stunting	25.9	25.0	24.5	25.3	25.2	25.2	*	(9.5)	17.4	24.8	20.4	20.7
Severe stunting	31.8	27.1	27.0	21.7	12.8	26.1	*	(13.5)	30.0	20.7	9.2	13.5
Moderate underweight	23.8	22.1	20.8	19.2	11.7	20.8	*	(4.8)	24.3	13.6	9.5	11.4
Severe underweight	8.8	7.4	5.7	4.2	4.2	6.5	*	(10.9)	3.9	2.9	0.5	1.4
Mild anemia	na	na	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na	na	na
Women:												
Malnutrition	10.4	9.5	10.3	8.5	7.0	9.4	*	(7.3)	6.5	5.6	5.3	5.5
Mild anemia	na	na	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na	na	na
D. Female circumcision												
Prevalence of circumcision:												
Girls	na	na	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na	na	na
Prevalence of occlusion:												
Girls	*	*	*	*	*	*	*	*	*	*	*	*
Women	*	*	*	*	*	*	*	*	*	*	*	*
E. Sexually transmitted disease												
Prevalence of genital discharge:												
Women	5.0	5.2	5.4	5.4	4.9	5.2	(7.0)	3.6	3.0	3.6	2.4	2.7
Men	3.9	4.2	2.9	2.7	3.2	3.5	*	*	(1.2)	3.4	7.4	6.2
Prevalence of genital ulcer:												
Women	7.1	8.8	8.7	9.5	7.1	8.3	(14.0)	14.2	9.1	8.4	5.8	6.7
Men	3.3	3.7	4.8	5.0	5.2	4.2	*	*	0.0	5.1	5.6	5.5

Malawi

2000 - RURAL / URBAN POPULATIONS

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood immunization												
BCG coverage	92.6	90.1	91.9	90.7	96.0	91.8	*	*	(86.2)	94.0	97.9	96.3
Measles coverage	79.6	80.4	83.1	83.9	87.3	82.0	*	*	(80.5)	90.0	92.6	90.6
DPT coverage	79.3	81.0	81.9	87.5	91.8	82.8	*	*	(78.7)	90.6	94.4	92.4
Full basic coverage	65.2	65.5	69.9	72.0	78.7	68.7	*	*	(54.1)	76.1	83.4	78.6
No basic coverage	3.1	4.2	2.7	2.9	1.3	3.1	*	*	(7.1)	0.4	0.6	1.1
Hepatitis B coverage	na	na	na	na	na	na	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood diseases												
Treatment of fever:												
Medical treatment of fever	10.3	10.5	12.1	12.7	17.3	11.8	*	*	11.0	15.2	20.3	18.4
Treatment in a public facility	8.0	7.6	8.7	8.3	6.8	8.0	*	*	8.0	11.3	12.5	11.8
Treatment in a private facility	2.1	2.8	3.3	4.4	10.0	3.6	*	*	3.0	2.1	7.8	6.2
Treatment of acute respiratory infection (ARI):												
Medical treatment of ARI	18.0	25.5	22.6	30.8	40.8	24.9	*	*	(50.9)	41.5	52.6	48.3
Treatment in a public facility	14.5	16.9	16.1	19.5	19.7	16.7	*	*	(31.1)	35.3	33.3	32.9
Treatment in a private facility	2.9	8.6	6.0	11.1	19.6	7.7	*	*	(19.8)	3.4	19.1	14.5
Treatment of diarrhea:												
Use of oral rehydration therapy	57.7	60.7	61.6	67.3	74.3	62.1	*	*	*	65.4	61.1	61.9
Medical treatment of diarrhea	25.1	26.8	26.2	32.5	32.3	27.6	*	*	*	51.1	30.8	34.9
Treatment in a public facility	19.2	21.0	19.6	23.8	14.3	20.2	*	*	*	46.0	20.9	25.6
Treatment in a private facility	5.3	4.7	6.2	8.3	17.6	6.8	*	*	*	3.8	9.9	9.1
C. Antenatal and delivery care												
Antenatal care visits:												
To a medically-trained person	89.4	91.0	90.6	95.2	96.3	91.7	*	(100.0)	94.1	96.2	98.6	97.7
To a doctor	7.4	8.5	7.5	9.0	8.2	8.1	*	(14.5)	6.8	8.3	9.0	9.0
To a nurse or trained midwife	82.0	82.5	83.1	86.1	88.1	83.7	*	(85.5)	87.3	87.9	89.6	88.7
Multiple visits to a medically-trained perso	76.9	78.1	78.0	81.6	83.7	78.9	*	(88.3)	88.1	86.4	87.3	87.0
Antenatal care content:												
Tetanus toxoid	78.8	81.0	80.0	82.7	84.7	80.9	*	(96.8)	83.3	84.3	86.1	85.7
Prophylactic antimalarial treatment	60.9	63.5	65.3	71.0	80.5	66.2	*	(67.0)	74.9	79.1	84.4	81.9
Iron supplementation	64.4	66.1	65.5	71.8	73.7	67.3	*	(44.2)	53.8	71.0	69.3	67.6
Delivery attendance:												
By a medically-trained person	43.0	49.5	50.5	56.8	77.0	51.9	(35.2)	39.0	60.4	70.6	88.4	81.6
By a doctor	3.9	5.2	3.9	5.7	7.1	4.9	(11.0)	5.6	4.5	6.1	10.6	9.3
By a nurse or trained midwife	39.1	44.3	46.6	51.1	69.9	47.0	(24.2)	33.4	55.9	64.5	77.8	72.3
In a public facility	32.4	36.4	35.7	40.2	45.4	36.8	(16.0)	24.1	50.7	59.3	68.9	64.3
In a private facility	10.4	12.8	14.7	15.8	31.1	14.8	(19.2)	15.0	9.7	13.4	19.5	17.6
At home	56.1	49.4	48.1	43.1	22.4	47.2	(64.8)	61.0	39.6	26.9	11.3	17.7
D. Contraceptive services												
Contraceptive prevalence:												
Women	19.9	23.4	22.8	25.1	36.9	24.1	*	24.3	25.1	30.7	41.8	38.2
Men	19.3	18.4	19.3	23.8	28.4	20.8	*	*	(27.3)	24.5	30.3	29.4

Malawi

2000 - RURAL / URBAN POPULATIONS

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE (Cont.)

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
D. Contraceptive services (cont.)												
Source of contraception - public sector:												
Women	73.0	74.4	72.1	72.0	54.6	70.2	*	*	(82.2)	80.2	64.9	67.6
Men	na	na	na	na	na	na	na	na	na	na	na	na
Source of contraception - private sector:												
Women	26.3	25.2	26.9	27.6	44.9	29.2	*	*	(17.8)	19.5	34.7	32.1
Men	na	na	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses												
Treatment of genital discharge, ulcer, sore:												
Women	13.2	18.4	16.8	22.3	43.0	19.9	*	*	*	24.8	45.3	39.8
Men	(12.8)	16.9	(20.9)	(42.4)	*	21.0	*	*	*	*	52.6	49.8
Treatment of genital discharge, ulcer, sore in public facilities:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
Voluntary counseling and testing for HIV/AIDS:												
Women	4.5	5.4	6.3	9.1	13.2	6.9	0.0	9.5	8.2	13.1	18.7	16.9
Men	11.1	11.3	14.7	16.1	19.7	13.7	*	*	(11.3)	31.7	20.6	21.9

Malawi

2000 - RURAL / URBAN POPULATIONS

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Hygienic practices												
Disposal of children's stools:												
Sanitary disposal	na	na	na	na	na	na	na	na	na	na	na	na
Handwashing:												
Wash hands prior to preparing food	96.5	97.7	97.0	97.6	97.9	97.2	(100.0)	100.0	98.2	99.2	99.2	99.2
Handwashing facilities in household	7.5	10.1	10.1	13.4	16.8	10.8	(1.8)	7.7	12.4	13.5	27.1	23.0
B. Bednet ownership and use												
Bednet ownership:												
Bednet ownership	4.1	7.5	7.6	13.0	30.6	10.1	(1.8)	23.3	6.3	20.1	37.9	32.0
Treated bednet ownership	0.9	0.8	1.6	1.7	5.5	1.7	(1.0)	14.1	3.7	3.1	10.2	8.5
Bednet use:												
By children	4.8	5.8	5.1	5.5	14.1	6.1	*	(3.9)	19.6	22.5	26.1	24.1
By pregnant women	2.6	5.8	5.0	7.5	15.1	5.9	*	*	(7.1)	8.2	19.9	16.1
C. Breastfeeding												
Exclusive breastfeeding	52.3	62.2	62.6	63.4	73.9	61.4	*	*	*	(81.6)	69.4	71.7
Timely complementary feeding	95.2	93.4	92.3	89.9	92.1	92.9	*	*	*	(99.0)	97.6	96.7
Bottle-feeding	0.6	2.0	0.9	2.4	5.7	1.8	*	*	(11.3)	2.5	13.7	10.8
D. Micronutrient consumption												
Iodized salt:												
Availability of iodized salt in household	47.1	48.5	50.0	53.2	58.2	50.5	(26.1)	42.8	68.5	62.5	70.7	68.0
Vitamin A:												
Children	68.9	70.8	72.3	76.1	74.9	72.0	*	(68.9)	62.9	69.0	59.2	61.4
Women	37.9	39.4	42.5	44.1	45.2	41.1	*	(45.5)	51.0	41.9	46.0	45.4
E. Tobacco and alcohol use												
Tobacco:												
Women	4.0	2.8	2.5	2.0	1.2	2.7	(5.8)	0.0	0.6	3.3	0.5	1.0
Men	30.9	24.9	22.8	21.8	20.9	25.0	*	*	(11.7)	21.3	18.6	19.4
Alcohol:												
Women	2.5	1.7	1.7	1.8	1.0	1.8	0.0	0.0	0.9	1.1	1.8	1.6
Men	24.6	19.7	19.5	19.2	17.1	20.5	*	*	(8.9)	19.7	30.7	28.7
F. Sexual practices												
Non-regular sexual partnerships:												
Women	0.3	0.5	0.5	0.6	0.4	0.5	0.0	0.3	0.4	0.1	0.5	0.4
Men	7.8	6.4	9.4	8.1	9.7	8.0	*	*	(10.4)	12.5	14.7	14.5
Condom usage with non-regular partner:												
Women	*	*	*	*	*	19.0	*	*	*	*	*	*
Men	27.7	47.5	25.8	54.4	39.8	37.9	*	*	(89.0)	84.2	59.9	65.0
G. Domestic violence												
Ever experienced violence	na	na	na	na	na	na	na	na	na	na	na	na
Experienced violence in past year	na	na	na	na	na	na	na	na	na	na	na	na

Malawi

2000 - RURAL / URBAN POPULATIONS

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Education												
School completion:												
Women	25.5	32.0	33.3	41.6	64.5	35.9	(37.5)	41.4	47.3	63.2	80.5	74.9
Men	42.8	51.4	52.8	62.6	73.9	55.4	(48.6)	67.5	71.1	80.2	90.1	86.9
School participation:												
Girls	61.8	70.9	69.5	78.8	88.2	71.8	*	(70.2)	96.7	83.9	91.2	88.7
Boys	55.1	65.9	68.5	75.2	85.5	68.0	*	*	61.4	88.1	92.2	88.9
B. Exposure to mass media												
Newspaper readership:												
Women	3.2	5.3	4.7	6.9	17.8	6.2	*	(21.9)	12.7	15.4	32.6	28.4
Men	10.1	11.1	14.1	17.5	25.6	14.3	*	*	(16.0)	30.0	62.7	53.8
Radio listenership:												
Women	17.7	50.9	50.4	68.6	71.1	47.8	*	(24.3)	40.9	68.1	82.5	76.2
Men	37.2	75.3	75.4	76.0	82.0	66.7	*	*	(58.0)	75.2	86.6	82.8
Television viewership:												
Women	0.2	0.8	0.8	1.2	4.6	1.1	*	0.0	0.7	3.1	22.9	18.0
Men	2.7	3.9	4.4	5.1	10.3	4.7	*	*	(3.0)	10.4	31.4	25.6
C. Knowledge and attitudes about HIV/AIDS												
Knowledge about sexual transmission of HIV/AIDS:												
Women	89.9	92.0	93.1	95.2	96.6	92.8	(93.1)	97.9	97.7	97.7	99.5	99.0
Men	96.6	97.3	98.5	97.7	99.2	97.7	*	*	(100.0)	99.6	97.5	98.0
Knowledge about mother-to-child transmission of HIV/AIDS:												
Women	62.9	66.5	68.5	72.1	76.7	68.2	(59.9)	75.4	84.2	76.4	84.0	82.3
Men	69.7	75.6	70.3	73.5	76.0	72.8	*	*	(85.3)	84.1	82.9	83.3
Attitudes toward HIV/AIDS:												
Women	56.6	50.5	50.4	48.6	37.2	50.2	(64.4)	55.4	47.1	37.2	25.9	29.7
Men	52.3	47.2	52.0	48.2	34.8	48.0	*	*	(28.2)	48.5	18.6	24.6
D. Status of women												
Household decisionmaking:												
Can seek own health care	30.2	21.7	26.1	20.4	22.1	24.6	(44.8)	28.1	26.6	32.1	30.9	31.0
Can seek children's health care	92.7	93.5	95.2	96.0	97.0	94.5	*	(95.4)	97.6	97.6	98.5	98.3
Can make daily household purchases	36.4	28.6	31.1	29.2	36.4	32.1	(27.1)	44.2	29.4	36.9	46.0	43.5
Can make large household purchases	25.8	17.4	21.0	18.5	24.8	21.3	(15.7)	22.3	24.9	18.9	30.9	28.4
Can make meal-related decisions	48.1	39.8	41.4	38.6	36.9	41.7	(33.5)	46.5	42.7	43.0	41.4	41.7
Freedom of movement:												
Can travel to visit family, relatives	30.9	20.0	24.7	20.8	22.2	24.2	(37.6)	37.4	23.6	25.3	22.6	23.6
Other decisionmaking, attitudes:												
Can decide how to spend own money	41.2	37.1	49.3	49.9	54.6	45.7	*	*	(63.2)	68.2	69.9	69.5
Can decide whether to have sex	70.3	71.8	71.6	73.2	67.4	71.2	(65.8)	79.0	79.8	67.7	55.8	59.4
Justifies domestic violence	39.8	38.1	39.5	36.8	34.0	38.2	(29.1)	29.7	41.3	29.0	19.6	22.4
E. Orphanhood												
Paternal orphan prevalence	8.7	6.6	7.8	8.6	9.3	8.0	20.5	6.0	7.2	6.9	11.6	10.5
Maternal orphan prevalence	3.7	4.2	4.6	5.8	6.6	4.7	11.1	2.3	3.3	3.1	6.9	6.0
Double orphan prevalence	1.3	1.4	1.6	2.5	2.9	1.8	6.2	0.7	0.9	1.7	2.5	2.3

PART II. BASIC TABLES, 1992

A. TOTAL POPULATION

B. FEMALE AND MALE POPULATIONS

C. RURAL AND URBAN POPULATIONS

Notes:

– Each of the three sections referred to above consists of four divisions, presenting data for: I) hnp status; II) hnp service use; III) hnp-related individual and household behavior; and IV) other, underlying determinants of hnp status.

– Full definitions of all indicators covered in the tables are provided in section A of the technical notes found in part II.

– "na" appears in the table cells when data are not available, usually because the DHS survey concerned did not collect information about the indicator(s) in question.

– Figures in the tables shown within parentheses indicate the absence of adequate observations to produce acceptably reliable values. Asterisks appear when the number of observations was too small to justify the presentation even of figures within parentheses. (For further information, see the section on "Sampling Errors" in the presentation of data and methods in part II.B.) Asterisks also will be found in columns showing statistical indices of inequality when the amount of quintile-specific information available is inadequate to permit computation of the value for the index concerned.

– Female/male tables include only indicators relevant for both sexes; those pertaining to only one sex (e.g., fertility, women's nutritional status, antenatal care, attended deliveries) have been omitted.

Malawi

1992 - TOTAL POPULATION

Part I: HNP STATUS

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Childhood illness and mortality										
Infant mortality rate	141.2	133.7	154.1	139.2	106.1	136.1	1.33	35.10	-0.0344	0.0009
Under-five mortality rate	253.1	248.3	257.9	256.3	172.4	239.7	1.47	80.70	-0.0459	0.0011
Prevalence of fever	40.0	38.9	43.5	38.8	38.4	40.0	1.04	1.60	-0.0194	0.0114
Prevalence of diarrhea	23.7	20.7	23.4	19.3	21.0	21.7	1.13	2.70	-0.0333	0.0174
Prevalence of acute respiratory infection (ARI)	16.8	14.4	13.8	13.6	13.3	14.4	1.26	3.50	-0.0365	0.0229
B. Fertility										
Total fertility rate	7.2	7.0	6.9	6.4	6.1	6.7	1.18	1.10	-0.0336	0.0003
Adolescent fertility rate	143.0	171.0	196.0	162.0	131.0	161.0	1.09	12.00	-0.0192	0.0020
C. Nutritional status (%)										
Children:										
Moderate stunting	25.7	28.7	27.4	26.2	21.7	26.0	1.18	4.00	-0.0398	0.0166
Severe stunting	28.8	26.7	23.4	22.0	14.0	23.2	2.06	14.80	-0.1406	0.0166
Moderate underweight	21.7	25.1	21.0	17.6	13.4	19.9	1.62	8.30	-0.1085	0.0189
Severe underweight	12.4	7.5	7.6	6.5	4.0	7.7	3.10	8.40	-0.1808	0.0333
Mild anemia	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na
Women:										
Malnutrition	14.1	11.3	8.1	8.9	6.0	9.7	2.35	8.10	-0.1389	0.0376
Mild anemia	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na
D. Female circumcision (%)										
Prevalence of circumcision:										
Girls	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na
Prevalence of occlusion:										
Girls	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na
E. Sexually transmitted disease										
Prevalence of genital discharge:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
Prevalence of genital ulcer:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na

Malawi

1992 - TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Childhood immunization										
BCG coverage	92.3	96.3	98.0	99.0	98.8	97.0	0.93	6.50	0.0101	0.0039
Measles coverage	77.2	84.0	83.8	90.6	93.2	85.9	0.83	16.00	0.0343	0.0081
DPT coverage	78.7	87.5	90.7	91.2	93.8	88.6	0.84	15.10	0.0292	0.0071
Full basic coverage	73.0	78.8	80.3	87.1	89.3	81.8	0.82	16.30	0.0391	0.0092
No basic coverage	6.6	3.7	1.1	1.0	0.7	2.5	9.43	5.90	-0.3622	0.1398
Hepatitis B coverage	na	na	na	na	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood illnesses										
Treatment of fever:										
Medical treatment of fever	49.0	47.6	46.7	48.8	64.2	50.7	0.76	15.20	0.0574	0.0141
Treatment in a public facility	35.1	37.8	35.1	34.7	45.2	37.2	0.78	10.10	0.0319	0.0189
Treatment in a private facility	13.4	8.6	10.8	14.2	18.0	12.8	0.74	4.60	0.1272	0.0388
Treatment of acute respiratory infection (ARI):										
Medical treatment of ARI	49.2	54.7	53.4	49.0	65.1	53.7	0.76	15.90	0.0473	0.0230
Treatment in a public facility	31.2	39.0	32.7	39.4	43.0	36.5	0.73	11.80	0.0714	0.0333
Treatment in a private facility	16.8	15.8	19.3	9.6	20.8	16.4	0.81	4.00	-0.0007	0.0536
Treatment of diarrhea:										
Use of oral rehydration therapy	65.5	67.7	71.7	77.4	86.9	73.3	0.75	21.40	0.0496	0.0113
Medical treatment of diarrhea	46.7	40.1	48.5	49.4	61.6	49.0	0.76	14.90	0.0428	0.0197
Treatment in a public facility	36.1	28.1	34.1	33.8	41.6	34.7	0.87	5.50	0.0128	0.0274
Treatment in a private facility	10.6	11.3	14.0	15.1	19.5	13.9	0.54	8.90	0.1188	0.0490
C. Antenatal and delivery care										
Antenatal care visits:										
To a medically trained person	83.6	87.2	90.7	95.7	96.6	90.6	0.87	13.00	0.0284	0.0034
To a doctor	4.6	5.5	6.4	7.1	11.0	6.8	0.42	6.40	0.2213	0.0435
To a nurse or trained midwife	79.0	81.7	84.2	88.6	85.6	83.8	0.92	6.60	0.0124	0.0049
Multiple visits to a medically trained perso	73.6	75.8	82.8	89.8	88.8	82.0	0.83	15.20	0.0407	0.0051
Antenatal care content:										
Tetanus toxoid	79.2	82.9	89.1	91.5	93.5	87.1	0.85	14.30	0.0310	0.0041
Prophylactic antimalarial treatment	na	na	na	na	na	na	na	na	na	na
Iron supplementation	na	na	na	na	na	na	na	na	na	na
Delivery attendance:										
By a medically trained person	44.6	46.2	50.4	58.8	77.9	54.9	0.57	33.30	0.1439	0.0071
By a doctor	2.3	2.9	4.0	5.1	8.3	4.4	0.28	6.00	0.3810	0.0470
By a nurse or trained midwife	42.2	43.2	46.4	53.7	69.5	50.5	0.61	27.30	0.1232	0.0081
In a public facility	34.6	35.3	35.6	43.5	59.7	41.2	0.58	25.10	0.1350	0.0103
In a private facility	9.6	11.5	15.6	15.8	18.4	14.1	0.52	8.80	0.1643	0.0217
At home	53.8	50.7	47.6	37.6	20.7	42.7	2.60	33.10	-0.1830	0.0092
D. Contraceptive services										
Contraceptive prevalence:										
Women	3.9	3.6	5.6	6.9	17.2	7.4	0.23	13.30	0.4116	0.0403
Men	4.8	8.6	6.1	13.2	24.9	12.5	0.19	20.10	0.3600	0.0551

Malawi

1992 - TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE (Cont.)

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
D. Contraceptive services (cont.)										
Source of contraception - public sector:										
Women	*	*	(77.3)	70.1	69.8	70.5	*	*	*	*
Men	na	na	na	na	na	na	na	na	na	na
Source of contraception - private sector:										
Women	*	*	(22.7)	29.9	29.0	28.4	*	*	*	*
Men	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses										
Treatment of genital discharge, ulcer, sore:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
Treatment of genital discharge, ulcer, sore in public facilities:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
Voluntary counseling and testing for HIV/AIDS:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na

Malawi

1992 - TOTAL POPULATION

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Hygienic practices										
Disposal of children's stools:										
Sanitary disposal	na	na	na	na	na	na	na	na	na	na
Handwashing:										
Wash hands prior to preparing food	na	na	na	na	na	na	na	na	na	na
Handwashing facilities in household	na	na	na	na	na	na	na	na	na	na
B. Bednet ownership and use										
Bednet ownership:										
Bednet ownership	na	na	na	na	na	na	na	na	na	na
Treated bednet ownership	na	na	na	na	na	na	na	na	na	na
Bednet use:										
By children	na	na	na	na	na	na	na	na	na	na
By pregnant women	na	na	na	na	na	na	na	na	na	na
C. Breastfeeding										
Exclusive breastfeeding	2.5	4.2	5.8	2.2	0.0	3.3	na	2.50	-0.2123	0.1322
Timely complementary feeding	86.6	80.3	88.4	94.0	90.0	87.2	0.96	3.40	0.0165	0.0121
Bottle-feeding	0.7	2.7	5.0	6.0	15.8	5.4	0.04	15.10	0.5981	0.0897
D. Micronutrient consumption										
Iodized salt:										
Availability of iodized salt in household	na	na	na	na	na	na	na	na	na	na
Vitamin A:										
Children	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na
E. Tobacco and alcohol use										
Tobacco:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
Alcohol:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
F. Sexual practices										
Non-regular sexual partnerships:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
Condom usage with non-regular partner:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
G. Domestic violence										
Ever experienced violence	na	na	na	na	na	na	na	na	na	na
Experienced violence in past year	na	na	na	na	na	na	na	na	na	na

Malawi

1992 - TOTAL POPULATION

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles						Low/High Ratio	Low-High Diff. (Abs. Val.)	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.			Value	Standard Errors
A. Education										
School completion:										
Women	10.2	17.9	23.2	29.2	58.6	27.9	0.17	48.40	0.3792	0.0121
Men	32.2	41.1	49.0	53.2	72.9	51.8	0.44	40.70	0.1586	0.0070
School participation:										
Girls	36.0	42.2	51.5	61.1	81.7	53.6	0.44	45.70	0.1674	0.0104
Boys	32.2	38.8	49.2	57.4	78.3	50.8	0.41	46.10	0.1876	0.0112
B. Exposure to mass media										
Newspaper readership:										
Women	6.1	11.1	12.8	19.4	43.4	18.5	0.14	37.30	0.4794	0.0184
Men	22.7	24.9	27.2	46.9	64.4	40.6	0.35	41.70	0.2691	0.0185
Radio listenership:										
Women	24.8	31.2	46.7	74.9	81.7	52.3	0.30	56.90	0.2645	0.0066
Men	50.5	58.4	66.8	86.7	91.8	74.5	0.55	41.30	0.1235	0.0092
Television viewership:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS										
Knowledge about sexual transmission of HIV/AIDS:										
Women	81.6	87.7	90.7	92.5	94.5	89.5	0.86	12.90	0.0279	0.0028
Men	84.9	91.3	95.2	98.1	96.1	94.1	0.88	11.20	0.0204	0.0044
Knowledge about mother-to-child transmission of HIV/AIDS:										
Women	74.8	73.6	75.8	81.6	89.2	77.8	0.84	14.40	0.0549	0.0041
Men	82.1	78.5	85.6	88.6	92.9	86.2	0.88	10.80	0.0385	0.0068
Attitudes toward HIV/AIDS:										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
D. Status of women										
Household decisionmaking:										
Can seek own health care	na	na	na	na	na	na	na	na	na	na
Can seek children's health care	na	na	na	na	na	na	na	na	na	na
Can make daily household purchases	na	na	na	na	na	na	na	na	na	na
Can make large household purchases	na	na	na	na	na	na	na	na	na	na
Can make meal-related decisions	na	na	na	na	na	na	na	na	na	na
Freedom of movement:										
Can travel to visit family, relatives	na	na	na	na	na	na	na	na	na	na
Other decisionmaking, attitudes:										
Can decide how to spend own money	na	na	na	na	na	na	na	na	na	na
Can decide whether to have sex	na	na	na	na	na	na	na	na	na	na
Justifies domestic violence	na	na	na	na	na	na	na	na	na	na
E. Orphanhood										
Paternal orphan prevalence	8.4	5.9	5.0	4.4	4.6	5.7	1.83	3.80	-0.1460	0.0236
Maternal orphan prevalence	4.1	3.7	3.4	5.1	5.0	4.3	0.82	0.90	-0.0133	0.0255
Double orphan prevalence	1.2	1.1	0.8	1.7	0.9	1.1	1.33	0.30	-0.0820	0.0446

Malawi

1992 - FEMALE / MALE POPULATIONS

Part I: HNP STATUS

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood mortality and morbidity												
Infant mortality rate	139.1	130.7	140.9	124.4	113.6	130.4	143.5	136.6	166.1	153.6	98.7	141.7
Under-five mortality rate	244.1	(234.0)	238.9	251.3	172.7	229.8	(262.6)	(262.8)	275.5	260.6	172.4	249.4
Prevalence of fever	40.6	39.3	41.2	39.1	38.8	39.8	39.5	38.4	45.9	38.5	38.0	40.2
Prevalence of diarrhea	21.2	20.4	20.3	17.3	21.2	20.0	26.2	21.0	26.5	21.2	20.9	23.3
Prevalence of acute respiratory infection (ARI)	16.5	15.2	12.3	14.0	16.0	14.7	17.1	13.5	15.4	13.3	10.7	14.1
B. Nutritional status												
Children:												
Moderate stunting	23.6	29.0	26.0	27.2	19.8	25.3	27.9	28.4	28.7	25.1	23.3	26.7
Severe stunting	30.5	24.8	19.3	18.6	13.0	21.6	27.0	28.7	27.3	25.7	14.8	24.8
Moderate underweight	20.8	25.0	23.2	13.7	14.6	19.6	22.7	25.3	18.9	21.7	12.2	20.1
Severe underweight	11.7	8.1	4.8	6.4	2.8	6.9	13.2	7.0	10.2	6.6	5.0	8.5
Mild anemia	na	na	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na	na	na
C. Sexually transmitted disease												
Prevalence of genital discharge:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
Prevalence of genital ulcer:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na

Malawi

1992 - FEMALE / MALE POPULATIONS

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood immunization												
BCG coverage	95.5	99.3	99.4	100.0	97.4	98.3	88.8	93.8	97.0	98.0	100.0	95.8
Measles coverage	79.6	82.3	83.9	87.5	94.2	85.4	74.6	85.4	83.7	93.8	92.4	86.3
DPT coverage	79.6	93.6	89.9	90.8	91.5	89.0	77.7	82.2	91.4	91.6	95.7	88.3
Full basic coverage	73.6	80.2	82.6	84.4	89.1	81.9	72.4	77.7	78.5	89.9	89.4	81.8
No basic coverage	4.5	0.7	0.6	0.0	1.6	1.5	9.0	6.2	1.5	2.0	0.0	3.4
Hepatitis B coverage	na	na	na	na	na	na	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood illnesses												
Treatment of fever:												
Medical treatment of fever	50.1	45.5	46.5	47.5	65.7	50.5	47.8	49.9	46.9	50.2	62.8	51.0
Treatment in a public facility	33.8	35.8	33.4	35.5	44.7	36.2	36.5	39.9	36.5	33.9	45.7	38.2
Treatment in a private facility	15.4	8.3	13.1	12.1	20.4	13.7	11.3	8.8	8.7	16.3	15.7	12.0
Treatment of acute respiratory infection (ARI):												
Medical treatment of ARI	(49.5)	(55.3)	(50.7)	58.6	61.0	54.8	48.9	(54.2)	55.4	39.0	70.7	52.6
Treatment in a public facility	(30.2)	(38.0)	(28.6)	52.2	35.3	36.8	32.2	(40.1)	36.0	25.9	53.6	36.3
Treatment in a private facility	(16.8)	(17.3)	(22.1)	6.3	25.8	17.5	16.8	(14.0)	17.1	13.1	14.1	15.2
Treatment of diarrhea:												
Use of oral rehydration therapy	64.6	72.6	68.9	69.9	83.9	71.6	66.3	62.9	73.7	83.5	89.6	74.7
Medical treatment of diarrhea	41.6	43.4	37.8	43.1	58.2	44.3	51.0	36.8	56.7	54.7	64.8	53.0
Treatment in a public facility	27.7	31.8	28.8	27.0	42.7	31.3	43.1	24.5	38.1	39.3	40.7	37.6
Treatment in a private facility	13.9	11.0	9.0	15.3	14.6	12.6	7.8	11.7	17.7	14.8	24.1	15.0
C. Contraceptive services												
Contraceptive prevalence:												
Women	3.9	3.6	5.6	6.9	17.2	7.4						
Men							4.8	8.6	6.1	13.2	24.9	12.5
Source of contraception - public sector:												
Women	*	*	(77.3)	70.1	69.8	70.5						
Men							na	na	na	na	na	na
Source of contraception - private sector:												
Women	*	*	(22.7)	29.9	29.0	28.4						
Men							na	na	na	na	na	na
D. Treatment of adult illnesses												
Treatment of genital discharge, ulcer, sore:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
Treatment of genital discharge, ulcer, sore in public facilities:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
Voluntary counseling and testing for HIV/AIDS:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na

Malawi

1992 - FEMALE / MALE POPULATIONS

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Hygienic practices												
Disposal of children's stools:												
Sanitary disposal	na	na	na	na	na	na						
Handwashing:												
Wash hands prior to preparing food	na	na	na	na	na	na						
Handwashing facilities in household	na	na	na	na	na	na						
B. Bednet ownership and use												
Bednet use:												
By children	na	na	na	na	na	na						
C. Breastfeeding												
Exclusive breastfeeding	*	(5.0)	(2.5)	(4.4)	0.0	2.8	(3.6)	(3.8)	(9.6)	0.0	0.0	3.6
Timely complementary feeding	(84.7)	(81.3)	(89.1)	(90.7)	(91.1)	86.6	(88.6)	(78.9)	(87.8)	*	(88.8)	88.0
Bottle-feeding	0.0	2.8	3.4	8.2	14.5	5.2	1.4	2.7	6.5	3.8	17.1	5.5
D. Micronutrient consumption												
Vitamin A:												
Children	na	na	na	na	na	na	na	na	na	na	na	na
E. Tobacco and alcohol use												
Tobacco:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
Alcohol:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
F. Sexual practices												
Non-regular sexual partnerships:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
Condom usage with non-regular partner:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na

Malawi

1992 - FEMALE / MALE POPULATIONS

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles - Female						Wealth Quintiles - Male					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Education												
School completion:												
Women	10.2	17.9	23.2	29.2	58.6	27.9						
Men							32.2	41.1	49.0	53.2	72.9	51.8
School participation:												
Girls	36.0	42.2	51.5	61.1	81.7	53.6						
Boys							32.2	38.8	49.2	57.4	78.3	50.8
B. Exposure to mass media												
Newspaper readership:												
Women	6.1	11.1	12.8	19.4	43.4	18.5						
Men							22.7	24.9	27.2	46.9	64.4	40.6
Radio listenership:												
Women	24.8	31.2	46.7	74.9	81.7	52.3						
Men							50.5	58.4	66.8	86.7	91.8	74.5
Television viewership:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS												
Knowledge about sexual transmission of HIV/AIDS:												
Women	81.6	87.7	90.7	92.5	94.5	89.5						
Men							84.9	91.3	95.2	98.1	96.1	94.1
Knowledge about mother-to-child transmission of HIV/AIDS:												
Women	74.8	73.6	75.8	81.6	89.2	77.8						
Men							82.1	78.5	85.6	88.6	92.9	86.2
Attitudes toward HIV/AIDS:												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
D. Orphanhood												
Paternal orphan prevalence	7.9	6.1	4.5	4.5	4.8	5.6	9.1	5.8	5.5	4.3	4.4	5.8
Maternal orphan prevalence	4.0	3.8	2.9	5.0	4.2	4.0	4.3	3.6	4.0	5.2	5.7	4.6
Double orphan prevalence	1.1	1.2	0.5	1.6	0.9	1.1	1.2	0.9	1.0	1.7	0.9	1.1

Malawi

1992 - RURAL / URBAN POPULATIONS

Part I: HNP STATUS

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood illness and mortality												
Infant mortality rate	141.3	133.4	153.2	139.3	107.4	138.4	*	*	*	(138.2)	104.3	118.1
Under-five mortality rate	252.2	249.1	255.8	256.5	168.8	244.1	*	*	*	(254.0)	177.0	205.4
Prevalence of fever	40.0	38.8	43.6	39.4	39.7	40.5	*	(41.5)	42.2	33.6	36.6	36.7
Prevalence of diarrhea	23.8	20.7	23.6	19.3	22.2	22.0	*	(19.8)	19.4	19.2	19.3	19.2
Prevalence of acute respiratory infection	16.8	14.6	13.8	13.7	11.4	14.3	*	(5.0)	15.4	13.2	15.8	14.8
B. Fertility												
Total fertility rate	7.2	7.1	6.9	6.4	(6.7)	6.9	*	*	*	*	(5.2)	5.5
Adolescent fertility rate	143.0	172.0	191.0	155.0	(160.0)	164.8	*	*	*	*	(92.0)	134.5
C. Nutritional status												
Children:												
Moderate stunting	25.7	28.7	27.1	26.1	22.1	26.3	*	*	(34.0)	27.1	20.9	23.7
Severe stunting	28.8	27.1	23.6	22.9	17.2	24.6	*	*	(18.6)	14.5	9.0	11.5
Moderate underweight	21.7	25.1	21.0	18.4	15.3	20.8	*	*	(20.3)	11.0	10.4	12.2
Severe underweight	12.5	7.4	7.8	6.8	4.7	8.2	*	*	(2.7)	4.5	3.0	3.6
Mild anemia	na	na	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na	na	na
Women:												
Malnutrition	14.2	11.2	8.0	9.0	6.1	10.1	*	*	*	(7.9)	5.9	7.0
Mild anemia	na	na	na	na	na	na	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na	na	na	na	na	na	na
D. Female circumcision												
Prevalence of circumcision:												
Girls	na	na	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na	na	na
Prevalence of occlusion:												
Girls	na	na	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na	na	na
E. Sexually transmitted disease												
Prevalence of genital discharge:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
Prevalence of genital ulcer:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na

Malawi

1992 - RURAL / URBAN POPULATIONS

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Childhood immunization												
BCG coverage	92.3	96.2	97.9	98.9	100.0	96.9	*	*	*	(100.0)	96.7	97.9
Measles coverage	77.2	84.4	84.4	90.8	91.8	85.3	*	*	*	(88.4)	95.9	90.7
DPT coverage	78.7	87.6	90.7	90.8	93.7	88.0	*	*	*	(94.4)	93.8	93.3
Full basic coverage	73.0	79.1	81.0	86.9	88.1	81.2	*	*	*	(88.4)	91.4	87.2
No basic coverage	6.6	3.8	1.2	1.1	0.0	2.7	*	*	*	0.0	2.1	1.3
Hepatitis B coverage	na	na	na	na	na	na	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood diseases												
Treatment of fever:												
Medical treatment of fever	49.1	47.7	45.8	49.4	68.2	50.2	*	*	(66.8)	43.6	58.3	55.8
Treatment in a public facility	35.1	37.7	33.7	34.0	48.7	36.6	*	*	(65.7)	41.6	40.1	43.1
Treatment in a private facility	13.5	8.7	11.2	15.4	19.5	13.0	*	*	(1.1)	1.9	15.8	11.2
Treatment of acute respiratory infection (ARI):												
Medical treatment of ARI	49.0	55.0	53.3	48.3	(73.0)	53.3	*	*	*	(55.5)	57.4	56.6
Treatment in a public facility	30.9	39.3	31.6	38.0	(50.7)	36.1	*	*	*	(52.2)	35.5	40.1
Treatment in a private facility	16.9	15.7	20.3	10.3	(22.3)	16.6	*	*	*	(3.3)	19.4	14.8
Treatment of diarrhea:												
Use of oral rehydration therapy	65.5	67.3	71.2	77.4	86.1	71.9	*	*	*	(77.4)	88.0	85.6
Medical treatment of diarrhea	46.6	40.0	48.4	51.0	66.8	48.9	*	*	*	(35.7)	53.7	49.9
Treatment in a public facility	36.0	27.8	33.8	33.8	43.7	34.3	*	*	*	(33.5)	38.4	38.0
Treatment in a private facility	10.6	11.5	14.2	16.5	23.0	14.2	*	*	*	(2.3)	14.1	11.0
C. Antenatal and delivery care												
Antenatal care visits:												
To a medically trained person	83.6	86.9	90.5	95.5	96.0	89.8	*	(100.0)	94.4	97.4	97.3	97.1
To a doctor	4.6	5.2	6.2	5.6	4.5	5.3	*	(16.9)	10.3	19.2	19.1	18.0
To a nurse or trained midwife	78.9	81.7	84.2	89.9	91.5	84.4	*	(83.1)	84.0	78.2	78.2	79.1
Multiple visits to a medically trained perso	73.5	75.7	82.7	90.4	88.5	81.3	*	(78.0)	84.1	84.1	89.1	87.2
Antenatal care content:												
Tetanus toxoid	79.1	82.6	89.1	91.2	94.5	86.4	*	(95.4)	89.8	93.4	92.3	92.4
Prophylactic antimalarial treatment	na	na	na	na	na	na	na	na	na	na	na	na
Iron supplementation	na	na	na	na	na	na	na	na	na	na	na	na
Delivery attendance:												
By a medically trained person	44.4	45.4	49.1	56.4	68.4	51.0	*	(78.4)	77.2	78.8	90.4	86.2
By a doctor	2.3	2.7	3.5	4.4	2.3	3.1	*	(13.8)	13.1	10.9	16.4	14.8
By a nurse or trained midwife	42.1	42.7	45.5	52.0	66.1	47.8	*	(64.6)	64.2	67.9	74.0	71.5
In a public facility	34.5	34.5	34.4	40.8	48.8	37.4	*	(72.2)	60.6	65.8	74.2	71.0
In a private facility	9.6	11.6	15.6	16.1	20.3	14.0	*	(6.2)	15.9	12.9	15.8	14.9
At home	53.9	51.4	48.9	39.7	29.6	46.5	*	(21.6)	22.1	20.1	8.9	13.0
D. Contraceptive services												
Contraceptive prevalence:												
Women	3.9	3.4	5.5	6.9	14.1	6.0	*	(14.1)	8.1	7.7	21.1	17.2
Men	4.3	8.9	6.0	12.4	24.1	10.5	*	*	*	(20.7)	25.8	23.8

1992 - RURAL / URBAN POPULATIONS

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE (Cont.)

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
D. Contraceptive services (cont.)												
Source of contraception - public sector:												
Women	*	*	(78.8)	(67.4)	(61.0)	67.6	*	*	*	*	77.2	78.2
Men	na	na	na	na	na	na	na	na	na	na	na	na
Source of contraception - private sector:												
Women	*	*	(21.2)	(32.6)	(38.1)	31.4	*	*	*	*	21.5	20.7
Men	na	na	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses												
Treatment of genital discharge, ulcer, sore:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
Treatment of genital discharge, ulcer, sore in public facilities:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
Voluntary counseling and testing for HIV/AIDS:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na

Malawi

1992 - RURAL / URBAN POPULATIONS

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Hygienic practices												
Disposal of children's stools:												
Sanitary disposal	na	na	na	na	na	na	na	na	na	na	na	na
Handwashing:												
Wash hands prior to preparing food	na	na	na	na	na	na	na	na	na	na	na	na
Handwashing facilities in household	na	na	na	na	na	na	na	na	na	na	na	na
B. Bednet ownership and use												
Bednet ownership:												
Bednet ownership	na	na	na	na	na	na	na	na	na	na	na	na
Treated bednet ownership	na	na	na	na	na	na	na	na	na	na	na	na
Bednet use:												
By children	na	na	na	na	na	na	na	na	na	na	na	na
By pregnant women	na	na	na	na	na	na	na	na	na	na	na	na
C. Breastfeeding												
Exclusive breastfeeding	(2.3)	4.2	6.1	(2.5)	*	3.5	*	*	*	0.0	0.0	0.6
Timely complementary feeding	86.6	79.8	88.6	(96.7)	(92.8)	87.6	*	*	*	*	(86.2)	84.0
Bottle-feeding	0.7	2.4	5.1	6.3	12.9	4.3	*	*	(4.0)	3.7	19.2	13.8
D. Micronutrient consumption												
Iodized salt:												
Availability of iodized salt in household	na	na	na	na	na	na	na	na	na	na	na	na
Vitamin A:												
Children	na	na	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na	na	na
E. Tobacco and alcohol use												
Tobacco:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
Alcohol:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
F. Sexual practices												
Non-regular sexual partnerships:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
Condom usage with non-regular partner:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
G. Domestic violence												
Ever experienced violence	na	na	na	na	na	na	na	na	na	na	na	na
Experienced violence in past year	na	na	na	na	na	na	na	na	na	na	na	na

Malawi

1992 - RURAL / URBAN POPULATIONS

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles - Rural						Wealth Quintiles - Urban					
	Low	2nd	3rd	4th	High	Avg.	Low	2nd	3rd	4th	High	Avg.
A. Education												
School completion:												
Women	10.0	18.0	22.6	27.2	50.3	23.3	*	(14.6)	36.3	45.7	68.7	60.2
Men	31.8	40.6	48.8	51.2	65.2	47.0	*	(57.4)	51.9	67.4	81.6	76.5
School participation:												
Girls	35.8	42.5	51.3	59.9	81.9	50.8	*	*	56.1	72.1	81.4	75.9
Boys	32.3	38.7	49.9	57.0	75.7	48.0	*	*	(32.9)	61.0	81.8	72.6
B. Exposure to mass media												
Newspaper readership:												
Women	6.1	11.1	12.5	18.4	31.5	14.4	*	*	(20.6)	27.9	58.2	47.9
Men	23.0	25.1	27.5	48.3	54.4	36.3	*	*	*	34.1	75.6	63.7
Radio listenership:												
Women	24.8	31.1	46.5	74.4	75.6	48.1	*	*	(49.4)	79.4	89.3	82.0
Men	50.3	58.6	66.9	87.5	90.6	72.0	*	*	*	80.0	93.0	88.0
Television viewership:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS												
Knowledge about sexual transmission of HIV/AIDS:												
Women	81.6	87.6	90.7	92.4	94.8	88.9	*	(91.1)	91.7	93.8	94.1	93.7
Men	84.7	91.1	95.4	98.3	93.7	93.3	*	*	*	96.4	98.7	97.9
Knowledge about mother-to-child transmission of HIV/AIDS:												
Women	68.3	73.4	75.7	80.8	87.9	76.2	*	(86.1)	76.4	88.9	90.9	89.2
Men	79.7	78.6	85.6	88.0	90.0	84.6	*	*	*	94.0	96.2	94.6
Attitudes toward HIV/AIDS:												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na	na	na
D. Status of women												
Household decisionmaking:												
Can seek own health care	na	na	na	na	na	na	na	na	na	na	na	na
Can seek children's health care	na	na	na	na	na	na	na	na	na	na	na	na
Can make daily household purchases	na	na	na	na	na	na	na	na	na	na	na	na
Can make large household purchases	na	na	na	na	na	na	na	na	na	na	na	na
Can make meal-related decisions	na	na	na	na	na	na	na	na	na	na	na	na
Freedom of movement:												
Can travel to visit family, relatives	na	na	na	na	na	na	na	na	na	na	na	na
Other decisionmaking, attitudes:												
Can decide how to spend own money	na	na	na	na	na	na	na	na	na	na	na	na
Can decide whether to have sex	na	na	na	na	na	na	na	na	na	na	na	na
Justifies domestic violence	na	na	na	na	na	na	na	na	na	na	na	na
E. Orphanhood												
Paternal orphan prevalence	8.4	5.9	4.7	4.5	5.1	5.8	(20.6)	7.5	11.4	3.8	3.9	4.8
Maternal orphan prevalence	4.1	3.8	3.4	5.2	5.9	4.3	(8.1)	1.3	4.5	4.2	3.7	3.8
Double orphan prevalence	1.2	1.1	0.6	1.8	1.2	1.2	0.0	0.0	3.4	0.5	0.4	0.7

PART III. TECHNICAL NOTES

A. INDICATOR DEFINITIONS

B. DATA AND METHODS

C. DISCUSSION

INDICATOR DEFINITIONS

Part I: HNP STATUS

A. CHILDHOOD MORTALITY AND ILLNESS [2]

Infant mortality rate: number of deaths to children under 12 months of age per 1,000 live births, based on experience during the ten years preceding the survey.

Under-five mortality rate: number of deaths to children under five years of age per 1,000 live births, based on experience during the ten years preceding the survey.

Prevalence of fever: percent of children who had fever, whether or not accompanied by cough or rapid breathing, in the two weeks before the survey.

Prevalence of diarrhea: percent of children who had diarrhea in the two weeks before the survey.

Prevalence of acute respiratory infection: percent of children who had a cough accompanied by rapid or difficult breathing in the two weeks before the survey.

B. FERTILITY

Total fertility rate (TFR): average number of births a woman could expect to have during her lifetime if she followed the levels of fertility currently observed at every age. The TFR is calculated as the sum of average annual age-specific fertility rates for all reproductive age groups (usually 15-49 years) in the three years before the survey.

Adolescent fertility rate: age-specific fertility rate for women 15-19 years of age. This is the average number of births among women aged 15-19 years per 1,000 women in that age group, based on births in the three years before the survey and expressed as annual averages.

[2] Figures for the prevalence of fever, diarrhea, and acute respiratory infection refer to percent of children under three, four, or five years of age, depending upon the country. (The specific ages covered for in particular country may be determined by consulting the full report on that country's DHS, which may be found at: www.measuredhs.com/countries.)

C. NUTRITIONAL STATUS

Children [3, 4, 5]

Moderate stunting (height-for-age): percent of children with a height-for-age Z-score of between –2 and –3 standard deviations of the median reference standard for their age (as defined in fn. 4).

Severe stunting (height-for-age): percent of children with a height-for-age Z-score of below –3 standard deviations of the median reference standard for their age (as defined in fn. 4).

Moderate underweight (weight-for-age): percent of children with a weight-for-age Z-score of between –2 and –3 standard deviations of the median reference standard for their age (as defined in fn. 4).

Severe underweight (weight-for-age): percent of children with a weight-for-age Z-score of below –3 standard deviations of the median reference standard for their age (as defined in fn. 4).

Mild anemia: percent of children with a hemoglobin level of between 10.0g/dl and 10.9 g/dl, the World Health Organization criterion for mild anemia.

Moderate anemia: percent of children with a hemoglobin level of between 7.0g/dl and 9.9g/dl, the World Health Organization criterion for moderate anemia.

Severe anemia: percent of children with a hemoglobin level of below 7.0g/dl, the World Health Organization criterion for severe anemia.

Women [6, 7]

Malnutrition: percent of women aged 15-49 years with a Body Mass Index (BMI) of less than 18.5, where BMI – commonly used to indicate adult nutritional status – is defined as weight in kilograms divided by the square of height in meters.

Mild anemia: percent of women aged 15-49 years with a hemoglobin level of between 10.0g/dl and 10.9g/dl for pregnant women and between 10.0g/dl and 11.9g/dl for non-pregnant women, the World Health Organization criterion for mild anemia.

Moderate anemia: percent of women aged 15-49 years with a hemoglobin level of between 7.0g/dl and 9.9g/dl, the World Health Organization criterion for moderate anemia.

Severe anemia: percent of women aged 15-49 years with a hemoglobin level of less than 7.0g/dl, the World Health Organization criterion for severe anemia.

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[3] All figures related to children's nutrition status refer to children under three, four, or five years of age, depending upon the country. (The specific ages covered for in particular country may be determined by consulting the full report on the DHS of the country concerned, which is available at: www.measuredhs.com/countries.)

[4] The reference standards used for stunting and underweight are those established in the 1970s by the World Health Organization, the U.S. Centers for Disease Control, and the U.S. National Center for Health Statistics. Updated stunting and underweight figures based on the recently-released, 2006 World Health Organization reference standards are currently under preparation. When complete, they will be available at: www.worldbank.org/povertyandhealth/countrydata.

[5] The anemia figures for children living at an altitude above 1,000 meters have been adjusted to reflect the higher level of hemoglobin required.

[6] In some countries, the BMI is presented for all women; in others, the figure is available only for mothers of children under five years of age. The reference population for any given country can be determined by consulting the full report on the DHS for the country concerned. An electronic version of this report is located at: www.measuredhs.com/countries.

[7] Anemia cut-off points for respondents who live at an altitude above 1,000 meters and/or who smoke have been adjusted to account for their higher hemoglobin requirements.

D. FEMALE CIRCUMCISION

Prevalence of Circumcision

Girls: percent of women aged 15-49 years with one or more daughters, at least one of whom had been circumcised.

Women: percent of women aged 15-49 years who had been circumcised.

Prevalence of Occlusion

Girls: percent of women aged 15-49 years with one or more daughters, at least one of whom had been circumcised with the vaginal area sewn closed.

Women: percent of women aged 15-49 years whose vaginal area had been sewn closed.

E. SEXUALLY TRANSMITTED DISEASES

Prevalence of Genital Discharge

Women: percent of women aged 15-49 years who had had abnormal genital discharge in the twelve months before the survey.

Men: percent of men aged 15-54 years who had had abnormal genital discharge in the twelve months before the survey.

Prevalence of Genital Ulcer or Sore

Women: percent of women aged 15-49 years who had had a genital ulcer or sore in the twelve months before the survey.

Men: percent of men aged 15-54 years who had had a genital ulcer or sore in the twelve months before the survey.

Part II: INTERMEDIATE DETERMINANTS OF HNP STATUS – HEALTH SERVICE USE

A. CHILDHOOD IMMUNIZATION [8]

BCG coverage: percent of children who had received a dose of BCG vaccine by the time of the survey.

Measles coverage: percent of children who had received a dose of measles vaccine by the time of the survey.

DPT coverage: percent of children who had received three doses of DPT vaccine by the time of the survey.

Full basic coverage: percent of children who had received a dose of BCG vaccine, measles vaccine, and three doses of DPT and polio vaccines by the time of the survey, excluding polio vaccine given at birth.

No basic coverage: percent of children who had received no vaccination against the six early-childhood diseases (TB, measles, polio, diphtheria, pertusis, and tetanus) by the time of the survey.

Hepatitis B coverage: percent of children who had received three doses of hepatitis B vaccine by the time of the survey.

Yellow fever coverage: percent of children who had received a dose of yellow fever vaccine by the time of the survey.

B. TREATMENT OF CHILDHOOD ILLNESSES [9]

Treatment of Fever

Medical treatment of fever: percent of children with fever, with or without cough or rapid breathing, in the two weeks before the survey who had sought medical advice for fever from any health facility or health provider, whether public or private.

Treatment in a public facility: percent of children with fever, with or without cough or rapid breathing, in the two weeks before the survey who had sought medical advice for fever from a public-sector health facility or provider (as defined in fn. 9).

Treatment in a private facility: percent of children with fever, with or without cough or rapid breathing, in the two weeks before the survey who had sought medical advice for fever from a private-sector health facility or provider (as defined in fn. 9).

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[8] Childhood immunization figures refer to rates among children 12-23 months of age in all countries except those in Latin America and the Caribbean. There, the figures refer to rates among children 18-29 months of age. All figures are based on information recorded on the child's vaccination card; or, in cases where a card was not seen by the interviewer, on the mother's report.

[9] Figures for illness treatment in a public facility refer to treatment in government hospitals, health centers, health posts, or dispensaries; or in facilities operated by government-affiliated social securing programs. Figures for treatment in private facilities cover treatment in private hospitals or clinics, in private doctors' offices, or in facilities operated by other private medical providers (such as non-governmental organizations) as defined in the country concerned; but exclude treatment obtained in private pharmacies or shops.

Treatment of Acute Respiratory Infection (ARI)

Medical treatment of ARI: percent of children with a cough and rapid breathing in the two weeks before the survey who had been taken for treatment at any medical facility or provider, whether public or private.

Treatment in a public facility: percent of children with a cough and rapid breathing in the two weeks before the survey who had been taken for treatment at a public-sector health facility or provider (as defined in fn. 9).

Treatment in a private facility: percent of children with a cough and rapid breathing in the two weeks before the survey who had been taken for treatment at a private-sector health facility or provider (as defined in fn. 9).

Treatment of Diarrhea

Use of oral rehydration therapy: percent of children with diarrhea in the two weeks before the survey who had received oral rehydration therapy (ORT) (defined as including consumption of oral rehydration salts, other recommended home fluids, or other increased liquids).

Medical treatment of diarrhea: percent of children with diarrhea in the two weeks before the survey who had been taken for treatment at any medical facility or provider, whether public or private.

Treatment in a public facility: percent of children with diarrhea in the two weeks before the survey who had been taken for treatment at a public-sector health facility or provider (as defined in fn. 9).

Treatment in a private facility: percent of children with diarrhea in the two weeks before the survey who had been taken for treatment at a private-sector health facility or provider (as defined in fn. 9).

C. ANTENATAL AND DELIVERY CARE [10]

Antenatal Care (ANC) Visits

To a medically-trained person: percent of women with one or more births in the five years before the survey who had received at least one antenatal care consultation from a medically-trained person (as defined in fn. 10) before her most recent birth.

To a doctor: percent of women with one or more births in the five years before the survey who had received at least one antenatal care consultation from a doctor before her most recent birth.

To a nurse or trained midwife: percent of women with one or more births in the five years before the survey who had received at least one antenatal care consultation from a nurse or trained midwife (as defined in fn. 10) before her most recent birth.

Multiple visits to a medically-trained person: percent of women with one or more births in the five years before the survey who had received at least three antenatal care consultations from any medically-trained provider (as defined in fn. 10) before her most recent birth.

[10] When speaking of antenatal and delivery care, medically-trained persons are defined as doctors, nurses, and trained midwives. The definition excludes traditional midwives or other traditional birth attendants, whether trained or untrained.

Antenatal Care (ANC) Content

Tetanus toxoid: percent of women with one or more births in the five years before the survey who had received at least one tetanus toxoid injection during her most recent pregnancy.

Prophylactic antimalarial treatment: percent of women with one or more births in the five years before the survey who had received prophylactic treatment with any anti-malarial drug during her most recent pregnancy.

Iron supplementation: percent of women with one or more births in the five years before the survey who had taken iron tablets during her most recent pregnancy.

Delivery Attendance

By a medically-trained person: percent of births in the five years before the survey attended by a medically-trained person (as defined in fn. 10).

By a doctor: percent of births in the five years before the survey attended by a doctor.

By a nurse or trained midwife: percent of births in the five years before the survey attended to by a nurse or a trained midwife (as defined in fn. 10).

In a public facility: percent of all deliveries in the five years before the survey occurring in a public-sector health facility (as defined in fn. 9).

In a private facility: percent of all deliveries in the five years before the survey occurring in a private-sector health facility (as defined in fn. 9).

At home: percent of all deliveries in the five years before the survey occurring at home (defined as the woman's own or any other home).

D. CONTRACEPTIVE SERVICES

Contraceptive Prevalence [11]

Women: percent of married or in-union women aged 15-49 years who used any modern means of contraception (as defined in fn. 11).

Men: percent of married or in-union men aged 15-54 years who used any modern means of contraception (as defined in fn. 11).

Source of Contraception - Public Sector

Women: percent of married women who obtained their current method of contraception from a public-sector health facility or provider (as defined in fn. 9).

Men: percent of married men who obtained their current method of contraception from a public-sector health facility or provider (as defined in fn. 9).

[11] Figures refer to use of modern means of contraception, defined as male/female sterilization, oral contraceptive pill, contraceptive injection, intrauterine device, male/female condom, diaphragm, cervical cap, contraceptive jelly or foam, implant, or some country-specific modern method.

Source of Contraception - Private Sector

Women: percent of married women who obtained their current method of contraception from a private-sector health facility or provider (as defined in fn. 9, except that private pharmacies and shops are included rather than excluded).

Men: percent of married women who obtained their current method of contraception from a private-sector health facility or provider (as defined in fn. 9, except that private pharmacies and shops are included rather than excluded).

E. TREATMENT OF ADULT ILLNESSES

Treatment of Genital Discharge, Ulcer, or Sore

Women: percent of women with genital discharge, ulcer, or sore who sought any medical treatment for resulting symptoms.

Men: percent of men with genital discharge, ulcer, or sore who sought any medical treatment for resulting symptoms.

Treatment of Genital Discharge, Ulcer, or Sore in a Public Facility

Women: percent of women with genital discharge, ulcer, or sore who sought treatment from a public-sector health facility or provider (as defined in fn. 9).

Men: percent of men with genital discharge, ulcer, or sore who sought treatment from a public-sector health facility or provider (as defined in fn. 9).

Voluntary Counseling and Testing for HIV/AIDS

Women: percent of women aged 15-49 years who had been tested for HIV at any time before the survey.

Men: percent of men aged 15-54 years who had been tested for HIV at any time before the survey.

Part III: INTERMEDIATE DETERMINANTS OF HNP STATUS – INDIVIDUAL AND HOUSEHOLD BEHAVIOR

A. HYGIENIC PRACTICES

Disposal of Children's Stools

Sanitary disposal: percent of mothers with at least one child under five years of age who disposed of the stools of their youngest child in a sanitary manner (defined as dropping stool into a latrine, burying it, or using disposable diapers).

Handwashing

Wash hands prior to preparing food: percent of women aged 15-49 years preparing meals who washed hands before handling food.

Handwashing facilities in household: percent of households that had hand-washing materials or facilities, as determined by direct observation of interviewers.

B. BEDNET OWNERSHIP AND USE

Bednet Ownership

Bednet ownership: percent of households owning one or more bednets.

Treated bednet ownership: percent of households owning one or more bednets that had recently been treated with insecticides.

Bednet Use

By children: percent of households with at least one child under five years of age, some or all of whom had slept under a bednet the night before the survey.

By pregnant women: percent of currently pregnant women who had slept under a bednet the night before the survey.

C. BREASTFEEDING

Exclusive breastfeeding: percent of children 0-3 months of age who had received only breast milk in the 24 hours before the survey.

Timely complementary feeding: percent of children 6-9 months of age who had received breast milk and solid or semi-solid foods in the twenty-four hours before the survey.

Bottle-feeding: percent of children under 12 months of age who had received any food or drink from a bottle with a nipple in the twenty-four hours before the survey.

D. MICRONUTRIENT CONSUMPTION

Iodized Salt

Availability of iodized salt in household: percent of households with cooking salt testing positive for iodine/iodate at the recommended level of 15 or 25 parts per million or more (depending on the country). [12]

Vitamin A

Children: percent of children[13] who had received at least one dose of vitamin A in the six months before the survey, as reported by the mothers.

Women: percent of women who had received a dose of vitamin A within two months of the last birth, in the five years before the survey.

E. TOBACCO AND ALCOHOL USE

Tobacco [14]

Women: percent of women aged 15-49 years who currently were smoking or chewing tobacco products.

Men: percent of men aged 15-54 years who currently were smoking or chewing tobacco products.

Alcohol

Women: percent of women aged 15-49 years who had gotten intoxicated due to excessive consumption of alcohol in the three months before the survey.

Men: percent of men aged 15-54 years who had gotten intoxicated due to excessive consumption of alcohol in the three months before the survey.

F. SEXUAL PRACTICES

Non-Regular Sexual Partnerships

Women: percent of women aged 15-49 years who had had sex with a non-regular partner at least once in the twelve months before the survey.

Men: percent of men aged 15-54 years who had had sex with a non-regular partner at least once in the twelve months before the survey.

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[12] Which of these two levels is recommended in any particular country may be determined by consulting the full report on that country's DHS, which may be found at: www.measuredhs.com/countries.

[13] Figures refer to children over six months of age and under three, four, or five years of age, depending upon the country. (The specific ages covered for in a particular country may be determined by consulting the full report on that country's DHS, which is available at: www.measuredhs.com/countries.)

[14] Tobacco products include cigarettes, pipes, cigars, leaves, etc.

Condom Usage with Non-Regular Partner

Women: percent of women aged 15-49 years with non-regular sexual partner who had used a condom in the last sexual intercourse with such a partner in the twelve months before the survey.

Men: percent of men aged 15-54 years with non-regular sexual partner who had used a condom in the last sexual intercourse with such a partner in the twelve months before the survey.

G. DOMESTIC VIOLENCE

Ever experienced violence: percent of women aged 15-49 years who had ever been hit or beaten by current or former husband/partner.

Experienced violence in past year: percent of women aged 15-49 years who had been hit or beaten by current or former husband/partner in the twelve months before the survey.

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

A. EDUCATION

School Completion

Women: percent of women aged 15-49 years who had completed the fifth grade.

Men: percent of men aged 15-54 years who had completed the fifth grade.

School Participation

Girls: percent of girls aged 6-10 years who were attending school at the time of the survey.

Boys: percent of boys aged 6-10 years who were attending school at the time of the survey.

B. EXPOSURE TO MASS MEDIA

Newspaper Readership

Women: percent of women aged 15-49 years who read a newspaper at least once a week.

Men: percent of men aged 15-54 years who read a newspaper at least once a week.

Radio Listenership

Women: percent of women aged 15-49 years who listened to radio at least once a week.

Men: percent of men aged 15-54 years who listened to radio at least once a week.

Television Viewership

Women: percent of women aged 15-49 years who watched television at least once a week.

Men: percent of men aged 15-54 years who watched television at least once a week.

C. KNOWLEDGE AND ATTITUDES ABOUT HIV/AIDS

Knowledge about Sexual Transmission of HIV/AIDS [15]

Women: percent of women aged 15-49 years who knew of HIV/AIDS and of at least one of the following ways to avoid it through interruption of its sexual transmission route: abstinence; using a condom; avoiding multiple sex partners, sex with prostitutes, and unprotected homosexual sex.

Men: percent of men aged 15-54 years who knew of HIV/AIDS and of at least one of the ways to avoid HIV/AIDS referred to in the preceding definition.

[15] In most countries, the survey sample included both married and unmarried individuals. Where this was the case, all respondents, regardless of marital status, were asked the question covered in this section. Where the survey covered only individuals who were or had been married, the data pertain only to individuals who had ever been married. (The marital status of people covered for in particular country is indicated in the full report on that country's DHS, which is located at: www.measuredhs.com/countries.)

Knowledge about Mother-to-Child Transmission of HIV/AIDS

Women: percent of women aged 15-49 years who knew of at least one way HIV/AIDS can be transmitted from mother to child during pregnancy, delivery, or breastfeeding.

Men: percent of men aged 15-54 years who knew of at least one way HIV/AIDS can be transmitted from mother to child during pregnancy, delivery, or breastfeeding.

Attitudes toward HIV/AIDS

Women: percent of women aged 15-49 years who believed that people with HIV/AIDS should be allowed to continue working or that HIV test results should remain confidential.

Men: percent of men aged 15-54 years who believed that people with HIV/AIDS should be allowed to continue working or that HIV test results should remain confidential.

D. STATUS OF WOMEN

Household Decisionmaking

Can seek own health care: percent of women age 15-49 years who could decide by themselves to seek their own health care.

Can seek children's health care: percent of women aged 15-49 years, whose children live with them, who could decide by themselves to seek health care for their children.

Can make daily household purchases: percent of women aged 15-49 years who could decide by themselves or jointly with others to make daily household purchases.

Can make large household purchases: percent of women aged 15-49 years who could decide by themselves or jointly with others to make large household purchases.

Can make meal-related decisions: percent of women aged 15-49 years who could decide by themselves what food to cook daily.

Freedom of Movement

Can travel to visit family, relatives: percent of women aged 15-49 years who could decide by themselves to visit family and relatives.

Other Decisionmaking, Attitudes

Can decide how to spend own money: percent of women aged 15-49 years who work for cash who could decide by themselves on how to use the money they earn.

Can decide whether to have sex: percent of women aged 15-49 years agreeing that they can refuse to have sex with their husband for at least one of the following reasons: he has a sexually-transmitted disease; he has had sexual relations with another woman; or the woman is tired, not in mood, or recently has given birth.

Justify domestic violence: percent of women aged 15-49 years believing that a husband/male partner would be justified in beating his wife/female partner for at least one of the following reasons: he suspects her of being unfaithful; she argues with him; she goes out without telling him; she neglects the children; she burns the food; or other, country-specific reasons (for example, she shows disrespect for her in-laws or her family does not give the expected dowry).

E. ORPHANHOOD

Maternal orphan prevalence: percent of children under 15 years of age whose natural mother had died before the survey.

Paternal orphan prevalence: percent of children under 15 years of age whose natural father had died before the survey.

Double orphan prevalence: percent of children under 15 years of age both of whose natural parents had died before the survey.

DATA AND METHODS

Any assessment of the figures featured in this report requires an appreciation of how they were prepared. The first need is to understand the basic features of the data and methods employed.

A. SOURCE OF FIGURES

The figures appearing in this report are all derived from data collected under the Demographic and Health Surveys (DHS) program conducted by ORC Macro, with support from the U.S. Agency for International Development and other external assistance organizations. Large DHS household surveys have been carried out, usually at periodic intervals, in approximately seventy-five countries across Africa, Asia, Latin America, the Middle East, and the former Soviet Union.[16] This series of reports covers the fifty-six of those countries that had one or more DHS surveys undertaken since 1990, for which data were publicly available as of June 2006. (Annex C is a list of the countries for which reports have been prepared.)

In each country, the DHS program has gathered information on a large number of indicators about health, nutrition, and population (hnp) status and service use; about relevant behaviors of household members; and about household characteristics like those described below. It has done this through a set of questionnaires, similar in all countries, to collect data at the individual, household, and community levels.

The data presented here draw on responses to the individual and household questionnaires. In most cases, they are based on responses from women or other family members interviewed. The principal exceptions concern nutritional status, which is based on anthropometric measurement; immunization, which typically relies to the extent possible on record cards maintained at the household level; and those other items where a source other than interviewer response is specifically identified.

B. MEASUREMENT OF ECONOMIC STATUS

Wealth or Asset Approach

Economic status has been expressed in terms of wealth or assets: specifically, on the basis of information about household characteristics gathered through the DHS household questionnaire. (Such information was normally provided for at least 25-30, and often many more, characteristics like the presence, availability, or use of a fan, radio receiver, or automobile; housing materials like wood or concrete flooring, tile or tin roofing, or cement block walls; superior sources of water like piped or a protected well; and other attributes related to economic status.)

[16] Further information about the DHS program is available at the program's website: www.measuredhs.com.

Index Construction

A single, consolidated index of living standards[17] was constructed by using principal components analysis (PCA) to generate a weight for each household item with available information. A wealth index score was calculated for each household by weighting the response with respect to each item pertaining to that household by the coefficient of the first principal component as determined by application of principal components analysis, and summing the results. The resulting household scores were standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one.

All individuals usually present in each household were assigned the household's standardized wealth index score, and all individuals in the sample population were ranked according to that score. The sample population was then divided into quintiles of individuals, with all individuals in a single household being assigned to the same quintile.

The same standardized household wealth index scores originally derived for the total population sample, as just described, were also used in preparing the disaggregated estimates for female and male members of the sample population, and for rural and urban residents. In preparing those disaggregated estimates, the entire population sample was divided into quintiles of individuals; the females and males, and the rural and urban residents in each quintile of the entire sample were then separated from one another; and the mean for each of the ten resulting subgroups (five female, five male; or five rural, five urban) was calculated.

This procedure was carried out separately for each of the surveys covered.

C. CALCULATION AND PRESENTATION OF RATES

Use of Sampling Weights

Rates for all health, nutrition, and population indicators are calculated after applying the DHS sampling weights. (DHS surveys often over-sample certain small subgroups of interest – residents of a particular geographic area, for example – in order to get sample sizes large enough to produce statistically-significant results. The DHS sampling weights are used to compensate for such over-sampling in order to ensure that the results are representative of the population as a whole and not just of the DHS sample.)

Calculation of Total Population Averages

The average for the total population presented alongside the quintile-specific rates for each indicator is calculated without reference to quintile divisions. It thus equals the weighted mean of the quintile rates, with the weight assigned to each quintile rate being the proportion of the number of individuals at risk (as defined on p. 59) for the indicator concerned.

Sampling Errors

Information needed to assess the statistical significance of differences among the quintile-specific rates is presented in three ways:

- First, in all the basic tables presented in part I, rates are shown in parentheses or replaced by asterisks in cases where the standard error is likely to be unacceptably high because

[17] Such an index is usually referred to as either an "asset index" or a "wealth index." The two expressions are used interchangeably in this report; for ease of communication, "wealth index" appears more frequently despite the inexact correspondence between the items included in the index's construction and those appearing in more conventional, financially-based definitions of wealth.

of small sample size. The number of observations used to determine how to present the data for the different indicators covered were as follows:

Indicator	**Unit of measure**	**Number of observations used to determine how quintile-specific rate was presented**		
		Without parentheses	*With parentheses*	*Replaced by asterisk*
Infant and child mortality	Number of deaths	>500	250-499	<250
Total and adolescent fertility	Number of births	>250	125-249	<125
All other indicators	Number of individuals	>50	25-49	<25

- Second, the standard error for each quintile-specific rate (except for any rate replaced by an asterisk) appearing in the total population table is provided in part III.B. (Standard errors for the quintile-specific rates presented in the female-male and rural-urban tables are not available.)

- Third, the right-hand column of the total population table provides the standard error for the concentration index, one of the measures of inequality shown, as indicated below.

D. MEASUREMENT OF INEQUALITY

Accompanying each of the indicators presented in the total population table are the values for three statistical measures of inequality:

- *Low/High Quintile Ratio:* the ratio between the rate prevailing in the lowest (poorest) population quintile and that found in the highest (least poor) quintile.

- *Low-High Quintile Difference:* the value of the lowest quintile minus the value of the highest, expressed as an absolute value.

- *Concentration Index:* twice the area in a Lorenz-type diagram between the line of equality and the concentration curve for the indicator in question, the curve being the graph of the cumulative share of the indicator against the cumulative share in the asset distribution. (The value, which can range from -1 to +1, is negative when the hnp indicator is higher among the poor (e.g., fertility), positive when it is higher among the better-off (e.g., modern contraceptive use), and zero when on balance the indicator shows no systematic relationship with wealth.)[18]

[18] Adam Wagstaff, Pierella Paci, and Eddy van Doorslaer, "On the Measurement of Inequalities of Health," *Social Science and Medicine* 33 (1991): 545-57. (See also chapter eight in the volume by O'Donnell, van Doorslaer, Wagstaff, and Lindelow described in the annotated bibliography that constitutes annex A.)

DISCUSSION

While a basic understanding of the data and methods employed is necessary to adequately appreciate the figures appearing in this report, it is not sufficient. For the application of the approach taken involves many subtleties that also need to be understood. Among the more important are:

A. DESCRIPTIVE NATURE OF THE RELATIONSHIPS

The hnp-poverty relationships shown in this report are no more than descriptive. They should not be taken to imply any direct causal relationships, for several reasons.

One reason is the possibility that it is not wealth or asset possession *per se* that determine a person's health condition. Rather, the determining factors could be other characteristics (such as education or ethnic background) that are simultaneously associated with both asset ownership and health status.

It is also possible that the health-poverty relationships shown are driven primarily by particular items included in the index (e.g., water and sanitation). Should this be the case, improvements in health conditions among the poor might be more effectively brought about by focusing on changing those particular components of the wealth index rather than by a general effort to increase economic status as measured by the index as a whole.

B. IMPLICATIONS OF A WEALTH/ASSET APPROACH

Wealth or Assets as a Measure of Economic Status

Reliance on a wealth index to measure economic status is a rather recent development in research on economic disparities, where such status traditionally has been defined in terms of consumption or income. The principal reason for the choice of the wealth index is pragmatic rather than conceptual: the DHS surveys, which are of interest because of the plethora of hnp information that they contain, do not collect consumption or income data; but they do have detailed information on households' physical characteristics, and on the household-level presence of and access to a wide range of goods and services. While there is some disagreement about the relative merits of using such wealth/asset information or consumption data to measure economic status, several recent studies suggest that the asset-consumption relationship is quite close.[19] To the extent this is the case, an index of wealth or asset possession/availability can be taken as a

[19] See, for example, Deon Filmer and Lant H. Pritchett, "Estimating Wealth Effects without Expenditure – or Tears: An Application to Educational Enrollments in States of India," *Demography* 38, no. 1 (February 2001): 115-32; Shea Rutstein and Kiersten Johnson, *The DHS Wealth Index*, DHS Comparative Reports No. 6 (Calverton, Maryland, USA: ORC Macro, August 2004) esp. 10-14; Adam Wagstaff and Naoko Watanabe, "What Difference Does the Choice of SES Make in Health Inequality Measurement?" *Health Economics* 12 (2003): 885-90.

reasonably satisfactory proxy for consumption, rather than or in addition to serving as an indicator of economic status in its own right.

C. ECONOMIC STATUS AS A MEASURE OF SOCIO-ECONOMIC WELL-BEING

Like consumption or income, a wealth index defines disparities that are primarily economic. This is by no means the only way to define inter-group inequalities that are of potential concern. Other possibilities include gender, place of residence, education, ethnic background, or other factors associated with social exclusion. Thus the economic perspective provides only a partial view of the multidimensional concepts of poverty, inequality, and inequity.

By including tables on female-male and rural-urban inequalities, this report pays adequate attention to two of inequality's other important dimensions to justify the use of the term "socio-economic" rather than simply "economic" in its title. However, the centrality of tabulations based on the wealth index means that the primary focus is on the economic dimension. The justification for this lies not in the greater importance of economic considerations, but rather in the recently-improved ability to analyze and thus begin dealing with them. Until the development of the wealth/asset approach, the assessment of economic status had been based on consumption, expenditures, or income, all of which are far more difficult to measure than such other, non-economic dimensions of inequality as gender, ethnic identity, educational level, and place of residence. As a result, assessments of health inequalities by economic status had lagged well behind measurements in terms of these other dimensions, especially gender and education. The focus on inequality's economic aspect applied here represents an effort to redress this imbalance.

D. INDEX CONSTRUCTION

Choice of Items

Use of a wealth index requires decisions about which items to include in it. In the case of secondary analyses like the one featured in this report, the choice is limited to those items included in the data sets being used. But even with this constraint, there nonetheless remains considerable room for choice, given the large number of items for which information is collected by the DHS.

The decision made in preparing this report was to include all items in each DHS household questionnaire that relate to ownership of household goods; to dwelling unit construction and characteristics; and to access to services and resources like electricity, water, and sanitation facilities. Also included were other potential indicators of wealth, such as live-in domestic servants. This decision, admittedly somewhat arbitrary, has both advantages and disadvantages.

The principal advantage is practical: use of a large number of assets increases the degree of variation across household asset scores and facilitates a more regular distribution of individuals across quintiles. It also reduces the possibility of subjectivity in selecting only some of the variables for inclusion on some *a priori* basis; and it may increase a wealth index's accuracy as a proxy for consumption.

However, including all variables is far from satisfying conceptually. For example, it means failing to discriminate with respect to the items' differing natures. It is not clear, for instance, whether access to water, sanitation, electricity, or other publicly-provided resources should be included in an index that purports to measure private household wealth.

Further, many items that are candidates for inclusion in a DHS-based wealth index might be seen as directly influencing health status: water and sanitation for infant and child mortality, for

example. It would be desirable to include quintile-specific estimates for such items; but to the extent that such items have large index coefficients, any estimates for those items would be suspect. Such items appear to be relatively few and of limited statistical significance in the index used here. However, for the sake of caution, quintile-specific estimates for items appearing in the index have nonetheless been excluded from the basic tables and appear only in supporting table III.C

Additional issues arise when comparing the findings for two different points in time covered in the basic tables. Because the nature and number of asset questions included in DHS surveys has been evolving, the items included in the wealth index differ somewhat for each of the surveys reported upon. As such, the results presented in the basic tables might differ to some extent from findings produced by some other approach, such as including in the index only those items appearing in each survey covered.

Weighting of Items

A further decision required in construction of an index concerns the weight to attach to each of the respective items. As noted earlier, the method used in this report is principal components analysis (PCA).

Adoption of this method was based on the findings, referred to earlier, that its use resulted in outcomes that approximated reasonably well those produced by taking a consumption or expenditure approach. Further, it often provides greater discrimination in economic status than does the use of consumption/expenditures. It has also emerged as the standard approach for use in analyses of the sort presented here, so that its adoption is largely non-controversial.

Yet this choice, too, is not without an arbitrary aspect; for alternative plausible methods exist. Examples include the "inverse possession" approach, which gives more weight to items possessed by only a few and less to those possessed by many;[20] or, perhaps, the common practice of simply assigning the same weight to each index item.

Also, the weights for any particular item vary from survey to survey, since the weights were determined separately for the population of each survey included in the basic tables. The results thus produced can be expected to differ from those generated in some other manner, such as generating common weights for all the surveys covered by pooling the data sets.

Use of Principal Components Analysis with Dichotomous Variables

An additional issue concerns the use of a technique like PCA, developed for use with continuous variables, in the construction of an index based primarily on dichotomous variables. While legitimate in principle, any reservations in this regard are of limited practical consequence, since the considerable experimentation undertaken in preparation for the tabulations presented here indicated that any inaccuracy introduced by applying PCA to the analysis of the dichotomous values used is minimal.

Economies of Scale

Calculating the values for a household wealth index also requires a decision concerning economies of scale that exist in the households covered. The calculations presented here assume complete economies of scale. The implicit assumption is that additional members do not add to household expenses on items included in the index.

[20] Saul S. Morris et al., "Validity of Rapid Estimates of Household Wealth and Income for Health Surveys in Rural Africa," *Journal of Epidemiology and Community Health* 54 (2000): 381-87.

E. DEFINITION OF QUINTILES

Quintiles of Individuals

As noted earlier, the quintile-specific figures presented in this report refer to quintiles of individuals in the household population. Such quintiles need to be distinguished from quintiles of households or quintiles of only those people in the population who are "at risk": that is, subject to the particular condition, eligible for the particular service, or capable of behaving in a particular way (children born alive for infant and under-five mortality, for example; or adult men and women for condom use or non-regular sexual partnerships).

The expression of findings in terms of quintiles of individuals has several implications:

- Because fertility is often higher in lower economic households than among better-off ones, the number of individuals per household will frequently be larger among the poor than among higher-income groups. In such cases, the number of households will vary systematically across quintiles of individuals, and the results expressed in terms of quintiles of households can differ significantly from those presented here.

- The proportion of individuals "at risk" with regard to a particular indicator is also likely to vary across quintiles in many cases. (For example, in cases where fertility is higher among poor people, a higher-than-average proportion of poor populations will consist of newborns at risk from infant mortality, young children subject to malnutrition, and pregnant women for whom antenatal care is relevant.) To facilitate the work of any investigators wishing to undertake calculations based on people at risk, the number of such people in each quintile of individuals is shown in part III.A.

- As previously indicated, the population average figure provided for each indicator is equivalent to the weighted sum of the quintile rates for that indicator, where the weight assigned to each quintile rate is the number of people at risk in each quintile as presented in part III.A. As a result of this weighting, the population average will usually differ from a simple mean of the population quintile estimates.

Quintiles of Males and Females, of Rural and Urban Residents

As also reported in the data and methods section, the tables on rural and urban residents and on men and women were prepared using the same asset scores as for the total population; and rural-urban residents and females-males were separated from one another only after the entire sample had been disaggregated into quintiles of individuals. This means that the figures given in the rural-urban and female-male tables refer to females-males and rural-urban residents belonging to each quintile of individuals in the total population, as distinct from quintiles of females, of males, of rural residents, or of urban residents alone.

The consequence of this distinction is particularly evident with regard to rural and urban residents. Since rural residents tend to be poorer than urban dwellers, they normally form a considerably higher proportion of individuals in the lower economic quintiles of the total population than in the higher ones. Conversely, urban residents tend to be concentrated in the higher economic groups. As a result, the number of individuals in each of the urban and rural quintiles usually varies greatly and systematically; and when this is the case, the figures presented in the rural-urban tables can differ significantly from those produced by a computation procedure that places the same number of rural and urban residents in each rural quintile or each urban quintile. (The results may also differ significantly from application of an approach featuring the separate calculation of index values for urban and for rural groups. While such separate index values may well be preferable conceptually, their calculation involves complexities that prevented their preparation for this report.)

F. COMPARISON OF QUINTILES ACROSS COUNTRIES

Reliance on population quintiles as basic presentational format for the data appearing in this report implicitly incorporates a relative concept of poverty. This differs from an absolute concept of poverty under which the population would be divided into groups of different sizes according to some absolute standard of living (such as people earning less than one dollar a day, between one and two dollars a day, and more than two dollars a day).

This means that, when comparing values of an indicator among people in a given quintile across countries, the comparison is between groups of people whose economic status can be quite different. The lowest quintile of a Latin American population, for example, will usually be considerably better-off than the lowest quintile in an African country.

G. COMPARISON OF QUINTILES OVER TIME

Another implication is that the wealth status of any given quintile within a particular country is likely to change over time. For instance, when a country is progressing economically, the wealth of the households in the population will tend to increase. This will raise the average asset score in most, possibly all population quintiles. As a result, the living standard enjoyed by individuals in any quintile covered by a recent survey is likely to be higher than that of individuals in that same quintile as measured in a prior survey.

H. STATISTICAL INDICATORS OF INEQUALITY

The available statistical indicators of inequality are far too numerous to permit use of more than a small proportion of them in presenting the findings featured in this report. The three indicators employed have been selected to provide a wide range of perspectives. Two are designed for ease of understanding, the third for greater technical accuracy.

The low/high quintile ratio and low-high quintile difference are the two presented for ease of understanding. The former is a relative measure, the latter an absolute measure that can produce a significantly different impression from that provided by the former.

The concentration index is provided for the benefit of technical specialists wishing greater accuracy. It measures the degree of inequality in an hnp indicator across the full wealth index distribution, rather than differences between only two of the five quintiles, and also reflects the relative size of the different asset-based divisions of the study population.

I. COMPARABILITY WITH OTHER REPORTS

Tabulations similar to those presented here can also be found in the initial series of hnp/poverty country reports, issued in 2000, and in the recent country reports issued by the DHS program. The figures presented in those reports normally resemble quite closely those appearing here for any given indicator; but there are often slight differences for one or more of several reasons. The most common is a difference in the definition of the indicator in question. (These differences are usually small and subtle. But there is one important exception: the definition of moderate malnutrition among children. In the 2000 reports, this was defined as second and third degree malnutrition taken together. Here, it is defined as second degree malnutrition alone.) Another reason, with respect to infant and child mortality, is that the figures in the DHS documents are typically based on experience during the five years before the survey in question, rather than

during the ten previous years as in this report. A further frequent reason is the use of an improved computational technique.

In addition, asset-based, quintile-specific tabulations of hnp indicators have begun to appear in an increasing number of other documents. Given the basic similarity of approach, such tabulations usually produce results that are generally congruent with those shown in part I of this report. However, significant divergences have occasionally been reported; and the absence of adequately detailed information about data and methods often prevents any fully-satisfying understanding of the approaches used. As a result, occasional doubts and frequent uncertainties about approach comparability remain.

PART IV. SUPPORTING TABLES, 2000

A. SAMPLE SIZES

B. STANDARD ERRORS

C. ASSET DISTRIBUTION AND WEIGHTS

Malawi

2000 - SAMPLE SIZES

TOTAL SAMPLE

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Number of household members						
All	12,414	12,729	12,696	12,301	12,259	62,398
Urban	125	187	452	1,534	6,472	8,771
Rural	12,289	12,542	12,244	10,767	5,786	53,627
Female	6,731	6,631	6,489	6,072	5,912	31,833
Male	5,683	6,098	6,207	6,229	6,347	30,565

Part I: HNP STATUS

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Mortality rates						
All	5,239	4,844	4,442	4,107	3,776	22,431
Urban	35	74	179	508	1,957	2,752
Rural	5,205	4,778	4,275	3,600	1,822	19,679
Female	2,644	2,514	2,161	2,036	1,858	11,213
Male	2,600	2,338	2,286	2,073	1,921	11,218
Prevalence of fever, diarrhea, acute respiratory infection						
All	2,454	2,190	2,143	1,929	1,831	10,559
Urban	16	29	89	252	971	1,357
Rural	2,438	2,161	2,054	1,677	860	9,190
Female	1,260	1,173	1,030	962	904	5,329
Male	1,195	1,017	1,112	967	927	5,218
Total fertility rate						
All	8,053	7,371	7,155	6,747	7,695	37,062
Urban	62	134	279	915	4,484	5,874
Rural	7,992	7,253	6,894	5,836	3,213	31,188
Age-specific fertility rate 15-19						
All	1,968	1,682	1,757	1,628	2,124	9,170
Urban	15	38	61	234	1,283	1,631
Rural	1,953	1,649	1,699	1,396	841	7,538
Children's nutritional status						
All	2,182	1,952	1,866	1,691	1,622	9,323
Urban	15	26	79	231	869	1,220
Rural	2,167	1,926	1,787	1,460	753	8,093
Female	1,121	1,038	898	836	805	4,698
Male	1,061	914	969	855	817	4,616
Children's anemia status						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Female	na	na	na	na	na	na
Male	na	na	na	na	na	na

Malawi

2000 - SAMPLE SIZES

Part I: HNP STATUS (Cont.)

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Women's nutritional status						
All	2,377	2,216	2,071	2,021	2,429	11,125
Urban	22	39	75	286	1,423	1,845
Rural	2,356	2,177	1,997	1,735	1,006	9,271
Women's anemia status						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Girls' circumcision						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Women's circumcision						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Prevalence of genital discharge, ulcer, sore						
Female	2,565	2,380	2,301	2,179	2,403	11,828
Urban Female	21	45	91	288	1,388	1,833
Rural Female	2,544	2,335	2,210	1,892	1,015	9,996
Male	590	640	452	462	642	2,786
Urban Male	10	3	24	92	365	494
Rural Male	580	637	427	370	278	2,292

Malawi

2000 - SAMPLE SIZES

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Immunization coverage						
All	511	492	460	391	380	2,238
Urban	4	6	24	54	220	308
Rural	507	487	435	337	160	1,926
Female	274	271	218	196	169	1,128
Male	237	222	242	196	211	1,108
Treatment of fever						
All	1,066	932	955	804	629	4,394
Urban	8	11	38	84	292	433
Rural	1,059	921	917	721	337	3,955
Female	516	430	507	398	323	2,174
Male	550	502	448	407	306	2,213
Treatment of acute respiratory infection						
All	715	588	662	504	348	2,816
Urban	5	8	13	54	134	214
Rural	710	580	649	450	214	2,603
Female	380	315	323	268	179	1,465
Male	335	273	338	236	169	1,351
Treatment of diarrhea						
All	460	416	394	334	252	1,859
Urban	3	8	14	39	131	195
Rural	457	408	380	295	122	1,662
Female	231	213	176	156	123	899
Male	229	202	218	178	129	956
Antenatal and delivery care						
All	1,852	1,662	1,652	1,448	1,435	8,057
Urban	12	25	69	181	788	1,075
Rural	1,840	1,637	1,583	1,267	647	6,974
Contraceptive prevalence						
Female	1,941	1,985	1,885	1,832	1,796	9,452
Urban Female	12	36	75	234	1,004	1,361
Rural Female	1,929	1,948	1,810	1,597	792	8,076
Male	407	457	340	299	403	1,906
Urban Male	4	3	22	55	224	308
Rural Male	404	454	318	244	179	1,599
Contraceptive source						
Female	385	464	432	473	712	2,469
Urban Female	1	9	19	72	420	520
Rural Female	384	456	413	401	292	1,948
Male	407	457	340	299	403	1,906
Urban Male	4	3	22	55	224	308
Rural Male	404	454	318	244	179	1,599
Treatment of genital discharge, ulcer, sore						
Female	268	287	267	270	204	1,296
Urban Female	3	7	9	30	100	149
Rural Female	265	280	258	240	105	1,148
Male	42	51	35	36	70	234
Urban Male	2	0	0	8	51	61
Rural Male	40	51	34	28	19	172

Malawi

2000 - SAMPLE SIZES

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Sanitary disposal of stools						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Wash hands prior to preparing food						
All	2,841	2,649	2,537	2,407	2,770	13,204
Urban	24	49	97	329	1,608	2,107
Rural	2,817	2,601	2,440	2,078	1,162	11,098
Handwashing facilities in household?						
All	3,001	2,792	3,144	2,750	2,662	14,349
Urban	26	44	117	346	1,407	1,940
Rural	2,975	2,748	3,027	2,404	1,255	12,409
Bednet ownership						
All	2,999	2,795	3,143	2,752	2,661	14,350
Urban	26	43	117	346	1,405	1,937
Rural	2,973	2,752	3,026	2,406	1,256	12,413
Bednet use by children						
All	1,494	1,440	1,581	1,342	1,241	7,098
Urban	13	25	66	165	669	938
Rural	1,481	1,415	1,515	1,177	572	6,160
Bednet use by pregnant women						
All	345	317	347	295	260	1,564
Urban	1	8	18	32	147	206
Rural	344	309	330	264	112	1,359
Exclusive breastfeeding						
All	176	156	173	135	152	792
Urban	1	3	7	16	75	102
Rural	175	154	167	119	77	692
Female	89	79	87	72	76	403
Male	86	77	87	63	77	390
Timely complementary breastfeeding						
All	203	154	146	163	133	799
Urban	1	2	2	24	75	104
Rural	202	152	144	139	58	695
Female	97	80	84	83	67	411
Male	106	74	63	80	67	390
Bottle-feeding						
All	604	498	520	463	432	2,517
Urban	4	6	14	64	221	309
Rural	600	492	505	399	211	2,207
Female	295	248	277	232	207	1,259
Male	308	250	243	231	225	1,257

2000 - SAMPLE SIZES

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR (Cont.)

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Iodized salt in household						
All	2,584	2,509	2,809	2,522	2,535	12,959
Urban	19	43	99	324	1,371	1,856
Rural	2,565	2,467	2,710	2,197	1,164	11,103
Vitamin A supplementation						
All	2,158	1,922	1,869	1,712	1,614	9,275
Urban	15	25	81	224	862	1,207
Rural	2,143	1,897	1,787	1,488	752	8,067
Female	1,053	887	973	854	816	4,583
Male	1,105	1,035	896	858	798	4,692
Tobacco and alcohol use, casual sexual partners, condom use for casual sex						
Female	2,841	2,649	2,537	2,407	2,770	13,204
Urban Female	24	49	97	329	1,608	2,107
Rural Female	2,817	2,601	2,440	2,078	1,162	11,098
Male	640	702	505	513	731	3,091
Urban Male	12	3	25	99	425	564
Rural Male	629	699	480	414	306	2,528
Domestic violence						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na

Malawi

2000 - SAMPLE SIZES

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
School completion (Grade 5)						
Female	2,844	2,667	2,586	2,489	2,789	13,376
Urban female	23	45	99	336	1,603	2,107
Rural female	2,821	2,623	2,487	2,152	1,186	11,269
Male	2,166	2,503	2,574	2,730	3,280	13,253
Urban male	29	38	100	403	1,878	2,447
Rural male	2,137	2,466	2,474	2,327	1,402	10,806
School participation						
Female	1,008	1,091	1,003	990	882	4,975
Urban female	10	24	32	128	438	632
Rural female	998	1,067	971	862	444	4,343
Male	981	1,057	935	971	913	4,858
Urban male	9	7	37	133	433	619
Rural male	972	1,050	898	839	480	4,239
Mass media exposure						
Female	2,841	2,649	2,537	2,407	2,770	13,220
Urban female	24	49	97	329	1,608	2,106
Rural female	2,817	2,601	2,440	2,078	1,162	11,114
Male	640	702	505	513	731	3,092
Urban male	12	3	25	99	425	564
Rural male	629	699	480	414	306	2,528
Knowledge of HIV/AIDS prevention						
Female	5,187	2,649	2,537	2,407	2,770	15,550
Urban female	24	49	97	329	1,608	2,107
Rural female	2,817	2,601	2,440	2,078	1,162	11,098
Male	640	702	505	513	731	3,092
Urban male	12	3	25	99	425	564
Rural male	629	699	480	414	306	2,528
Household decisionmaking and justification of violence						
All	2,841	2,649	2,537	2,407	2,770	13,220
Urban	24	49	97	329	1,608	2,106
Rural	2,817	2,601	2,440	2,078	1,162	11,114
Orphanhood						
All	6,062	6,079	5,803	5,591	5,366	28,918
Urban	59	88	216	690	2,719	3,772
Rural	6,003	5,991	5,587	4,901	2,647	25,146
Female	3,103	3,156	2,882	2,814	2,750	14,712
Male	2,959	2,924	2,921	2,777	2,616	14,206

Malawi

2000 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part I: HNP STATUS

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Childhood illness and mortality						
Infant mortality rate	6.33	5.86	6.32	5.98	5.81	3.04
Under-five mortality rate	8.73	7.67	7.65	7.63	9.16	4.13
Prevalence of fever	1.26	1.36	1.33	1.48	1.50	0.58
Prevalence of diarrhea	0.91	1.16	0.92	1.05	0.94	0.44
Prevalence of acute respiratory infection	1.27	1.19	1.43	1.13	1.18	0.58
B. Fertility						
Total fertility rate	0.16	0.17	0.18	0.17	0.22	0.10
Adolescent fertility rate	11.00	10.00	11.00	9.00	10.00	5.00
C. Nutritional status						
Children:						
Moderate stunting	1.12	1.15	1.08	1.32	1.28	0.54
Severe stunting	1.18	1.24	1.27	1.20	0.90	0.59
Moderate underweight	1.05	1.16	1.10	1.20	0.92	0.52
Severe underweight	0.79	0.78	0.60	0.52	0.46	0.32
Mild anemia	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na
Women:						
Malnutrition	0.69	0.70	0.81	0.67	0.55	0.32
Mild anemia	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na
D. Female circumcision						
Prevalence of circumcision:						
Girls	na	na	na	na	na	na
Women	na	na	na	na	na	na
Prevalence of occlusion:						
Girls	*	*	*	*	*	*
Women	*	*	*	*	*	*
E. Sexually transmitted disease						
Prevalence of genital discharge:						
Women	0.51	0.52	0.56	0.54	0.46	0.24
Men	0.79	1.02	0.93	0.85	1.26	0.44
Prevalence of genital ulcer:						
Women	0.73	0.71	0.69	0.69	0.65	0.34
Men	0.78	0.77	1.18	1.15	1.13	0.44

2000 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Childhood immunization						
BCG coverage	1.33	1.80	1.41	1.69	1.09	0.70
Measles coverage	2.10	2.33	2.14	2.30	1.89	1.01
DPT coverage	na	na	na	na	na	na
Full basic coverage	2.32	2.77	2.57	2.79	2.57	1.37
No basic coverage	0.89	1.14	0.79	0.94	0.53	0.47
Hepatitis B coverage	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na
B. Treatment of childhood illnesses						
Treatment of fever:						
Medical treatment of fever	1.09	1.23	1.26	1.29	1.72	0.58
Treatment in a public facility	1.01	1.18	1.07	1.08	1.41	0.53
Treatment in a private facility	0.55	0.63	0.72	0.83	1.71	0.41
Treatment of acute respiratory infection (ARI):						
Medical treatment of ARI	1.75	2.21	1.82	2.66	3.02	1.10
Treatment in a public facility	1.69	2.04	1.57	2.50	3.46	1.01
Treatment in a private facility	0.85	1.55	1.27	1.71	2.89	0.81
Treatment of diarrhea:						
Use of oral rehydration therapy	3.07	2.95	3.03	3.26	3.35	1.43
Medical treatment of diarrhea	2.54	2.42	2.61	3.20	3.58	1.33
Treatment in a public facility	2.36	2.38	2.41	3.15	3.09	1.33
Treatment in a private facility	1.44	1.28	1.55	1.80	2.73	0.82
C. Antenatal and delivery care						
Antenatal care (ANC) visits:						
To a medically trained person	1.18	1.02	0.79	0.87	0.53	0.55
To a doctor	0.82	0.84	0.73	0.91	0.98	0.45
To a nurse or trained midwife	1.22	1.24	1.18	1.17	0.96	0.64
Multiple visits to a medically trained person	1.15	1.24	1.34	1.10	1.27	0.66
Antenatal care content:						
Tetanus toxoid	1.28	1.30	1.11	1.24	0.98	0.61
Prophylactic antimalarial treatment	1.42	1.70	1.45	1.51	1.41	0.87
Iron supplementation	1.43	1.58	1.43	1.49	1.78	0.82
Delivery attendance:						
By a medically trained person	1.90	1.69	1.70	1.73	1.49	1.19
By a doctor	0.51	0.60	0.52	0.59	0.85	0.30
By a nurse or trained midwife	1.75	1.64	1.71	1.69	1.62	1.13
In a public facility	2.03	1.79	1.63	1.86	2.48	1.26
In a private facility	1.13	1.46	1.27	1.38	2.43	0.95
At home	1.90	1.71	1.68	1.75	1.46	1.21
D. Contraceptive services						
Contraceptive prevalence:						
Women	1.23	1.51	1.16	1.26	1.86	0.79
Men	3.12	2.93	3.65	3.12	2.46	1.42
Source of contraception - public sector:						
Women	3.70	3.63	2.86	2.65	3.97	1.88
Men	6.41	4.82	5.69	5.51	5.26	2.49

2000 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE (Cont.)

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
D. Contraceptive services (cont.)						
Source of contraception - private sector:						
Women	3.51	3.57	2.68	2.51	3.91	1.84
Men	5.04	4.19	5.07	4.64	4.19	2.11
E. Treatment of adult illnesses						
Treatment of genital discharge, ulcer, sore:						
Women	1.97	2.72	2.36	2.81	3.90	1.37
Men	3.88	4.53	7.63	8.92	7.68	3.28
Treatment of genital discharge, ulcer, sore in public facilities:						
Women	0.51	0.52	0.56	0.54	0.46	0.24
Men	1.06	1.22	1.41	1.40	1.58	0.57
Voluntary counseling and testing for HIV/AIDS:						
Women	0.45	0.53	0.53	0.77	0.94	0.37
Men	1.57	1.36	1.74	2.42	1.61	0.74

2000 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Hygienic practices						
Disposal of children's stools:						
Sanitary disposal	1.58	1.37	1.15	1.07	0.99	0.69
Handwashing:						
Wash hands prior to preparing food	0.55	0.42	0.43	0.33	0.26	0.23
Handwashing facilities in household	0.67	0.86	0.72	1.18	2.92	0.86
B. Bednet ownership and use						
Bednet ownership:						
Bednet ownership	0.50	0.73	0.60	0.93	1.91	0.64
Treated bednet ownership	0.17	0.28	0.28	0.29	0.69	0.19
Bednet use:						
By children	na	na	na	na	na	na
By pregnant women	0.77	1.38	1.13	1.78	2.96	0.82
C. Breastfeeding						
Exclusive breastfeeding	5.30	4.27	4.13	4.54	4.13	1.97
Timely complementary feeding	1.75	1.99	2.56	2.54	1.88	0.91
Bottle-feeding	0.34	0.80	0.51	0.88	2.10	0.45
D. Micronutrient consumption						
Iodized salt:						
Availability of iodized salt in household	1.66	1.44	1.44	1.40	1.39	0.87
Vitamin A:						
Children	1.52	1.38	1.21	1.28	2.01	0.77
Women	1.41	1.41	1.64	1.58	2.01	0.87
E. Tobacco and alcohol use						
Tobacco:						
Women	0.46	0.36	0.32	0.40	0.21	0.16
Men	2.12	2.29	1.91	1.90	1.85	0.93
Alcohol:						
Women	0.35	0.29	0.28	0.29	0.29	0.16
Men	1.95	2.19	1.87	1.73	2.05	0.97
F. Sexual practices						
Non-regular sexual partnerships:						
Women	0.10	0.17	0.18	0.16	0.16	0.07
Men	1.36	0.95	1.73	1.43	1.36	0.63
Condom usage with non-regular partner:						
Women	*	*	*	*	*	6.48
Men	6.64	8.26	9.26	8.22	5.66	3.92
G. Domestic violence						
Ever experienced violence	na	na	na	na	na	na
Experienced violence in past year	na	na	na	na	na	na

Malawi

2000 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Education						
School completion:						
Women	1.18	1.49	1.24	1.52	1.53	1.02
Men	1.28	1.58	1.25	1.44	1.37	0.87
School participation:						
Girls	2.22	1.81	1.82	1.70	1.48	0.85
Boys	2.23	1.86	1.93	1.74	1.17	0.94
B. Exposure to mass media						
Newspaper readership:						
Women	0.36	0.55	0.47	1.02	2.20	0.71
Men	1.31	1.32	1.72	2.00	2.71	1.00
Radio listenership:						
Women	0.85	1.28	1.22	1.26	1.44	0.79
Men	2.61	2.40	2.55	2.39	1.91	1.20
Television viewership:						
Women	0.08	0.16	0.18	0.27	2.08	0.51
Men	0.86	0.87	1.17	1.19	2.54	0.74
C. Knowledge and attitudes about HIV/AIDS						
Knowledge about sexual transmission of HIV/AIDS:						
Women	0.77	0.71	0.56	0.55	0.33	0.32
Men	0.92	0.80	0.67	0.67	0.53	0.34
Knowledge about mother-to-child transmission of HIV/AIDS:						
Women	1.11	1.11	1.12	1.14	0.99	0.58
Men	2.27	1.90	2.41	2.18	1.94	1.02
Attitudes toward HIV/AIDS:						
Women	1.29	1.14	1.23	1.24	1.34	0.65
Men	2.43	2.03	2.60	2.82	2.15	1.14
D. Status of women						
Household decisionmaking:						
Can seek own health care	1.13	0.92	1.03	0.95	1.19	0.49
Can seek children's health care	0.76	0.85	0.57	0.56	0.42	0.32
Can make daily household purchases	1.07	1.00	1.10	1.19	1.07	0.57
Can make large household purchases	0.94	0.95	0.98	0.87	1.16	0.49
Can make meal-related decisions	1.25	1.19	1.16	1.27	1.82	0.68
Freedom of movement:						
Can travel to visit family/relatives	1.27	0.95	1.06	1.15	1.40	0.63
Other decisionmaking, attitudes:						
Can decide how to spend own money	2.77	2.61	2.70	2.51	2.10	1.42
Can decide whether to have sex	1.13	1.14	1.12	1.04	1.90	0.66
Justifies domestic violence	1.10	1.14	1.20	1.14	1.21	0.57
E. Orphanhood						
Paternal orphan prevalence	0.65	0.47	0.62	0.66	0.71	0.30
Maternal orphan prevalence	0.36	0.43	0.41	0.49	0.63	0.22
Double orphan prevalence	0.21	0.19	0.20	0.32	0.37	0.12

Malawi

2000 - ASSET DISTRIBUTION AND WEIGHTS

(FACTOR SCORE)

Asset Variable	Unweighted		Wealth Quintiles						Factor Score
			Low	2nd	3rd	4th	High	Avg.	
	Mean	Std. Deviation	Percentage of Population						
Has electricity	0.059	0.235	0.0%	0.0%	0.0%	0.1%	28.4%	5.6%	0.15931
Has radio	0.556	0.497	1.8%	57.4%	60.9%	87.0%	88.3%	59.0%	0.06274
Has television	0.024	0.154	0.0%	0.0%	0.0%	0.0%	14.5%	2.8%	0.12731
Has bicycle	0.438	0.496	27.4%	53.7%	42.7%	69.0%	50.5%	48.6%	0.00528
Has motorcycle/scooter	0.011	0.106	0.0%	0.0%	0.0%	1.4%	5.3%	1.3%	0.03549
Has car/truck	0.018	0.132	0.0%	0.0%	0.0%	0.2%	11.0%	2.2%	0.08596
Has a domestic worker not related to head	0.003	0.054	0.0%	0.0%	0.0%	0.0%	2.0%	0.4%	0.05008
Works on own or family's agric. land	0.330	0.470	75.3%	63.2%	28.5%	17.9%	11.4%	39.4%	-0.04972
Uses piped drinking water in residence	0.036	0.186	0.0%	0.0%	0.0%	0.1%	17.0%	3.4%	0.13782
Uses water that is piped into yard/plot	0.050	0.219	0.0%	0.0%	0.0%	3.7%	18.6%	4.4%	0.06867
Uses a public faucet (piped)	0.189	0.391	1.0%	4.4%	10.0%	34.2%	29.9%	15.8%	0.01388
Uses unprotected well	0.212	0.409	35.5%	31.8%	33.5%	10.9%	6.7%	23.8%	-0.03761
Uses a protected well	0.061	0.240	4.1%	4.4%	12.1%	6.2%	3.6%	6.1%	-0.01261
Uses borehole for drinking water	0.342	0.474	42.3%	45.8%	33.9%	36.2%	21.3%	36.0%	-0.04090
Uses river, canal or surface water for drinking	0.099	0.298	15.8%	12.4%	9.7%	7.4%	2.2%	9.5%	-0.02524
Uses spring for drinking water	0.010	0.102	1.2%	1.2%	0.9%	1.1%	0.4%	0.9%	-0.00762
Uses rain for drinking water	0.000	0.008	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.00086
Uses drinking water from tanker truck	0.000	0.015	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.00005
Uses bottled water	0.000	0.008	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00085
Uses a flush toilet in residence/private	0.029	0.167	0.0%	0.0%	0.0%	0.0%	14.1%	2.8%	0.14088
Uses a pit latrine	0.475	0.499	34.4%	83.8%	33.7%	57.7%	43.1%	50.6%	-0.02385
Uses a VIP latrine	0.003	0.059	0.0%	0.0%	0.0%	0.2%	1.3%	0.3%	0.01590
Uses a shared flush toilet in residence/private	0.006	0.078	0.0%	0.0%	0.0%	0.3%	2.4%	0.5%	0.03100
Uses a shared pit latrine	0.311	0.463	17.5%	1.4%	50.6%	38.9%	36.1%	28.8%	-0.00061
Uses a shared VIP latrine	0.004	0.064	0.0%	0.0%	0.0%	0.1%	1.7%	0.3%	0.01561
Uses bush,field as latrine	0.171	0.377	48.1%	14.8%	15.6%	2.7%	1.2%	16.5%	-0.04178
Has dirt, sand, dung as principal floor in dwelling	0.793	0.405	100.0%	100.0%	100.0%	88.7%	7.7%	79.6%	-0.14286
Has wood, plank principal floor in dwelling	0.000	0.012	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.00768
Has broken bricks for principal floor	0.002	0.042	0.0%	0.0%	0.0%	0.7%	0.2%	0.2%	0.00220
Has tiles for main flooring material	0.000	0.019	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.01412
Has cement principal floor	0.203	0.402	0.0%	0.0%	0.0%	10.2%	91.8%	20.0%	0.14215
Has parquet or polished wood floors	0.000	0.008	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.01117
Has vinyl or asphalt strips as flooring material	0.000	0.008	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00325
Uses electricity as cooking fuel	0.021	0.144	0.0%	0.0%	0.0%	0.0%	11.7%	2.3%	0.13606
Uses kerosene as cooking fuel	0.005	0.071	0.0%	0.0%	0.0%	0.0%	1.9%	0.4%	0.02580
Uses charcoal for cooking	0.038	0.190	0.0%	0.0%	0.0%	0.0%	20.0%	3.9%	0.07148
Uses wood as cooking fuel	0.936	0.245	100.0%	100.0%	100.0%	99.9%	66.3%	93.4%	-0.14306
Uses other cooking fuel	0.000	0.017	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00237

PART V. SUPPORTING TABLES, 1992

A. SAMPLE SIZES

B. STANDARD ERRORS

C. ASSET DISTRIBUTION AND WEIGHTS

Malawi

1992 - SAMPLE SIZES

TOTAL SAMPLE

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Number of household members						
All	4,807	4,559	4,860	4,778	4,740	23,743
Urban	35	97	228	500	2,057	2,916
Rural	4,772	4,462	4,633	4,278	2,683	20,827
Female	2,563	2,400	2,496	2,390	2,239	12,088
Male	2,244	2,159	2,365	2,388	2,500	11,655

Part I: HNP STATUS

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Mortality rates						
All	1,819	1,635	1,961	1,843	1,543	8,802
Urban	10	39	92	192	681	1,014
Rural	1,809	1,596	1,869	1,651	863	7,788
Female	922	815	937	912	764	4,350
Male	897	821	1,024	931	780	4,452
Prevalence of fever, diarrhea, acute respiratory infection						
All	765	718	846	790	671	3,790
Urban	5	16	38	80	287	426
Rural	760	701	809	709	384	3,363
Female	389	362	420	395	321	1,887
Male	375	355	427	394	350	1,901
Total fertility rate						
All	2,621	2,484	2,975	2,898	2,575	13,553
Urban	15	57	131	300	1,166	1,669
Rural	2,606	2,427	2,843	2,599	1,409	11,884
Age-specific fertility rate 15-19						
All	572	644	649	717	619	3,201
Urban	0	13	36	64	262	375
Rural	571	630	613	653	356	2,823
Children's nutritional status						
All	668	609	721	667	567	3,232
Urban	4	15	31	72	223	345
Rural	664	594	690	595	344	2,887
Female	346	310	352	345	265	1,618
Male	322	299	369	322	302	1,614
Children's anemia status						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Female	na	na	na	na	na	na
Male	na	na	na	na	na	na

Malawi

1992 - SAMPLE SIZES

Part I: HNP STATUS (Cont.)

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Women's nutritional status						
All	457	413	475	448	406	2,199
Urban	2	12	24	46	175	259
Rural	455	400	450	403	231	1,939
Women's anemia status						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Girls' circumcision						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Women's circumcision						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Prevalence of genital discharge, ulcer, sore						
Female	na	na	na	na	na	na
Urban Female	na	na	na	na	na	na
Rural Female	na	na	na	na	na	na
Male	na	na	na	na	na	na
Urban Male	na	na	na	na	na	na
Rural Male	na	na	na	na	na	na

Malawi

1992 - SAMPLE SIZES

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Immunization coverage						
All	141	148	174	157	153	773
Urban	0	5	8	17	55	85
Rural	141	144	166	140	98	689
Female	75	68	75	80	69	367
Male	66	80	99	77	83	405
Treatment of fever						
All	306	279	368	306	257	1,516
Urban	2	7	16	27	105	157
Rural	304	272	353	279	152	1,360
Female	148	136	196	152	133	765
Male	158	142	173	154	125	752
Treatment of acute respiratory infection						
All	128	103	117	108	89	545
Urban	0	1	6	11	45	63
Rural	128	102	111	97	44	482
Female	64	55	51	55	51	276
Male	64	48	66	53	38	269
Treatment of diarrhea						
All	181	149	198	152	141	821
Urban	0	3	7	15	55	80
Rural	181	145	191	137	85	739
Female	83	74	85	69	68	379
Male	98	75	113	84	73	443
Antenatal and delivery care						
All	587	550	628	586	504	2,855
Urban	3	14	32	63	224	336
Rural	584	536	596	523	280	2,519
Contraceptive prevalence						
Female	645	640	793	764	649	3,491
Urban Female	5	14	28	77	288	412
Rural Female	640	627	765	688	361	3,081
Male	125	150	170	224	196	865
Urban Male	2	5	4	20	96	127
Rural Male	123	145	166	204	101	739
Contraceptive source						
Female	25	23	44	53	112	257
Urban Female	0	2	2	6	61	71
Rural Female	25	21	42	47	51	186
Male	125	150	170	224	196	866
Urban Male	2	5	4	20	96	127
Rural Male	123	145	166	204	101	739
Treatment of genital discharge, ulcer, sore						
Female	na	na	na	na	na	na
Urban Female	na	na	na	na	na	na
Rural Female	na	na	na	na	na	na
Male	na	na	na	na	na	na
Urban Male	na	na	na	na	na	na
Rural Male	na	na	na	na	na	na

Malawi

1992 - SAMPLE SIZES

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Sanitary disposal of stools						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Wash hands prior to preparing food						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Handwashing facilities in household?						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Bednet ownership						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Bednet use by children						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Bednet use by pregnant women						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Exclusive breastfeeding						
All	66	86	69	67	40	328
Urban	1	0	3	10	16	30
Rural	64	85	66	57	24	296
Female	46	54	31	34	20	185
Male	20	31	38	33	19	141
Timely complementary breastfeeding						
All	83	73	69	53	47	325
Urban	0	1	3	5	20	29
Rural	83	72	66	47	27	295
Female	40	31	37	25	23	156
Male	43	42	32	27	24	168
Bottle-feeding						
All	204	215	217	192	141	969
Urban	1	4	12	23	63	103
Rural	203	211	205	169	77	865
Female	108	108	114	95	71	496
Male	97	107	103	96	70	473

1992 - SAMPLE SIZES

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR (Cont.)

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
Iodized salt in household						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Vitamin A supplementation						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Female	na	na	na	na	na	na
Male	na	na	na	na	na	na
Tobacco and alcohol use, casual sexual partners, condom use for casual sex						
Female	na	na	na	na	na	na
Urban Female	na	na	na	na	na	na
Rural Female	na	na	na	na	na	na
Male	na	na	na	na	na	na
Urban Male	na	na	na	na	na	na
Rural Male	na	na	na	na	na	na
Domestic violence						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na

Malawi

1992 - SAMPLE SIZES

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles					Pop.
	Low	2nd	3rd	4th	High	Total
School completion (Grade 5)						
Female	974	923	1,079	1,030	985	4,992
Urban female	6	20	48	109	444	627
Rural female	969	904	1,030	921	541	4,365
Male	786	834	941	1,066	1,209	4,837
Urban male	9	21	49	134	569	782
Rural male	777	813	892	932	640	4,054
School participation						
Female	435	405	371	396	361	1,969
Urban female	2	6	21	39	156	224
Rural female	434	399	350	357	205	1,745
Male	401	366	408	376	364	1,914
Urban male	1	9	16	37	155	219
Rural male	400	356	392	339	209	1,696
Mass media exposure						
Female	947	889	1,052	1,032	929	4,849
Urban female	5	20	46	106	417	594
Rural female	942	869	1,006	926	512	4,255
Male	159	200	204	299	288	1,151
Urban male	2	6	9	30	135	181
Rural male	158	194	195	270	152	970
Knowledge of HIV/AIDS prevention						
Female	1,941	889	1,052	1,032	929	5,843
Urban female	5	20	46	106	417	594
Rural female	942	869	1,006	926	512	4,255
Male	159	200	204	299	288	1,150
Urban male	2	6	9	30	135	182
Rural male	158	194	195	270	152	969
Household decisionmaking and justification of violence						
All	na	na	na	na	na	na
Urban	na	na	na	na	na	na
Rural	na	na	na	na	na	na
Orphanhood						
All	2,272	2,081	2,273	2,173	2,115	10,914
Urban	14	48	103	214	900	1,279
Rural	2,258	2,032	2,170	1,959	1,215	9,635
Female	1,242	1,153	1,169	1,099	1,050	5,713
Male	1,030	928	1,103	1,074	1,065	5,200

1992 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part I: HNP STATUS

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Childhood illness and mortality						
Infant mortality rate	8.73	9.25	9.61	10.23	11.06	4.58
Under-five mortality rate	9.05	9.65	10.58	11.20	11.14	5.06
Prevalence of fever	2.26	2.06	2.13	2.18	1.92	1.01
Prevalence of diarrhea	1.82	1.72	1.49	1.77	1.35	0.82
Prevalence of acute respiratory infection	1.96	1.60	1.63	1.51	1.45	0.68
B. Fertility						
Total fertility rate	0.32	0.27	0.27	0.22	0.14	0.13
Adolescent fertility rate	20.00	20.00	20.00	10.00	10.00	10.00
C. Nutritional status						
Children:						
Moderate stunting	2.04	2.05	1.89	1.76	1.74	0.91
Severe stunting	2.07	2.35	1.71	1.98	2.28	0.90
Moderate underweight	2.01	2.41	1.87	1.85	1.68	0.86
Severe underweight	1.60	1.35	1.33	1.04	0.94	0.62
Mild anemia	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na
Women:						
Malnutrition	1.88	1.89	1.52	1.72	1.12	0.74
Mild anemia	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na
D. Female circumcision						
Prevalence of circumcision:						
Girls	na	na	na	na	na	na
Women	na	na	na	na	na	na
Prevalence of occlusion:						
Girls	na	na	na	na	na	na
Women	na	na	na	na	na	na
E. Sexually transmitted disease						
Prevalence of genital discharge:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
Prevalence of genital ulcer:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na

1992 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Childhood immunization						
BCG coverage	2.30	1.62	1.28	1.00	0.68	0.66
Measles coverage	4.31	3.67	3.56	2.42	2.12	1.64
DPT coverage	4.21	2.99	2.76	2.68	2.03	1.40
Full basic coverage	4.54	3.94	3.96	3.04	2.61	1.80
No basic coverage	2.11	1.62	0.89	1.00	0.53	0.61
Hepatitis B coverage	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na
B. Treatment of childhood illnesses						
Treatment of fever:						
Medical treatment of fever	3.66	3.52	3.17	3.78	3.38	1.93
Treatment in a public facility	3.87	4.03	3.07	3.67	4.23	2.11
Treatment in a private facility	3.69	2.46	2.10	2.93	3.48	1.54
Treatment of acute respiratory infection (ARI):						
Medical treatment of ARI	5.86	6.10	5.57	6.33	5.70	2.56
Treatment in a public facility	5.11	5.82	5.08	6.72	6.09	2.86
Treatment in a private facility	5.76	4.29	5.25	2.88	5.79	2.55
Treatment of diarrhea:						
Use of oral rehydration therapy	5.58	4.59	4.44	3.94	2.86	2.23
Medical treatment of diarrhea	4.91	4.59	4.16	4.96	4.40	2.36
Treatment in a public facility	4.38	4.21	3.98	4.99	4.07	2.12
Treatment in a private facility	3.92	3.66	3.08	3.06	3.78	1.83
C. Antenatal and delivery care						
Antenatal care (ANC) visits:						
To a medically trained person	2.93	2.08	1.59	1.04	1.09	1.00
To a doctor	1.24	1.15	1.26	1.43	1.43	0.63
To a nurse or trained midwife	3.00	2.30	1.73	1.71	1.69	1.12
Multiple visits to a medically trained person	2.80	2.17	1.98	1.48	1.57	1.02
Antenatal care content:						
Tetanus toxoid	2.78	2.28	1.70	1.26	1.38	0.95
Prophylactic antimalarial treatment	na	na	na	na	na	na
Iron supplementation	na	na	na	na	na	na
Delivery attendance:						
By a medically trained person	3.06	2.68	2.76	2.89	3.31	1.77
By a doctor	0.86	0.74	0.90	0.93	1.12	0.45
By a nurse or trained midwife	2.93	2.64	2.72	2.84	3.07	1.69
In a public facility	2.83	2.81	2.52	3.10	3.40	1.70
In a private facility	2.08	1.78	2.34	2.04	2.66	1.31
At home	2.97	2.77	2.74	2.91	3.44	1.82
D. Contraceptive services						
Contraceptive prevalence:						
Women	0.97	0.84	1.01	1.02	1.66	0.57
Men	2.20	2.51	2.22	2.91	2.96	1.21
Source of contraception - public sector:						
Women	*	*	8.81	6.45	4.39	3.10
Men	na	na	na	na	na	na

1992 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part II: Intermediate Determinants of HNP Status - HNP SERVICE USE (Cont.)

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
D. Contraceptive services (cont.)						
Source of contraception - private sector:						
Women	*	*	8.81	6.45	4.35	3.29
Men	na	na	na	na	na	na
E. Treatment of adult illnesses						
Treatment of genital discharge, ulcer, sore:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
Treatment of genital discharge, ulcer, sore in public facilities:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
Voluntary counseling and testing for HIV/AIDS:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na

1992 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part III: Intermediate Determinants of HNP Status - INDIVIDUAL AND HOUSEHOLD BEHAVIOR

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Hygienic practices						
Disposal of children's stools:						
Sanitary disposal	na	na	na	na	na	na
Handwashing:						
Wash hands prior to preparing food	na	na	na	na	na	na
Handwashing facilities in household	na	na	na	na	na	na
B. Bednet ownership and use						
Bednet ownership:						
Bednet ownership	na	na	na	na	na	na
Treated bednet ownership	na	na	na	na	na	na
Bednet use:						
By children	na	na	na	na	na	na
By pregnant women	na	na	na	na	na	na
C. Breastfeeding						
Exclusive breastfeeding	2.27	2.58	3.23	2.05	0.00	1.11
Timely complementary feeding	5.65	5.79	4.74	3.65	4.31	2.33
Bottle-feeding	0.71	1.23	1.73	2.64	2.49	0.83
D. Micronutrient consumption						
Iodized salt:						
Availability of iodized salt in household	na	na	na	na	na	na
Vitamin A:						
Children	na	na	na	na	na	na
Women	na	na	na	na	na	na
E. Tobacco and alcohol use						
Tobacco:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
Alcohol:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
F. Sexual practices						
Non-regular sexual partnerships:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
Condom usage with non-regular partner:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
G. Domestic violence						
Ever experienced violence	na	na	na	na	na	na
Experienced violence in past year	na	na	na	na	na	na

Malawi

1992 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles					
	Low	2nd	3rd	4th	High	Avg.
A. Education						
School completion:						
Women	1.39	1.73	1.65	1.80	2.40	1.22
Men	2.14	2.27	2.24	2.20	1.86	1.28
School participation:						
Girls	3.29	3.64	3.84	3.32	2.07	1.86
Boys	3.24	3.41	3.08	3.33	2.31	1.81
B. Exposure to mass media						
Newspaper readership:						
Women	1.00	1.54	1.26	1.83	1.98	1.00
Men	4.49	3.87	3.97	3.93	3.43	2.19
Radio listenership:						
Women	2.17	2.10	2.02	2.19	1.70	1.21
Men	4.96	4.29	3.68	2.67	2.01	2.05
Television viewership:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS						
Knowledge about sexual transmission of HIV/AIDS:						
Women	1.93	1.30	1.09	1.24	0.84	0.65
Men	3.56	2.18	1.60	0.84	1.30	0.83
Knowledge about mother-to-child transmission of HIV/AIDS:						
Women	2.39	1.89	1.67	1.78	1.17	0.95
Men	3.51	3.65	3.10	2.60	1.55	1.40
Attitudes toward HIV/AIDS:						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
D. Status of women						
Household decisionmaking:						
Can seek own health care	na	na	na	na	na	na
Can seek children's health care	na	na	na	na	na	na
Can make daily household purchases	na	na	na	na	na	na
Can make large household purchases	na	na	na	na	na	na
Can make meal-related decisions	na	na	na	na	na	na
Freedom of movement:						
Can travel to visit family/relatives	na	na	na	na	na	na
Other decisionmaking, attitudes:						
Can decide how to spend own money	na	na	na	na	na	na
Can decide whether to have sex	na	na	na	na	na	na
Justifies domestic violence	na	na	na	na	na	na
E. Orphanhood						
Paternal orphan prevalence	1.06	0.85	0.72	0.74	0.74	0.39
Maternal orphan prevalence	0.67	0.64	0.62	0.74	0.58	0.30
Double orphan prevalence	0.30	0.40	0.26	0.42	0.28	0.15

Malawi

1992 - ASSET DISTRIBUTION AND WEIGHTS

(FACTOR SCORE)

Asset Variable	Unweighted		Wealth Quintiles						Factor Score
			Low	2nd	3rd	4th	High	Avg.	
	Mean	Std. Deviation	Percentage of Population						
Has electricity	0.059	0.235	0.0%	0.0%	0.0%	0.0%	18.5%	3.7%	0.12976
Has radio	0.393	0.489	0.5%	5.6%	30.1%	74.0%	76.3%	37.5%	0.09582
Has bicycle	0.202	0.401	8.4%	2.9%	29.1%	46.3%	41.5%	25.8%	0.02932
Has motorcycle	0.012	0.107	0.0%	0.0%	0.0%	0.5%	6.1%	1.3%	0.04704
Has car	0.017	0.129	0.0%	0.0%	0.0%	0.1%	8.7%	1.8%	0.07498
Has Parrafin Lamp	0.836	0.371	73.8%	82.5%	88.9%	93.7%	88.3%	85.5%	-0.00350
Has oxcart	0.027	0.163	1.1%	1.3%	2.9%	5.5%	7.0%	3.6%	0.00599
Has a domestic worker not related to head	0.003	0.056	0.0%	0.0%	0.0%	0.1%	2.0%	0.4%	0.02877
Works own or family's agric. land	0.756	0.429	78.1%	79.7%	87.8%	87.4%	85.3%	83.7%	0.00851
Uses piped drinking water in residence	0.035	0.184	0.0%	0.0%	0.0%	0.1%	11.3%	2.3%	0.10861
Uses water piped into yard or plot	0.062	0.241	0.0%	0.0%	0.0%	2.2%	17.0%	3.8%	0.07734
Uses water from protected/borehole well	0.186	0.389	28.5%	12.9%	32.0%	22.0%	16.8%	22.6%	-0.03103
Uses river, canal or surface water for drinking	0.141	0.348	18.4%	18.6%	17.9%	14.9%	6.6%	15.3%	-0.03359
Uses a public faucet (piped)	0.254	0.435	0.6%	7.0%	17.9%	36.8%	35.0%	19.5%	0.03334
Uses a traditional public well	0.321	0.467	52.5%	61.3%	32.0%	23.8%	13.1%	36.3%	-0.06284
Uses own flush toilet	0.034	0.181	0.0%	0.0%	0.0%	0.2%	10.6%	2.1%	0.11313
Uses a shared flush toilet	0.010	0.098	0.0%	0.0%	0.0%	0.3%	2.1%	0.5%	0.03130
Uses bush,field as latrine	0.228	0.420	88.3%	13.1%	14.7%	5.7%	2.1%	25.0%	-0.06608
Uses a traditional pit toilet	0.719	0.449	11.7%	86.9%	84.9%	92.5%	83.1%	71.6%	0.00628
Uses a VIP latrine	0.008	0.087	0.0%	0.0%	0.4%	1.2%	1.8%	0.7%	0.01531
Uses other type of latrine	0.000	0.014	0.0%	0.0%	0.0%	0.0%	0.3%	0.1%	0.00067
Has dirt, sand, dung as principal floor in dwelling	0.803	0.398	100.0%	100.0%	100.0%	99.5%	23.7%	84.7%	-0.16846
Has wood, plank principal floor in dwelling	0.000	0.014	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.01069
Has tiles for main flooring material	0.001	0.034	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	0.02320
Has cement principal floor	0.190	0.393	0.0%	0.0%	0.0%	0.4%	73.6%	14.8%	0.16544
Has other type of flooring	0.000	0.014	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.00106
Has natural material roofing	0.754	0.431	100.0%	100.0%	100.0%	93.2%	6.4%	80.0%	-0.16303
Has other roofing	0.006	0.078	0.0%	0.0%	0.0%	3.2%	0.6%	0.8%	0.00012
Has iron sheets as roofing material	0.236	0.425	0.0%	0.0%	0.0%	3.4%	91.6%	19.0%	0.16058
Has iron and tiles for roofing materials	0.003	0.051	0.0%	0.0%	0.0%	0.0%	1.0%	0.2%	0.02557
Has asbestos as main roofing material	0.001	0.027	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	0.01822
Has cement as main roofing material	0.000	0.019	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.01178
Number of members per sleeping room	2.585	1.455	3.6	3.1	2.9	2.7	2.7	3.0	-0.01758

PART VI. ANNEXES

A. SOURCES OF ADDITIONAL INFORMATION

B. USE OF INFORMATION FROM THIS REPORT TO MONITOR THE ECONOMIC STATUS OF PEOPLE SERVED BY HNP PROGRAMS

C. COUNTRIES COVERED BY THE HNP-POVERTY REPORT PROJECT

ANNEX A. SOURCES OF ADDITIONAL INFORMATION

ADDITIONAL INEQUALITY DATA

World Bank HNP/Poverty Country Report Website:
http://www.worldbank.org/hnp/povertyandhealth/countrydata.

This World Bank website provides the full texts and tables for all fifty-six countries covered by the HNP/Poverty Country Report Project. (A list of the countries covered appears in annex C, at the end of this report.) Also available at the site are summary tables, organized by indicator, designed to facilitate cross-country comparisons in inequality with respect to particular indicators.

DHS Country Reports: http://www.measuredhs.com/countries.

All DHS final country reports produced since 2003 include quintile-specific tabulations in approximately 50-100 of the reports' HNP indicator tables. The tables deal with some of the indicators covered in this volume, and with many that are not.

UNICEF Multi-Indicator Cluster Survey Website:
http://www.childinfo.org/MICS2/natlMICSrepz/MICSnatrep.htm.

The UNICEF Multi-Indicator Cluster Survey (MICS) project is generally similar to the DHS program, but covers a somewhat different set of countries and indicators. The "standard tables" section for each country listed at the MICS website provides wealth-based, quintile-specific information in around 40-45 of the tables related to hnp, education, and child labor. In deriving these quintile-specific estimates, the MICS investigators have employed a wealth index similar to the one used here.

World Health Organization World Health Survey Website:
http://www.who.int/healthinfo/survey/en/index.html.

The World Health Organization's World Health Survey (WHS) includes such issues as self-assessed adult health status; coverage of interventions against adult chronic diseases and against maternal and child health problems; household health expenditures; insurance coverage; and health system responsiveness. Approximately seventy countries – developed as well as developing – have been covered thus far. Household wealth information has been collected and used to prepare quintile-specific estimates for many of the indicators appearing in the reports on these countries.

METHODS AND RESOURCES FOR FURTHER INEQUALITY ANALYSIS

Shea Oscar Rutstein and Kiersten Johnson, *The DHS Wealth Index*, DHS Comparative Reports No. 6 (Calverton, Maryland, USA: ORC Macro, August 2004) (Available at: http://www.measuredhs.com/pubs/pub_details.cfm?ID =470&srchTp=type).

> This DHS publication, by two of the co-authors of the current report, describes in detail the construction of the wealth index that underlies the data presented in the basic tables.

Deon Filmer and Lant H. Pritchett, "Estimating Wealth Effects without Expenditure Data – or Tears: An Application to Education Enrollments in States in India," *Demography* 38, no.1 (February 2001): 115-132.

> This seminal piece gave birth to the wealth index procedure used in the current volume. It also includes three of the previously-cited country case studies demonstrating the close relationship between results produced using wealth and those based on consumption as an indicator of household economic status.

Owen O'Donnell, Eddy van Doorslaer, Adam Wagstaff, and Magnus Lindelow. *Quantitative Techniques for Health Equity Analysis*. Washington D.C.: The World Bank, forthcoming.

> Among the topics covered in this comprehensive overview of available quantitative techniques are the measurement of living standards using a wealth index and other approaches (chapter 6) and the concentration index as a measure of inequality (chapter 8).

DHS Country Data Sets: http://www.measuredhs.com/accesssurveys/search.

> The data sets for all DHS surveys undertaken since 2003 include two pieces of information for each household that are designed to help investigators prepare quintile-specific tabulations for any indicator. These are: 1) the household wealth score; and 2) the economic quintile to which individuals in the household belong. Any tabulation using these pieces of information will be comparable to the figures appearing here.

ANNEX B. USE OF INFORMATION FROM THIS REPORT TO MONITOR THE ECONOMIC STATUS OF PEOPLE SERVED BY HNP PROGRAMS

The wealth or asset approach employed in this report can be used to monitor the economic status of people served by health, nutrition, and population (hnp) programs in two ways. The first, simpler way is suitable for monitoring nationwide, facility-based programs. A second, fuller version can also be employed for other types of programs, such as initiatives undertaken only in some parts of a country, or activities like mass education or outreach programs that do not operate through facilities.

BASIC MONITORING OF NATIONWIDE FACILITY-BASED PROGRAMS

The economic distribution of patients in a nationwide, facility-based program (say, a network of rural health posts, antenatal care clinics, emergency obstetrical facilities, or hospitals) can be determined through an exit survey of facility patients, using the wealth questionnaire and the set of quintile cut-off points that immediately follow this text, and which have been created using the information presented in part III.C. The questionnaire can be employed to measure the economic status of any individual responding to the questions on it. The set of cut-off points can serve to compare the distribution of the respondents' economic status with that of the nationally-representative sample of people interviewed by the DHS survey on which the present report is based.

The first step is to use the questionnaire in interviewing an adequately-large sample of patients attending the facility-based services of interest. The wealth score for each patient can then be calculated by multiplying the response to each question by the item scores also provided on the questionnaire, and summing the results. After this has been done, the quintile cut-off points can be used to place each individual in the economic quintile to which (s)he belongs. The number of patients and percentage of total patients in each quintile can then be calculated.

Since each quintile defined by the cut-off points contains 20 percent of the individuals in the nationally-representative DHS sample, the patients belonging to any such quintile containing significantly more (or less) than 20 percent of the total are over- (under-) represented relative to the national population. When the percentage of patients in each of the five quintiles is viewed as a whole, the result is a frequency distribution that indicates the spread of service beneficiaries across economic classes of individuals.[21] For example:

- A service that favors the poorest people would have substantially more than 20 percent of its patients in each of the lowest one or two economic quintiles; considerably less than 20 percent of its patients in each of the highest quintiles.

[21] That is, across economic classes of all individuals in the sample population. Estimates pertaining to quintiles of only those individuals needing services require adjusting the results of the procedure described here through application of the relevant quintile-specific, sample-size figures presented in part III.A.

- A service that reaches all economic classes equally would draw roughly the same proportion of total patients from the lower and upper quintiles.

- A service that favors the least poor population groups would have well over 20 percent of its patients in each of the highest one or two quintiles, considerably less than 20 percent of its patients in each of the lowest quintiles.

FULLER MONITORING OF FACILITY-BASED AND OF OTHER PROGRAMS

While capable of providing far more information than currently exists about the distribution of a program's beneficiaries, the approach just described has important limitations. For example, it cannot deal with the many important types of health programs that do not deliver services primarily through facilities – mass media health education, household visits by health workers, and many social marketing initiatives, for example. It is also limited in its ability to assess programs working only with certain areas within a country: it can compare the economic status of the programs' beneficiaries with that of the national population, but not with that of the specific sub-national areas where the programs are active. Further, it focuses primarily on only one of the two important dimensions of monitoring the distribution of program beneficiaries: that is, incidence or focus – the percentage of program benefits that flow to the poor. It cannot deal nearly so well with the second dimension, which concerns coverage, or the percentage of the poor that the program reaches.

These limitations can be overcome by a modified version of the approach described above that relies on a household- rather than facility-based survey. A household survey can generate a set of data containing the full range of information needed to produce an equity assessment by collecting two types of information: first, about the household's wealth or assets, using the questions in the left-hand column of the attached questionnaire;[22] and second, about the household members' use of or exposure to the services provided by the program(s) of interest. The collected data can be analyzed in either (or both) of two ways, depending on the type of information desired:

- One way would be to use only data from the household survey. The procedure would be analogous to that for a DHS survey employed in this report:

  – Asset information from the survey-generated data set would be used as the basis for the construction of a wealth index, weighting the individual items using some method like principal components analysis.

  – The individuals in the sample would be ranked in order of the index values for their households, then divided into groups like quintiles.

  – The coverage rates in each quintile for the service of interest would be calculated.

- A second approach would be to use the weights for each item appearing on the attached questionnaire in determining the wealth of each individual, instead of calculating the weights from the new household data set. Once the individuals' wealth is determined, the individuals would be ranked, divided into quintiles, and the coverage rate in each quintile would be calculated. In the case of programs undertaken in only one region of the country, it would

[22] Or, if one is willing to forego the benefits of the second analytical approach described below, using any of several other asset questionnaires that exist. Examples include the INDEPTH health equity survey tool (available at: www.indepth-network.org/core_documents/indepthtools.htm) or the model questionnaire developed by M. Mahood Khan and David Hotchkiss of the PHR Plus project (which can be found at: www.phrplus.org).

provide a comparison of the economic status of the people served with that of the entire country rather than of only the region where the programs are active;[23] in the case of nationwide as well as regional programs, it would permit a comparison with the other service programs covered in this report.

[23] This additional perspective could be particularly helpful in an assessment of a program seeking to reach the poor by focusing on especially backward districts. A report presenting only a finding that the program was reaching the better-off people in those districts could produce an impression that it had failed to reach its intended beneficiaries. But a comparison between the economic status of the program's beneficiaries with that of the national population might well reveal that most of the beneficiaries were poor by national standards and that the program was thus considerably more successful than otherwise thought.

Malawi

2000 - ASSET QUESTIONNAIRE

Question	Score if "Yes"	Score if "No"	Item Score
1. In your household, is/are there?			
Electricity	0.63847	-0.03975	
One or more radios	0.05608	-0.07018	
One or more televisions	0.80595	-0.02011	
One or more bicycles	0.00599	-0.00466	
One or more motorcycles, scooters	0.33260	-0.00379	
One or more cars, trucks	0.64111	-0.01153	
2. Does your household have a domestic worker not related to head?	0.91984	-0.00273	
3. Do the members of your household work their own or family's agricultural land?	-0.07077	0.03492	
4. What is the principal source of drinking water for your household?			
Piped water in residence	0.71361	-0.02661	
Piped water in yard, plot	0.29834	-0.01580	
Piped water in public faucet	0.02879	-0.00669	
Protected well	-0.04926	0.00323	
Unprotected well	-0.07248	0.01951	
Borehole	-0.05677	0.02946	
River, canal, surface water	-0.07630	0.00835	
Springwater	-0.07400	0.00078	
Rainwater	-0.10309	0.00001	
Tanker truck	0.00332	0.00000	
Bottled water	0.10088	-0.00001	
5. What is the principal source of fuel for cooking used by your household?			
Electricity	0.92500	-0.02001	
Kerosene	0.35903	-0.00185	
Charcoal	0.36209	-0.01411	
Wood	-0.03746	0.54630	
Other	0.14116	-0.00004	
6. What is the principal type of toilet facility used by your household?			
Private flush toilet in residence	0.81737	-0.02428	
Shared flush toilet in residence	0.39269	-0.00245	
Private VIP latrine	0.27033	-0.00094	
Shared VIP latrine	0.24179	-0.00101	
Private pit latrine	-0.02508	0.02267	
Shared pit latrine	-0.00091	0.00041	
Bush, field as latrine	-0.09186	0.01900	
7. What is the principal material used for the floors in your household?			
Dirt, sand, dung	-0.07297	0.27967	
Cement	0.28166	-0.07173	
Wood plank	0.64770	-0.00009	
Parquet	1.33122	-0.00009	
Broken bricks	0.05252	-0.00009	
Tile	0.75255	-0.00026	
Vinyl	0.38745	-0.00003	
Total Household Asset Score (sum of individual item scores)			

Malawi

2000 - QUINTILE CUT-OFF POINTS

Wealth Quintile	Asset Index Value	
	Bottom Cut-Off	Top Cut-Off
Low	Low	-0.48744
Second	-0.48744	-0.41210
Third	-0.41210	-0.31375
Fourth	-0.31375	0.29235
High	0.29235	High

ANNEX C. COUNTRIES COVERED BY THE HNP - POVERTY REPORT PROJECT*

East Asia and Pacific

Cambodia	2000
Indonesia	1997, 2002-03
Philippines	1998, 2003
Vietnam	1997, 2002

Europe and Central Asia

Armenia	2000
Kazakhstan	1995, 1999
Kyrgyz Rep.	1997
Turkey	1993, 1998
Turkmenistan	2000
Uzbekistan	1996

Latin America and the Caribbean

Bolivia	1998, 2003
Brazil	1996
Colombia	1995, 2000, 2005
Dominican Rep.	1996, 2002
Guatemala	1995, 1998-99
Haiti	1994-95, 2000
Nicaragua	1997- 98, 2001
Paraguay	1990
Peru	1996, 2000

Middle East and North Africa

Egypt	1995, 2000
Jordan	1997
Morocco	1992, 2003-04
Yemen	1997

South Asia

Bangladesh	1996-97, 1999-2000, 2004
India	1992-93, 1998-99
Nepal	1996, 2001
Pakistan	1990-91

Sub-Saharan Africa

Benin	1996, 2001
Burkina Faso	1992-3, 1998-9, 2003
Cameroon	1991, 1998, 2004
Central African Rep.	1994-95
Chad	1996-97, 2004
Comoros	1996
Cote d'Ivoire	1994
Eritrea	1995
Ethiopia	2000
Gabon	2000
Ghana	1993, 1998, 2003
Guinea	1999
Kenya	1993, 1998, 2003
Madagascar	1997
Malawi	1992, 2000
Mali	1995-96, 2001
Mauritania	2000-01
Mozambique	1997, 2003
Namibia	1992, 2000
Niger	1998
Nigeria	1990, 2003
Rwanda	2000
Senegal	1997
South Africa	1998
Tanzania	1996, 1999, 2004
Togo	1998
Uganda	1995, 2000-01
Zambia	1996, 2001-02
Zimbabwe	1994, 1999

* Note: electronic versions of reports for all countries are currently available at: www.worldbank.org/povertyandhealth/countrydata. While supplies last, paper copies may be obtained at no charge by sending a request to the World Bank's health advisory service: healthpop@worldbank.org.