

**SOCIO-ECONOMIC DIFFERENCES
IN
HEALTH, NUTRITION, AND POPULATION**

**NICARAGUA
1997/98, 2001**

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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.

The authors thank the Dutch and Swedish Governments for the generous support that made production of this report possible.

PART I. BASIC TABLES, 2001

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.

Nicaragua
2001 - 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	49.6	40.6	32.2	25.7	16.3	35.3	3.04	33.30	-0.1825	0.0012
Under-five mortality rate	64.3	52.2	38.6	32.4	19.2	44.6	3.35	45.10	-0.1961	0.0012
Prevalence of fever	26.2	28.0	24.8	22.4	21.1	24.9	1.24	5.10	-0.0504	0.0128
Prevalence of diarrhea	15.4	14.0	13.5	11.8	8.2	13.1	1.88	7.20	-0.0884	0.0187
Prevalence of acute respiratory infection (ARI)	34.5	34.4	31.2	26.8	23.4	30.9	1.47	11.10	-0.0664	0.0111
B. Fertility										
Total fertility rate	5.6	3.9	3.1	2.4	2.1	3.2	2.67	3.50	-0.1972	0.0005
Adolescent fertility rate	193.0	150.0	122.0	94.0	70.0	119.0	2.76	123.00	-0.1913	0.0011
C. Nutritional status (%)										
<i>Children:</i>										
Moderate stunting	22.4	18.4	12.3	5.4	4.1	13.9	5.46	18.30	-0.2798	0.0189
Severe stunting	12.8	7.4	3.3	3.0	0.4	6.2	32.00	12.40	-0.4069	0.0311
Moderate underweight	12.8	9.5	7.2	4.0	2.2	7.9	5.82	10.60	-0.2497	0.0258
Severe underweight	3.2	2.0	1.0	1.2	0.5	1.8	6.40	2.70	-0.3714	0.0626
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
<i>Women:</i>										
Malnutrition	3.4	2.4	3.8	3.5	4.0	3.5	0.85	0.60	0.0179	0.0288
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 (%)										
<i>Prevalence of circumcision:</i>										
Girls	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na
<i>Prevalence of occlusion:</i>										
Girls	*	*	*	*	*	*	*	*	*	*
Women	*	*	*	*	*	*	*	*	*	*
E. Sexually transmitted disease										
<i>Prevalence of genital discharge:</i>										
Women	13.8	12.9	12.9	11.9	10.3	12.2	1.34	3.50	-0.0838	0.0154
Men	na	na	na	na	na	na	na	na	na	na
<i>Prevalence of genital ulcer:</i>										
Women	2.9	2.4	2.5	1.3	1.1	1.9	2.64	1.80	-0.2149	0.0414
Men	na	na	na	na	na	na	na	na	na	na

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2001 - TOTAL POPULATION

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

Indicator	Wealth Quintiles						Low/High	Low-High	Concentration Index	
	Low	2nd	3rd	4th	High	Avg.	Ratio	Diff. (Abs. Val.)	Value	Standard Errors
A. Childhood immunization										
BCG coverage	92.0	95.3	96.6	97.8	98.7	95.5	0.93	6.70	0.0159	0.0032
Measles coverage	76.2	90.8	91.3	85.9	93.8	86.4	0.81	17.60	0.0397	0.0065
DPT coverage	76.5	86.0	85.2	85.7	82.9	82.7	0.92	6.40	0.0331	0.0074
Full basic coverage	63.6	77.2	78.0	71.4	71.0	71.6	0.90	7.40	0.0439	0.0100
No basic coverage	4.3	2.2	0.6	1.0	1.3	2.2	3.31	3.00	-0.3974	0.1146
Hepatitis B coverage	1.4	0.4	1.3	2.0	8.4	2.3	0.17	7.00	0.2877	0.1196
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood illnesses										
<i>Treatment of fever:</i>										
Medical treatment of fever	49.2	65.8	68.7	59.5	72.7	61.5	0.68	23.50	0.0775	0.0125
Treatment in a public facility	46.2	59.3	54.4	46.4	35.9	49.6	1.29	10.30	-0.0006	0.0166
Treatment in a private facility	3.0	6.4	12.1	13.2	36.3	11.4	0.08	33.30	0.4183	0.0449
<i>Treatment of acute respiratory infection (ARI):</i>										
Medical treatment of ARI	45.0	61.1	62.6	59.2	74.5	57.7	0.60	29.50	0.0956	0.0120
Treatment in a public facility	42.4	55.8	47.9	43.6	33.6	45.8	1.26	8.80	0.0016	0.0155
Treatment in a private facility	2.5	5.0	12.0	13.6	40.6	11.0	0.06	38.10	0.4793	0.0429
<i>Treatment of diarrhea:</i>										
Use of oral rehydration therapy	61.4	71.3	67.2	70.6	77.0	67.7	0.80	15.60	0.0432	0.0143
Medical treatment of diarrhea	37.6	49.2	51.8	41.6	41.9	44.1	0.90	4.30	0.0490	0.0234
Treatment in a public facility	36.9	44.5	39.7	29.1	22.0	36.6	1.68	14.90	-0.0395	0.0264
Treatment in a private facility	0.7	4.8	11.0	11.6	19.9	7.2	0.04	19.20	0.5244	0.0790
C. Antenatal and delivery care										
<i>Antenatal care visits:</i>										
To a medically trained person	68.8	85.2	90.8	94.6	96.6	86.2	0.71	27.80	0.0668	0.0038
To a doctor	34.1	49.8	55.5	54.9	41.6	46.8	0.82	7.50	0.0740	0.0091
To a nurse or trained midwife	34.7	35.4	35.4	39.7	55.1	39.4	0.63	20.40	0.0639	0.0104
Multiple visits to a medically trained person	57.7	76.4	83.0	89.6	92.5	78.5	0.62	34.80	0.0940	0.0043
<i>Antenatal care content:</i>										
Tetanus toxoid	76.7	83.9	86.2	86.8	83.5	83.1	0.92	6.80	0.0218	0.0040
Prophylactic antimalarial treatment	na	na	na	na	na	na	na	na	na	na
Iron supplementation	62.7	78.4	82.6	84.7	91.4	78.9	0.69	28.70	0.0703	0.0042
<i>Delivery attendance:</i>										
By a medically trained person	77.5	88.5	95.0	97.2	99.3	89.7	0.78	21.80	0.0567	0.0027
By a doctor	27.1	58.3	79.1	88.2	95.2	64.2	0.28	68.10	0.2363	0.0044
By a nurse or trained midwife	50.3	30.2	15.9	9.0	4.1	25.6	12.27	46.20	-0.3963	0.0120
In a public facility	28.7	60.3	76.3	82.0	70.7	59.8	0.41	42.00	0.1997	0.0059
In a private facility	0.3	1.0	5.2	8.1	25.5	6.5	0.01	25.20	0.4903	0.0308
At home	70.4	38.3	18.1	9.4	3.3	33.3	21.33	67.10	-0.4551	0.0085
D. Contraceptive services										
<i>Contraceptive prevalence:</i>										
Women	50.2	65.8	71.2	71.1	71.0	66.1	0.71	20.80	0.0623	0.0051
Men	na	na	na	na	na	na	na	na	na	na

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2001 - 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.)										
<i>Source of contraception - public sector:</i>										
Women	79.3	77.2	68.0	62.7	41.3	64.0	1.92	38.00	-0.1017	0.0061
Men	na	na	na	na	na	na	na	na	na	na
<i>Source of contraception - private sector:</i>										
Women	16.7	20.3	28.9	34.5	55.2	32.8	0.30	38.50	0.2025	0.0116
Men	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses										
<i>Treatment of genital discharge, ulcer, sore:</i>										
Women	2.6	3.6	7.6	12.2	8.4	7.1	0.31	5.80	0.2405	0.0534
Men	na	na	na	na	na	na	na	na	na	na
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
<i>Voluntary counseling and testing for HIV/AIDS:</i>										
Women	0.9	2.5	5.9	8.3	12.1	6.6	0.07	11.20	0.3164	0.0189
Men	na	na	na	na	na	na	na	na	na	na

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2001 - 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										
<i>Disposal of children's stools:</i>										
Sanitary disposal	24.5	57.8	73.9	73.8	74.3	58.7	0.33	49.80	0.1960	0.0066
<i>Handwashing:</i>										
Wash hands prior to preparing food	98.1	98.4	98.0	97.4	94.3	97.0	1.04	3.80	-0.0067	0.0010
Handwashing facilities in household	2.1	34.7	77.2	93.3	99.1	64.2	0.02	97.00	0.3324	0.0023
B. Bednet ownership and use										
<i>Bednet ownership:</i>										
Bednet ownership	29.3	40.4	51.4	49.6	38.5	42.1	0.76	9.20	0.1010	0.0067
Treated bednet ownership	na	na	na	na	na	na	na	na	na	na
<i>Bednet use:</i>										
By children	na	na	na	na	na	na	na	na	na	na
By pregnant women	27.5	40.1	36.0	39.3	14.4	31.9	1.91	13.10	0.0536	0.0343
C. Breastfeeding										
Exclusive breastfeeding	53.0	53.5	24.9	32.7	(14.5)	39.3	3.66	67.50	-0.1527	0.0338
Timely complementary feeding	73.2	75.1	66.2	68.0	(52.0)	67.5	1.41	125.20	-0.0587	0.0226
Bottle-feeding	38.6	41.9	67.7	66.9	75.1	55.8	0.51	36.50	0.1462	0.0144
D. Micronutrient consumption										
<i>Iodized salt:</i>										
Availability of iodized salt in household	na	na	na	na	na	na	na	na	na	na
<i>Vitamin A:</i>										
Children	52.0	67.3	70.6	71.8	72.2	65.3	0.72	20.20	0.0790	0.0059
Women	16.0	27.6	28.7	32.5	31.6	26.7	0.51	15.60	0.1238	0.0132
E. Tobacco and alcohol use										
<i>Tobacco:</i>										
Women	2.1	3.2	4.1	5.5	9.4	5.3	0.22	7.30	0.2387	0.0223
Men	na	na	na	na	na	na	na	na	na	na
<i>Alcohol:</i>										
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										
<i>Non-regular sexual partnerships:</i>										
Women	0.9	0.9	1.2	1.1	1.3	1.1	0.69	0.40	0.0429	0.0479
Men	na	na	na	na	na	na	na	na	na	na
<i>Condom usage with non-regular partner:</i>										
Women	*	(10.3)	(19.7)	(13.7)	(31.7)	19.6	*	*	*	*
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

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2001 - 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										
<i>School completion:</i>										
Women	19.9	42.2	64.8	81.0	91.7	64.1	0.22	71.80	0.2400	0.0028
Men	18.3	36.9	61.7	80.2	94.4	59.8	0.19	76.10	0.2726	0.0029
<i>School participation:</i>										
Girls	55.3	79.5	88.2	91.2	95.2	79.6	0.58	39.90	0.1118	0.0046
Boys	49.5	71.8	82.6	89.2	92.3	74.3	0.54	42.80	0.1330	0.0048
B. Exposure to mass media										
<i>Newspaper readership:</i>										
Women	10.6	25.4	41.6	52.2	68.2	43.0	0.16	57.60	0.2761	0.0050
Men	na	na	na	na	na	na	na	na	na	na
<i>Radio listenership:</i>										
Women	72.2	80.0	85.5	88.6	90.3	84.4	0.80	18.10	0.0412	0.0024
Men	na	na	na	na	na	na	na	na	na	na
<i>Television viewership:</i>										
Women	7.5	42.6	81.0	92.6	96.6	69.4	0.08	89.10	0.2707	0.0026
Men	na	na	na	na	na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS										
<i>Knowledge about sexual transmission of HIV/AIDS:</i>										
Women	20.8	30.8	36.0	44.9	49.7	38.2	0.42	28.90	0.1713	0.0065
Men	na	na	na	na	na	na	na	na	na	na
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>										
Women	77.4	71.9	82.2	86.0	91.8	79.5	0.84	14.40	0.0885	0.0027
Men	na	na	na	na	na	na	na	na	na	na
<i>Attitudes toward HIV/AIDS:</i>										
Women	24.7	23.8	25.4	23.1	20.2	22.6	1.22	4.50	0.0052	0.0100
Men	na	na	na	na	na	na	na	na	na	na
D. Status of women										
<i>Household decisionmaking:</i>										
Can seek own health care	32.6	38.2	40.5	42.5	43.3	40.0	0.75	10.70	0.0428	0.0065
Can seek children's health care	94.7	98.4	99.2	99.5	99.0	98.0	0.96	4.30	0.0102	0.0015
Can make daily household purchases	na	na	na	na	na	na	na	na	na	na
Can make large household purchases	41.7	47.8	49.7	53.4	53.1	49.8	0.79	11.40	0.0445	0.0052
Can make meal-related decisions	52.4	53.6	53.5	53.1	46.9	51.6	1.12	5.50	-0.0258	0.0050
<i>Freedom of movement:</i>										
Can travel to visit family, relatives	16.8	21.0	25.2	28.3	28.5	24.7	0.59	11.70	0.0929	0.0090
<i>Other decisionmaking, attitudes:</i>										
Can decide how to spend own money	78.0	86.6	89.4	91.4	90.6	89.2	0.86	12.60	0.0139	0.0031
Can decide whether to have sex	92.3	95.4	95.8	97.6	98.1	96.2	0.94	5.80	0.0097	0.0011
Justifies domestic violence	22.1	17.4	12.9	9.8	5.4	12.5	4.09	16.70	-0.2667	0.0134
E. Orphanhood										
Paternal orphan prevalence	3.6	3.5	3.6	3.9	2.5	3.5	1.44	1.10	-0.0185	0.0218
Maternal orphan prevalence	1.0	1.0	0.9	1.8	0.9	1.1	1.11	0.10	0.0344	0.0402
Double orphan prevalence	0.2	0.3	0.1	0.6	0.3	0.3	0.67	0.10	0.1202	0.0770

Nicaragua
2001 - 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	42.5	39.2	26.6	21.8	18.1	31.7	56.3	41.9	37.5	29.3	14.5	38.8
Under-five mortality rate	59.1	50.1	28.0	29.7	21.2	40.5	69.2	54.2	48.6	34.9	17.2	48.4
Prevalence of fever	26.5	30.0	26.1	18.2	19.8	24.8	25.8	26.0	23.6	26.1	22.3	25.0
Prevalence of diarrhea	16.1	13.3	13.9	10.1	6.4	12.6	14.9	14.8	13.1	13.3	10.0	13.5
Prevalence of acute respiratory infection (ARI)	33.1	35.1	32.4	24.2	21.9	30.2	35.8	33.8	30.0	29.2	24.9	31.4
B. Nutritional status												
<i>Children:</i>												
Moderate stunting	22.0	18.6	12.2	4.3	4.1	13.7	22.8	18.1	12.5	6.4	4.1	14.1
Severe stunting	13.7	7.6	2.9	2.0	0.2	6.2	11.9	7.1	3.8	4.0	0.6	6.2
Moderate underweight	12.1	10.1	5.8	2.1	2.1	7.2	13.4	8.9	8.5	5.7	2.3	8.5
Severe underweight	3.6	1.5	0.8	1.1	1.1	1.8	2.9	2.5	1.3	1.3	0.0	1.8
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												
<i>Prevalence of genital discharge:</i>												
Women	13.8	12.9	12.9	11.9	10.3	12.2						
Men							na	na	na	na	na	na
<i>Prevalence of genital ulcer:</i>												
Women	2.9	2.4	2.5	1.3	1.1	1.9						
Men							na	na	na	na	na	na

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2001 - 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	91.7	96.8	98.3	96.9	97.2	95.6	92.3	93.7	95.2	98.5	100.0	95.5
Measles coverage	75.1	92.4	90.8	84.8	91.8	85.5	77.4	89.0	91.7	86.8	95.5	87.1
DPT coverage	75.4	86.9	82.2	85.4	78.2	81.1	77.8	85.1	87.6	86.0	87.0	84.2
Full basic coverage	62.3	82.0	75.2	67.0	67.8	70.5	65.0	72.0	80.3	74.8	73.9	72.6
No basic coverage	4.8	1.9	1.0	0.4	2.8	2.5	3.8	2.4	0.4	1.5	0.0	1.8
Hepatitis B coverage	1.1	0.4	0.0	2.3	9.6	2.1	1.8	0.4	2.3	1.7	7.4	2.4
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood illnesses												
<i>Treatment of fever:</i>												
Medical treatment of fever	51.1	61.2	63.5	61.8	69.5	59.8	47.3	71.1	74.2	58.1	75.4	63.1
Treatment in a public facility	48.8	55.6	48.2	46.4	29.3	47.8	43.6	63.8	61.0	46.3	41.4	51.3
Treatment in a private facility	2.3	5.7	12.7	15.4	40.2	11.5	3.8	7.4	11.4	11.8	33.0	11.4
<i>Treatment of acute respiratory infection (ARI):</i>												
Medical treatment of ARI	47.0	60.0	60.2	62.4	67.3	57.3	43.2	62.2	65.1	56.9	80.6	58.1
Treatment in a public facility	44.6	54.5	45.0	43.4	27.1	45.2	40.4	57.2	50.8	43.7	39.2	46.5
Treatment in a private facility	2.4	5.0	13.1	16.8	40.2	11.3	2.7	4.9	10.8	11.3	40.9	10.6
<i>Treatment of diarrhea:</i>												
Use of oral rehydration therapy	59.3	65.2	55.9	(73.2)	(74.2)	63.0	63.5	76.9	78.7	68.8	(78.7)	72.0
Medical treatment of diarrhea	36.9	45.7	51.2	(44.5)	(34.8)	42.8	38.4	52.5	52.4	39.6	(46.2)	45.3
Treatment in a public facility	36.4	42.1	38.6	(34.0)	(9.5)	35.8	37.5	46.6	40.8	25.8	(29.7)	37.3
Treatment in a private facility	0.5	3.6	10.4	(10.5)	(25.2)	6.5	0.9	5.8	11.7	12.4	(16.6)	7.8
C. Contraceptive services												
<i>Contraceptive prevalence:</i>												
Women	50.2	65.8	71.2	71.1	71.0	66.1						
Men							na	na	na	na	na	na
<i>Source of contraception - public sector:</i>												
Women	79.3	77.2	68.0	62.7	41.3	64.0						
Men							na	na	na	na	na	na
<i>Source of contraception - private sector:</i>												
Women	16.7	20.3	28.9	34.5	55.2	32.8						
Men							na	na	na	na	na	na
D. Treatment of adult illnesses												
<i>Treatment of genital discharge, ulcer, sore:</i>												
Women	2.6	3.6	7.6	12.2	8.4	7.1						
Men							na	na	na	na	na	na
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
<i>Voluntary counseling and testing for HIV/AIDS:</i>												
Women	0.9	2.5	5.9	8.3	12.1	6.6						
Men							na	na	na	na	na	na

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2001 - 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												
<i>Disposal of children's stools:</i>												
Sanitary disposal	24.5	57.8	73.9	73.8	74.3	58.7						
<i>Handwashing:</i>												
Wash hands prior to preparing food	98.1	98.4	98.0	97.4	94.3	97.0						
Handwashing facilities in household	2.1	34.7	77.2	93.3	99.1	64.2						
B. Bednet ownership and use												
<i>Bednet use:</i>												
By children	na	na	na	na	na	na						
C. Breastfeeding												
Exclusive breastfeeding	48.9	49.7	(33.3)	(36.8)	*	38.5	56.2	56.5	(18.6)	(27.4)	*	39.9
Timely complementary feeding	77.7	(75.8)	(60.8)	(73.1)	(64.9)	70.5	68.8	(74.4)	(74.7)	*	*	63.9
Bottle-feeding	36.7	40.2	68.9	59.1	75.9	54.3	40.5	43.4	66.5	75.7	74.4	57.2
D. Micronutrient consumption												
<i>Vitamin A:</i>												
Children	51.4	69.2	68.5	71.1	71.5	64.8	52.6	65.4	72.7	72.4	72.7	65.7
E. Tobacco and alcohol use												
<i>Tobacco:</i>												
Women	2.1	3.2	4.1	5.5	9.4	5.3						
Men							na	na	na	na	na	na
<i>Alcohol:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
F. Sexual practices												
<i>Non-regular sexual partnerships:</i>												
Women	0.9	0.9	1.2	1.1	1.3	1.1						
Men							na	na	na	na	na	na
<i>Condom usage with non-regular partner:</i>												
Women	*	(10.3)	(19.7)	(13.7)	(31.7)	19.6						
Men							na	na	na	na	na	na

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2001 - 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												
<i>School completion:</i>												
Women	19.9	42.2	64.8	81.0	91.7	64.1						
Men							18.3	36.9	61.7	80.2	94.4	59.8
<i>School participation:</i>												
Girls	55.3	79.5	88.2	91.2	95.2	79.6						
Boys							49.5	71.8	82.6	89.2	92.3	74.3
B. Exposure to mass media												
<i>Newspaper readership:</i>												
Women	10.6	25.4	41.6	52.2	68.2	43.0						
Men							na	na	na	na	na	na
<i>Radio listenership:</i>												
Women	72.2	80.0	85.5	88.6	90.3	84.4						
Men							na	na	na	na	na	na
<i>Television viewership:</i>												
Women	7.5	42.6	81.0	92.6	96.6	69.4						
Men							na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS												
<i>Knowledge about sexual transmission of HIV/AIDS:</i>												
Women	20.8	30.8	36.0	44.9	49.7	38.2						
Men							na	na	na	na	na	na
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>												
Women	77.4	71.9	82.2	86.0	91.8	79.5						
Men							na	na	na	na	na	na
<i>Attitudes toward HIV/AIDS:</i>												
Women	24.7	23.8	25.4	23.1	20.2	22.6						
Men							na	na	na	na	na	na
D. Orphanhood												
Paternal orphan prevalence	3.3	3.3	3.8	4.4	3.0	3.6	3.9	3.8	3.3	3.4	2.0	3.4
Maternal orphan prevalence	1.0	1.1	1.2	1.7	1.0	1.2	1.1	0.9	0.7	1.8	0.8	1.1
Double orphan prevalence	0.2	0.3	0.2	0.7	0.4	0.3	0.1	0.3	0.0	0.4	0.2	0.2

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2001 - 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	48.4	42.7	28.9	(20.4)	*	42.8	*	35.1	33.8	26.3	16.6	27.7
Under-five mortality rate	63.7	54.6	35.2	(22.4)	*	55.3	*	46.0	40.3	33.7	19.5	33.9
Prevalence of fever	26.3	26.9	23.5	19.0	*	25.8	22.4	30.7	25.5	22.9	21.0	24.0
Prevalence of diarrhea	15.4	13.7	12.3	11.8	*	14.4	15.7	14.8	14.1	11.8	8.1	11.7
Prevalence of acute respiratory infection	34.7	33.5	30.7	24.6	*	33.2	28.9	36.8	31.4	27.2	23.7	28.5
B. Fertility												
Total fertility rate	5.7	3.9	3.0	(3.1)	*	4.4	*	(4.0)	3.1	2.4	2.1	2.6
Adolescent fertility rate	195.0	140.0	108.0	(127.0)	*	153.0	*	(176.0)	129.0	89.0	71.0	98.8
C. Nutritional status												
<i>Children:</i>												
Moderate stunting	22.4	19.2	13.7	1.5	*	19.2	23.0	16.4	11.7	6.0	4.1	8.6
Severe stunting	12.4	8.5	3.7	5.6	*	9.7	22.3	4.8	3.2	2.6	0.4	2.8
Moderate underweight	12.3	10.1	6.8	5.7	*	10.6	25.0	8.2	7.3	3.7	2.2	5.2
Severe underweight	3.3	2.7	1.7	1.7	*	2.8	0.0	0.4	0.7	1.1	0.6	0.7
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
<i>Women:</i>												
Malnutrition	3.4	2.4	4.0	3.8	0.0	3.1	3.6	2.6	3.7	3.5	4.1	3.7
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												
<i>Prevalence of circumcision:</i>												
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
<i>Prevalence of occlusion:</i>												
Girls	*	*	*	*	*	*	*	*	*	*	*	*
Women	*	*	*	*	*	*	*	*	*	*	*	*
E. Sexually transmitted disease												
<i>Prevalence of genital discharge:</i>												
Women	13.9	13.1	13.5	10.1	(3.1)	13.2	13.4	12.4	12.6	12.2	10.4	11.6
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Prevalence of genital ulcer:</i>												
Women	2.7	2.9	3.2	0.6	0.0	2.7	5.9	1.0	2.1	1.4	1.1	1.5
Men	na	na	na	na	na	na	na	na	na	na	na	na

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2001 - 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	91.6	94.1	92.9	(92.2)	*	92.5	(100.0)	97.9	98.8	98.8	98.6	98.7
Measles coverage	75.6	90.3	93.5	(90.4)	*	83.1	(86.7)	91.7	90.0	85.1	93.7	89.8
DPT coverage	75.9	84.6	85.9	(93.7)	*	80.7	(89.2)	89.2	84.8	84.3	82.6	84.7
Full basic coverage	63.2	77.4	75.1	(79.5)	*	69.4	(69.9)	76.7	79.8	69.9	72.2	73.9
No basic coverage	4.6	3.2	0.6	0.0	*	3.4	0.0	0.0	0.7	1.2	1.4	0.9
Hepatitis B coverage	1.5	0.5	1.0	0.0	*	1.5	0.0	0.0	1.5	2.3	7.2	3.2
Yellow fever coverage	na	na	na	na	na	na	na	na	na	na	na	na
B. Treatment of childhood diseases												
<i>Treatment of fever:</i>												
Medical treatment of fever	48.8	62.0	60.5	(61.4)	*	54.8	*	73.9	72.1	59.3	72.5	68.7
Treatment in a public facility	45.7	56.4	45.7	(43.3)	*	49.1	*	65.6	58.1	46.7	35.2	50.2
Treatment in a private facility	3.1	5.6	8.6	(18.0)	*	5.1	*	8.3	13.5	12.6	36.7	18.2
<i>Treatment of acute respiratory infection (ARI):</i>												
Medical treatment of ARI	44.7	59.2	57.9	(59.0)	*	51.1	(52.7)	65.0	64.7	59.2	74.4	65.4
Treatment in a public facility	42.1	54.4	41.4	(37.5)	*	45.6	(52.7)	59.1	50.8	44.4	33.7	46.1
Treatment in a private facility	2.6	4.5	10.8	(21.5)	*	4.8	0.0	6.0	12.5	12.6	40.4	18.1
<i>Treatment of diarrhea:</i>												
Use of oral rehydration therapy	60.8	69.4	(65.0)	*	*	65.0	*	75.5	68.1	67.9	76.2	71.1
Medical treatment of diarrhea	38.0	50.4	(50.2)	*	*	43.1	*	46.7	52.5	41.4	41.4	45.4
Treatment in a public facility	37.2	47.4	(36.6)	*	*	39.4	*	37.8	40.9	30.2	22.7	33.2
Treatment in a private facility	0.7	3.0	(11.0)	*	*	3.4	*	8.8	11.0	10.3	18.7	11.7
C. Antenatal and delivery care												
<i>Antenatal care visits:</i>												
To a medically trained person	68.2	84.9	92.9	96.9	*	78.5	82.2	85.8	89.9	94.3	96.6	92.7
To a doctor	33.9	47.9	56.4	58.7	*	42.8	39.0	54.3	55.0	54.4	41.4	50.2
To a nurse or trained midwife	34.3	37.0	36.5	38.2	*	35.8	43.2	31.4	34.9	39.9	55.2	42.5
Multiple visits to a medically trained person	57.3	75.9	83.8	88.4	*	68.7	67.3	77.6	82.6	89.8	92.3	86.9
<i>Antenatal care content:</i>												
Tetanus toxoid	76.4	84.5	85.6	85.2	*	80.8	84.1	82.5	86.4	87.0	83.3	85.1
Prophylactic antimalarial treatment	na	na	na	na	na	na	na	na	na	na	na	na
Iron supplementation	62.7	77.1	83.5	87.8	*	71.5	64.4	81.4	82.2	84.3	91.5	85.3
<i>Delivery attendance:</i>												
By a medically trained person	77.3	86.9	94.5	94.3	*	83.1	80.8	92.4	95.2	97.7	99.2	96.5
By a doctor	26.0	53.6	72.4	83.0	*	42.7	56.8	69.8	82.2	89.0	95.2	86.0
By a nurse or trained midwife	51.4	33.3	22.1	11.3	*	40.4	24.0	22.6	13.0	8.7	4.1	10.5
In a public facility	27.5	55.2	73.5	73.8	*	43.5	61.5	72.7	77.5	83.2	71.0	76.4
In a private facility	0.3	0.6	2.1	10.0	*	1.2	0.0	1.9	6.6	7.9	25.3	11.8
At home	71.6	43.8	23.6	15.8	*	54.7	38.5	25.0	15.6	8.4	3.3	11.5
D. Contraceptive services												
<i>Contraceptive prevalence:</i>												
Women	49.8	63.9	71.3	75.9	(79.6)	60.0	59.9	71.5	71.2	70.4	70.8	70.7
Men	na	na	na	na	na	na	na	na	na	na	na	na

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2001 - 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.)												
<i>Source of contraception - public sector:</i>												
Women	79.2	76.4	67.3	66.7	*	74.3	81.8	79.4	68.3	62.0	41.5	57.6
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Source of contraception - private sector:</i>												
Women	16.6	20.7	30.3	30.9	*	22.5	18.2	19.1	28.1	35.1	55.0	39.3
Men	na	na	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses												
<i>Treatment of genital discharge, ulcer, sore:</i>												
Women	2.3	4.9	7.4	(7.8)	*	4.4	*	0.0	7.7	12.6	8.4	9.0
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>												
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
<i>Voluntary counseling and testing for HIV/AIDS:</i>												
Women	0.9	1.7	3.7	5.0	(12.0)	2.1	1.0	4.6	7.0	8.8	12.1	9.3
Men	na	na	na	na	na	na	na	na	na	na	na	na

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2001 - 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												
<i>Disposal of children's stools:</i>												
Sanitary disposal	na	na	na	na	na	na	na	na	na	na	na	na
<i>Handwashing:</i>												
Wash hands prior to preparing food	98.0	98.5	98.6	98.3	(89.9)	98.2	98.8	98.1	97.7	97.3	94.4	96.3
Handwashing facilities in household	1.8	26.9	65.1	88.0	(95.3)	27.8	8.2	54.5	83.8	94.1	99.2	88.9
B. Bednet ownership and use												
<i>Bednet ownership:</i>												
Bednet ownership	28.5	36.1	49.5	60.5	(40.1)	36.9	43.7	51.1	52.5	48.1	38.5	45.7
Treated bednet ownership	na	na	na	na	na	na	na	na	na	na	na	na
<i>Bednet use:</i>												
By children	na	na	na	na	na	na	na	na	na	na	na	na
By pregnant women	27.3	35.7	(28.0)	*	*	32.1	*	(50.5)	39.1	35.6	12.9	31.8
C. Breastfeeding												
Exclusive breastfeeding	53.0	54.0	*	*	0.0	49.3	*	(52.0)	(25.8)	(31.7)	(14.5)	28.8
Timely complementary feeding	73.1	78.1	*	*	0.0	73.6	*	*	65.2	69.2	(52.0)	62.6
Bottle-feeding	38.5	38.0	65.4	(61.4)	*	42.6	*	51.5	68.6	68.0	75.1	67.9
D. Micronutrient consumption												
<i>Iodized salt:</i>												
Availability of iodized salt in household	na	na	na	na	na	na	na	na	na	na	na	na
<i>Vitamin A:</i>												
Children	51.6	65.7	68.8	71.2	*	58.9	65.2	71.2	71.4	71.9	72.1	71.6
Women	15.7	27.1	30.4	36.0	*	22.4	22.2	28.6	28.0	32.0	31.7	30.3
E. Tobacco and alcohol use												
<i>Tobacco:</i>												
Women	1.8	2.5	1.4	3.5	(3.4)	2.1	8.6	4.9	5.5	5.8	9.4	7.1
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Alcohol:</i>												
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												
<i>Non-regular sexual partnerships:</i>												
Women	0.8	0.7	1.7	0.3	(5.7)	1.0	1.2	1.7	0.9	1.2	1.2	1.2
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Condom usage with non-regular partner:</i>												
Women	*	*	*	*	*	(14.9)	*	*	*	(14.2)	(33.9)	21.8
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

Nicaragua

2001 - 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												
<i>School completion:</i>												
Women	19.5	39.7	60.1	76.3	(92.5)	38.5	25.9	48.7	67.1	81.7	91.7	79.3
Men	18.0	35.2	58.7	76.7	92.0	35.6	24.1	42.1	63.3	80.8	94.4	77.6
<i>School participation:</i>												
Girls	55.0	79.0	87.2	89.1	*	69.1	62.1	80.5	88.8	91.4	95.1	89.6
Boys	49.3	70.9	85.7	94.9	*	63.8	52.1	74.2	81.1	88.5	92.2	84.6
B. Exposure to mass media												
<i>Newspaper readership:</i>												
Women	10.3	23.7	35.7	48.5	(66.9)	22.8	17.3	29.5	44.5	52.7	68.3	54.8
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Radio listenership:</i>												
Women	72.4	80.8	87.2	92.5	(86.1)	79.5	68.1	78.1	84.6	88.1	90.4	87.3
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Television viewership:</i>												
Women	6.9	38.0	80.9	93.4	(97.8)	38.0	20.3	54.3	81.0	92.4	96.6	87.8
Men	na	na	na	na	na	na	na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS												
<i>Knowledge about sexual transmission of HIV/AIDS:</i>												
Women	20.8	27.9	33.2	38.7	(57.9)	27.1	21.1	38.3	37.4	45.8	49.6	44.6
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>												
Women	54.2	68.6	81.6	82.7	(90.5)	66.4	72.3	80.3	82.5	86.5	91.9	87.1
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Attitudes toward HIV/AIDS:</i>												
Women	20.3	24.0	24.8	26.9	(14.4)	23.0	19.0	23.4	25.7	22.6	20.3	22.4
Men	na	na	na	na	na	na	na	na	na	na	na	na
D. Status of women												
<i>Household decisionmaking:</i>												
Can seek own health care	32.0	35.4	34.5	31.2	(43.1)	33.6	45.0	45.5	43.5	44.1	43.3	43.8
Can seek children's health care	94.5	98.6	98.5	99.6	*	96.6	100.0	98.0	99.6	99.5	99.0	99.2
Can make daily household purchases	na	na	na	na	na	na	na	na	na	na	na	na
Can make large household purchases	41.3	46.3	46.0	52.9	(51.3)	44.8	49.7	51.6	51.5	53.5	53.1	52.7
Can make meal-related decisions	52.1	51.3	53.2	48.0	(55.8)	51.8	58.2	59.4	53.6	53.8	46.8	51.5
<i>Freedom of movement:</i>												
Can travel to visit family, relatives	16.2	19.2	19.6	17.4	(22.8)	18.0	28.2	25.3	28.0	29.8	28.6	28.6
<i>Other decisionmaking, attitudes:</i>												
Can decide how to spend own money	76.2	83.2	86.6	83.4	*	82.3	90.9	92.0	90.4	92.3	90.9	91.3
Can decide whether to have sex	92.1	94.8	93.6	96.1	(100.0)	93.6	95.8	97.2	96.9	97.8	98.1	97.6
Justifies domestic violence	22.1	17.3	13.5	14.2	(2.5)	18.1	21.3	17.8	12.6	9.2	5.4	9.3
E. Orphanhood												
Paternal orphan prevalence	3.5	3.2	2.7	2.3	1.8	3.2	5.8	4.4	4.0	4.1	2.5	3.7
Maternal orphan prevalence	1.0	1.0	0.9	0.7	3.0	1.0	2.8	0.9	1.0	1.9	0.8	1.3
Double orphan prevalence	0.1	0.3	0.2	0.0	1.8	0.2	0.7	0.2	0.0	0.6	0.3	0.3

PART II. BASIC TABLES, 1997 / 98

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.

Nicaragua
1997 / 98 - 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	50.7	53.7	45.7	40.2	25.8	45.2	1.97	24.90	-0.0943	0.0010
Under-five mortality rate	68.8	66.6	52.5	48.5	29.7	56.0	2.32	39.10	-0.1241	0.0010
Prevalence of fever	26.1	23.1	24.2	22.4	16.6	23.2	1.57	9.50	-0.0728	0.0120
Prevalence of diarrhea	16.1	14.0	14.2	14.4	8.7	14.0	1.85	7.40	-0.0988	0.0161
Prevalence of acute respiratory infection (ARI)	29.1	27.4	24.6	27.1	20.8	26.4	1.40	8.30	-0.0609	0.0111
B. Fertility										
Total fertility rate	6.6	4.6	3.5	2.7	1.9	3.6	3.47	4.70	-0.2348	0.0006
Adolescent fertility rate	213.0	176.0	147.0	90.0	58.0	130.0	3.67	155.00	-0.2419	0.0014
C. Nutritional status (%)										
<i>Children:</i>										
Moderate stunting	22.6	19.2	15.0	8.6	5.6	15.7	4.04	17.00	-0.2135	0.0159
Severe stunting	15.5	9.9	7.7	4.4	2.7	9.2	5.74	12.80	-0.2810	0.0229
Moderate underweight	15.0	12.1	9.9	5.6	3.4	10.3	4.41	11.60	-0.2274	0.0199
Severe underweight	3.4	2.1	1.5	0.9	0.5	1.9	6.80	2.90	-0.2872	0.0920
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
<i>Women:</i>										
Malnutrition	4.1	4.2	4.0	5.1	4.2	4.4	0.98	0.10	0.0283	0.0248
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 (%)										
<i>Prevalence of circumcision:</i>										
Girls	na	na	na	na	na	na	na	na	na	na
Women	na	na	na	na	na	na	na	na	na	na
<i>Prevalence of occlusion:</i>										
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										
<i>Prevalence of genital discharge:</i>										
Women	12.6	11.3	11.4	9.4	9.1	10.7	1.38	3.50	-0.0729	0.0166
Men	2.1	2.2	3.1	1.5	1.0	2.0	2.10	1.10	-0.1841	0.0764
<i>Prevalence of genital ulcer:</i>										
Women	2.1	2.0	1.5	1.7	1.2	1.7	1.75	0.90	-0.1199	0.0424
Men	1.6	0.6	1.1	0.3	0.9	0.9	1.78	0.70	-0.0546	0.1250

Nicaragua

1997 / 98 - 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	91.0	96.1	95.8	99.7	94.7	95.0	0.96	3.70	0.0181	0.0037
Measles coverage	77.6	86.9	87.8	91.7	90.4	85.7	0.86	12.80	0.0437	0.0063
DPT coverage	69.2	81.7	85.1	89.5	77.7	79.7	0.89	8.50	0.0545	0.0082
Full basic coverage	61.0	74.6	75.3	85.7	73.1	72.6	0.83	12.10	0.0736	0.0094
No basic coverage	5.5	1.7	0.3	0.0	2.8	2.3	1.96	2.70	-0.4895	0.1239
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										
<i>Treatment of fever:</i>										
Medical treatment of fever	37.4	48.1	50.6	52.3	54.2	46.6	0.69	16.80	0.0885	0.0154
Treatment in a public facility	34.5	44.8	40.4	36.3	23.9	37.3	1.44	10.60	0.0217	0.0188
Treatment in a private facility	2.9	3.3	10.2	15.8	25.6	8.8	0.11	22.70	0.3859	0.0495
<i>Treatment of acute respiratory infection (ARI):</i>										
Medical treatment of ARI	45.2	56.2	62.6	67.1	73.9	57.8	0.61	28.70	0.0925	0.0113
Treatment in a public facility	42.1	51.0	54.6	49.8	37.7	47.4	1.12	4.40	0.0295	0.0146
Treatment in a private facility	3.1	5.2	8.0	16.9	32.5	10.0	0.10	29.40	0.4038	0.0423
<i>Treatment of diarrhea:</i>										
Use of oral rehydration therapy	68.8	71.7	74.1	69.5	71.1	70.8	0.97	2.30	0.0215	0.0121
Medical treatment of diarrhea	39.8	46.3	45.9	42.9	50.7	43.9	0.79	10.90	0.0512	0.0209
Treatment in a public facility	38.5	41.4	38.1	27.4	22.1	35.8	1.74	16.40	-0.0523	0.0247
Treatment in a private facility	0.9	4.1	7.7	15.5	28.5	7.8	0.03	27.60	0.4939	0.0768
C. Antenatal and delivery care										
<i>Antenatal care visits:</i>										
To a medically trained person	70.2	83.7	88.8	91.7	96.1	84.9	0.73	25.90	0.0635	0.0033
To a doctor	29.9	41.4	46.4	45.6	40.3	40.2	0.74	10.40	0.0711	0.0093
To a nurse or trained midwife	40.3	42.3	42.5	46.1	55.8	44.6	0.72	15.50	0.0585	0.0086
Multiple visits to a medically trained person	55.3	71.7	78.8	84.5	91.3	74.5	0.61	36.00	0.1004	0.0042
<i>Antenatal care content:</i>										
Tetanus toxoid	78.9	86.5	89.1	89.4	88.0	86.0	0.90	9.10	0.0240	0.0031
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
<i>Delivery attendance:</i>										
By a medically trained person	32.9	58.8	79.8	86.0	92.3	64.6	0.36	59.40	0.2094	0.0040
By a doctor	20.8	36.5	46.7	47.3	42.3	36.7	0.49	21.50	0.1733	0.0084
By a nurse or trained midwife	12.1	22.3	33.1	38.7	49.9	27.9	0.24	37.80	0.2571	0.0100
In a public facility	32.2	57.7	75.4	80.7	78.2	60.6	0.41	46.00	0.1947	0.0048
In a private facility	0.3	0.4	3.3	4.4	11.6	3.1	0.03	11.30	0.4694	0.0417
At home	66.0	39.9	20.2	13.0	8.6	34.8	7.67	57.40	-0.3797	0.0076
D. Contraceptive services										
<i>Contraceptive prevalence:</i>										
Women	40.2	55.5	60.3	65.4	64.2	57.4	0.63	24.00	0.0953	0.0056
Men	45.2	59.5	63.1	67.8	68.5	61.1	0.66	23.30	0.0851	0.0109

Nicaragua

1997 / 98 - 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.)										
<i>Source of contraception - public sector:</i>										
Women	74.4	69.7	62.5	59.5	49.4	61.6	1.51	25.00	-0.0718	0.0065
Men	na	na	na	na	na	na	na	na	na	na
<i>Source of contraception - private sector:</i>										
Women	23.5	28.4	35.3	37.2	47.4	35.8	0.50	23.90	0.1206	0.0112
Men	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses										
<i>Treatment of genital discharge, ulcer, sore:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
<i>Voluntary counseling and testing for HIV/AIDS:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na

Nicaragua

1997 / 98 - 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										
<i>Disposal of children's stools:</i>										
Sanitary disposal	na	na	na	na	na	na	na	na	na	na
<i>Handwashing:</i>										
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										
<i>Bednet ownership:</i>										
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
<i>Bednet use:</i>										
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	40.5	30.5	24.2	27.3	19.3	29.6	2.10	21.20	-0.1404	0.0376
Timely complementary feeding	69.6	57.7	58.7	49.5	60.3	60.0	1.15	9.30	-0.0565	0.0211
Bottle-feeding	62.7	74.7	72.3	80.8	84.8	73.4	0.74	22.10	0.0593	0.0087
D. Micronutrient consumption										
<i>Iodized salt:</i>										
Availability of iodized salt in household	na	na	na	na	na	na	na	na	na	na
<i>Vitamin A:</i>										
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										
<i>Tobacco:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
<i>Alcohol:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	72.2	69.7	66.0	64.7	61.4	66.4	1.18	10.80	-0.0329	0.0076
F. Sexual practices										
<i>Non-regular sexual partnerships:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
<i>Condom usage with non-regular partner:</i>										
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	27.9	30.5	31.8	29.1	23.9	28.6	1.17	4.00	-0.0849	0.0105
Experienced violence in past year	12.0	12.8	14.3	13.9	9.4	12.5	1.28	2.60	-0.0908	0.0159

Nicaragua

1997 / 98 - 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										
<i>School completion:</i>										
Women	20.2	41.2	61.8	78.6	88.7	61.9	0.23	68.50	0.2342	0.0029
Men	19.8	38.7	61.6	80.0	90.3	60.1	0.22	70.50	0.2536	0.0031
<i>School participation:</i>										
Girls	52.8	71.0	81.2	86.1	89.4	73.8	0.59	36.60	0.1120	0.0050
Boys	47.4	67.1	74.9	80.3	89.4	69.5	0.53	42.00	0.1253	0.0054
B. Exposure to mass media										
<i>Newspaper readership:</i>										
Women	20.4	36.7	50.2	63.2	75.2	52.1	0.27	54.80	0.2135	0.0041
Men	24.5	40.3	59.6	72.6	79.3	57.4	0.31	54.80	0.1973	0.0084
<i>Radio listenership:</i>										
Women	53.9	70.9	80.6	83.8	83.9	76.2	0.64	30.00	0.0741	0.0031
Men	76.1	84.7	88.5	89.5	93.2	87.0	0.82	17.10	0.0382	0.0046
<i>Television viewership:</i>										
Women	10.2	39.9	80.1	91.0	96.4	68.4	0.11	86.20	0.2718	0.0025
Men	22.3	49.9	87.9	95.3	97.4	73.6	0.23	75.10	0.2236	0.0054
C. Knowledge and attitudes about HIV/AIDS										
<i>Knowledge about sexual transmission of HIV/AIDS:</i>										
Women	78.8	89.2	95.0	97.5	97.8	92.7	0.81	19.00	0.0403	0.0016
Men	96.1	98.1	99.9	99.6	100.0	98.9	0.96	3.90	0.0073	0.0015
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>										
Women	na	na	na	na	na	na	na	na	na	na
Men	na	na	na	na	na	na	na	na	na	na
<i>Attitudes toward HIV/AIDS:</i>										
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										
<i>Household decisionmaking:</i>										
Can seek own health care	30.8	37.0	40.4	38.3	38.1	37.2	0.81	7.30	0.0311	0.0066
Can seek children's health care	20.0	27.7	32.9	30.7	30.0	27.8	0.67	10.00	0.0565	0.0136
Can make daily household purchases	na	na	na	na	na	na	na	na	na	na
Can make large household purchases	29.8	33.4	35.7	34.4	34.1	33.7	0.87	4.30	0.0231	0.0071
Can make meal-related decisions	32.3	29.0	30.6	24.8	26.2	28.2	1.23	6.10	-0.0593	0.0081
<i>Freedom of movement:</i>										
Can travel to visit family, relatives	na	na	na	na	na	na	na	na	na	na
<i>Other decisionmaking, attitudes:</i>										
Can decide how to spend own money	64.5	78.2	80.1	75.7	73.5	75.3	0.88	9.00	0.0016	0.0048
Can decide whether to have sex	67.0	65.9	62.8	57.8	53.7	60.7	1.25	13.30	-0.0530	0.0042
Justifies domestic violence	31.4	27.2	20.8	16.5	12.0	20.5	2.62	19.40	-0.2233	0.0095
E. Orphanhood										
Paternal orphan prevalence	3.7	3.7	3.4	3.6	2.1	3.4	1.76	1.60	-0.0682	0.0194
Maternal orphan prevalence	1.2	1.2	1.1	0.8	0.7	1.0	1.71	0.50	-0.1092	0.0346
Double orphan prevalence	0.2	0.1	0.1	0.2	0.1	0.2	2.00	0.10	-0.1743	0.0979

Nicaragua
1997 / 98 - 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	41.7	56.4	37.5	35.8	21.2	40.2	59.8	51.1	53.9	44.8	30.5	50.2
Under-five mortality rate	61.8	67.1	42.4	44.9	22.7	50.5	75.8	66.1	62.8	52.2	37.0	61.6
Prevalence of fever	26.8	22.2	23.3	22.3	15.2	22.8	25.3	24.0	25.1	22.5	18.1	23.6
Prevalence of diarrhea	16.7	13.2	13.3	14.3	7.6	13.7	15.5	14.7	15.2	14.5	9.8	14.3
Prevalence of acute respiratory infection (ARI)	28.7	27.1	25.5	25.3	18.7	25.8	29.5	27.6	23.6	28.9	23.0	27.0
B. Nutritional status												
<i>Children:</i>												
Moderate stunting	21.4	19.1	15.2	6.6	5.2	15.0	23.8	19.2	14.8	10.7	6.0	16.5
Severe stunting	14.6	8.6	6.5	5.0	2.1	8.4	16.6	11.2	9.1	3.7	3.3	10.0
Moderate underweight	14.1	11.7	10.1	4.4	2.8	9.6	16.0	12.5	9.8	7.0	3.9	10.9
Severe underweight	3.8	1.2	0.8	1.1	0.0	1.7	3.0	2.9	2.2	0.7	1.1	2.2
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												
<i>Prevalence of genital discharge:</i>												
Women	12.6	11.3	11.4	9.4	9.1	10.7						
Men							2.1	2.2	3.1	1.5	1.0	2.0
<i>Prevalence of genital ulcer:</i>												
Women	2.1	2.0	1.5	1.7	1.2	1.7						
Men							1.6	0.6	1.1	0.3	0.9	0.9

Nicaragua

1997 / 98 - 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	90.5	94.8	94.8	99.4	95.5	94.5	91.5	97.1	96.9	100.0	93.8	95.6
Measles coverage	80.8	84.8	86.0	91.9	90.1	85.9	74.4	88.5	90.0	91.4	90.8	85.5
DPT coverage	71.1	79.8	82.2	88.3	74.1	78.6	67.2	83.1	88.5	90.8	82.1	80.7
Full basic coverage	62.4	73.4	72.9	84.5	69.6	71.6	59.5	75.6	78.1	86.9	77.4	73.6
No basic coverage	4.9	3.3	0.5	0.0	2.3	2.4	6.1	0.5	0.0	0.0	3.5	2.3
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 illnesses												
<i>Treatment of fever:</i>												
Medical treatment of fever	37.6	50.2	51.7	51.1	51.3	46.7	37.1	46.2	49.5	53.5	56.7	46.4
Treatment in a public facility	34.3	45.6	41.9	35.3	26.9	37.8	34.7	44.1	38.9	37.2	21.3	36.8
Treatment in a private facility	3.3	4.6	9.9	15.3	24.4	8.8	2.5	2.1	10.6	16.3	26.6	8.7
<i>Treatment of acute respiratory infection (ARI):</i>												
Medical treatment of ARI	49.7	56.7	64.4	64.9	75.5	59.3	40.8	55.7	60.5	69.2	72.6	56.3
Treatment in a public facility	46.2	50.6	56.2	48.1	44.0	49.3	38.0	51.4	52.7	51.3	32.3	45.4
Treatment in a private facility	3.5	6.1	8.2	16.3	31.5	9.9	2.8	4.3	7.8	17.4	33.4	10.0
<i>Treatment of diarrhea:</i>												
Use of oral rehydration therapy	68.5	64.5	72.1	71.9	(69.0)	69.1	69.0	77.8	76.0	67.1	(72.8)	72.5
Medical treatment of diarrhea	41.1	44.2	52.1	39.2	(56.9)	44.8	38.3	48.1	39.9	46.6	(45.6)	43.0
Treatment in a public facility	40.9	40.1	42.4	25.4	(29.3)	37.4	35.8	42.4	34.0	29.5	(16.3)	34.2
Treatment in a private facility	0.0	3.1	9.7	13.8	(27.6)	7.1	1.9	4.9	5.9	17.1	(29.3)	8.5
C. Contraceptive services												
<i>Contraceptive prevalence:</i>												
Women	40.2	55.5	60.3	65.4	64.2	57.4						
Men							45.2	59.5	63.1	67.8	68.5	61.1
<i>Source of contraception - public sector:</i>												
Women	74.4	69.7	62.5	59.5	49.4	61.6						
Men							na	na	na	na	na	na
<i>Source of contraception - private sector:</i>												
Women	23.5	28.4	35.3	37.2	47.4	35.8						
Men							na	na	na	na	na	na
D. Treatment of adult illnesses												
<i>Treatment of genital discharge, ulcer, sore:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
<i>Voluntary counseling and testing for HIV/AIDS:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na

Nicaragua

1997 / 98 - 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												
<i>Disposal of children's stools:</i>												
Sanitary disposal	na	na	na	na	na	na						
<i>Handwashing:</i>												
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												
<i>Bednet use:</i>												
By children	na	na	na	na	na	na						
C. Breastfeeding												
Exclusive breastfeeding	40.2	34.4	(27.0)	(33.2)	(22.2)	32.0	40.8	27.2	(21.6)	(21.9)	(15.5)	27.2
Timely complementary feeding	60.0	65.0	(62.2)	(54.8)	(58.6)	60.0	78.7	51.8	(54.9)	(42.3)	(62.7)	60.0
Bottle-feeding	59.5	73.4	66.3	82.0	88.4	72.0	65.8	75.9	78.5	79.4	80.7	74.7
D. Micronutrient consumption												
<i>Vitamin A:</i>												
Children	na	na	na	na	na	na	na	na	na	na	na	na
E. Tobacco and alcohol use												
<i>Tobacco:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
<i>Alcohol:</i>												
Women	na	na	na	na	na	na						
Men							72.2	69.7	66.0	64.7	61.4	66.4
F. Sexual practices												
<i>Non-regular sexual partnerships:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na
<i>Condom usage with non-regular partner:</i>												
Women	na	na	na	na	na	na						
Men							na	na	na	na	na	na

Nicaragua

1997 / 98 - 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												
<i>School completion:</i>												
Women	20.2	41.2	61.8	78.6	88.7	61.9	19.8	38.7	61.6	80.0	90.3	60.1
Men												
<i>School participation:</i>												
Girls	52.8	71.0	81.2	86.1	89.4	73.8	47.4	67.1	74.9	80.3	89.4	69.5
Boys												
B. Exposure to mass media												
<i>Newspaper readership:</i>												
Women	20.4	36.7	50.2	63.2	75.2	52.1	24.5	40.3	59.6	72.6	79.3	57.4
Men												
<i>Radio listenership:</i>												
Women	53.9	70.9	80.6	83.8	83.9	76.2	76.1	84.7	88.5	89.5	93.2	87.0
Men												
<i>Television viewership:</i>												
Women	10.2	39.9	80.1	91.0	96.4	68.4	22.3	49.9	87.9	95.3	97.4	73.6
Men												
C. Knowledge and attitudes about HIV/AIDS												
<i>Knowledge about sexual transmission of HIV/AIDS:</i>												
Women	78.8	89.2	95.0	97.5	97.8	92.7	96.1	98.1	99.9	99.6	100.0	98.9
Men												
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men												
<i>Attitudes toward HIV/AIDS:</i>												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men												
D. Orphanhood												
Paternal orphan prevalence	3.0	3.9	2.7	3.8	2.3	3.2	4.3	3.4	4.3	3.3	1.9	3.6
Maternal orphan prevalence	1.0	1.2	1.0	0.8	0.8	1.0	1.5	1.2	1.1	0.7	0.5	1.1
Double orphan prevalence	0.4	0.2	0.0	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.0	0.1

Nicaragua
1997 / 98 - 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	50.9	54.1	48.6	(41.2)	*	51.1	49.4	53.2	44.4	40.1	23.6	40.0
Under-five mortality rate	69.0	67.2	50.8	(43.0)	*	64.3	(66.9)	65.7	53.3	49.3	27.8	48.8
Prevalence of fever	25.7	21.3	21.8	26.6	30.0	24.1	29.5	26.0	25.1	21.7	15.5	22.3
Prevalence of diarrhea	16.2	12.2	11.4	12.1	11.1	14.2	14.7	16.8	15.4	14.8	8.5	13.8
Prevalence of acute respiratory infection	29.2	27.6	20.8	29.1	23.8	27.6	27.7	27.0	26.1	26.8	20.5	25.2
B. Fertility												
Total fertility rate	6.6	4.5	3.3	*	*	5.0	*	4.7	3.6	2.7	1.9	2.9
Adolescent fertility rate	213.0	164.0	113.0	*	*	167.0	*	202.0	161.0	89.0	59.0	108.9
C. Nutritional status												
<i>Children:</i>												
Moderate stunting	22.4	19.5	16.2	9.1	4.4	19.9	24.0	18.7	14.5	8.5	5.7	12.0
Severe stunting	15.1	8.7	7.1	4.1	8.8	11.6	19.9	11.9	8.0	4.5	2.3	6.9
Moderate underweight	14.7	11.2	9.1	5.3	14.0	12.5	17.7	13.7	10.3	5.7	2.6	8.2
Severe underweight	3.1	1.1	0.6	3.8	0.0	2.2	6.6	3.7	1.8	0.5	0.6	1.7
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
<i>Women:</i>												
Malnutrition	4.1	3.7	4.4	3.1	4.1	4.0	3.9	5.0	3.8	5.4	4.2	4.6
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
D. Female circumcision												
<i>Prevalence of circumcision:</i>												
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
<i>Prevalence of occlusion:</i>												
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												
<i>Prevalence of genital discharge:</i>												
Women	12.5	11.0	12.3	9.9	7.7	11.7	14.3	11.8	11.0	9.3	9.2	10.1
Men	2.3	2.4	3.4	0.0	0.0	2.3	0.0	1.7	3.0	1.8	1.0	1.7
<i>Prevalence of genital ulcer:</i>												
Women	2.1	1.6	1.4	1.6	0.3	1.7	2.0	2.7	1.6	1.7	1.2	1.6
Men	1.5	0.7	1.5	0.0	0.0	1.1	(2.3)	0.4	0.9	0.3	1.0	0.8

Nicaragua

1997 / 98 - 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	90.3	96.5	98.9	(100.0)	*	93.2	(97.5)	95.4	94.5	99.6	95.8	96.6
Measles coverage	76.4	90.5	91.3	(91.2)	*	82.6	(90.2)	81.3	86.5	91.7	91.3	88.5
DPT coverage	67.3	82.8	90.8	(91.3)	*	75.2	(87.4)	79.8	82.8	89.3	78.6	83.6
Full basic coverage	58.8	77.8	85.8	(89.3)	*	68.2	(82.1)	69.6	71.2	85.1	75.1	76.6
No basic coverage	5.8	0.8	0.0	0.0	*	3.8	(2.5)	3.1	0.4	0.0	1.7	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												
<i>Treatment of fever:</i>												
Medical treatment of fever	36.8	46.5	49.0	(44.3)	*	41.4	42.0	50.1	51.2	53.7	54.1	51.5
Treatment in a public facility	34.0	43.8	38.9	(33.8)	*	36.6	38.2	46.0	40.9	36.7	24.7	37.9
Treatment in a private facility	2.8	2.7	10.1	(10.5)	*	4.6	3.8	4.0	10.3	16.7	25.6	12.9
<i>Treatment of acute respiratory infection (ARI):</i>												
Medical treatment of ARI	43.0	54.5	66.3	(70.2)	*	50.5	67.4	58.9	61.5	66.7	73.0	65.1
Treatment in a public facility	39.8	50.3	57.6	(54.2)	*	44.8	64.8	52.1	53.6	49.1	39.2	49.9
Treatment in a private facility	3.2	4.2	8.8	(16.0)	*	5.4	2.6	6.7	7.8	17.0	31.0	14.5
<i>Treatment of diarrhea:</i>												
Use of oral rehydration therapy	67.2	69.0	(78.7)	*	*	69.2	(85.0)	74.8	72.7	70.1	68.0	72.3
Medical treatment of diarrhea	38.1	44.3	(59.7)	*	*	41.6	(57.4)	48.6	41.7	44.2	51.2	46.0
Treatment in a public facility	36.7	40.0	(48.8)	*	*	37.9	(57.4)	42.9	34.9	27.6	23.2	33.8
Treatment in a private facility	1.0	4.3	(10.9)	*	*	3.5	0.0	3.9	6.8	16.6	28.0	11.8
C. Antenatal and delivery care												
<i>Antenatal care visits:</i>												
To a medically trained person	68.4	82.2	87.7	90.2	93.8	76.8	87.7	86.1	89.3	92.0	96.3	91.3
To a doctor	28.8	39.8	46.5	47.5	45.8	35.8	40.0	43.9	46.3	45.3	39.8	43.7
To a nurse or trained midwife	39.5	42.4	41.2	42.6	48.0	41.0	47.7	42.2	43.0	46.6	56.5	47.6
Multiple visits to a medically trained person	53.9	71.4	77.0	84.4	86.6	64.6	68.0	72.3	79.5	84.6	91.7	82.5
<i>Antenatal care content:</i>												
Tetanus toxoid	78.4	85.7	89.8	90.2	88.9	83.0	83.6	87.9	88.8	89.3	88.0	88.4
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
<i>Delivery attendance:</i>												
By a medically trained person	30.4	50.5	69.7	69.7	80.2	43.6	56.9	71.8	83.9	88.3	93.2	83.9
By a doctor	19.5	31.3	42.9	41.9	35.4	27.0	33.2	44.6	48.3	48.1	42.9	45.6
By a nurse or trained midwife	10.9	19.2	26.9	27.8	44.8	16.6	23.7	27.3	35.6	40.2	50.3	38.2
In a public facility	29.8	49.1	64.5	66.4	59.6	41.7	54.2	71.0	79.8	82.7	79.7	77.8
In a private facility	0.2	0.3	3.0	1.9	19.1	1.0	1.4	0.6	3.4	4.8	11.0	4.9
At home	68.5	48.6	31.3	30.6	21.3	55.8	42.2	26.1	15.7	10.5	7.6	15.5
D. Contraceptive services												
<i>Contraceptive prevalence:</i>												
Women	39.6	52.8	62.4	64.2	55.3	49.3	46.5	60.4	59.3	65.5	64.8	62.8
Men	45.1	56.6	72.2	(69.2)	*	55.2	(46.5)	66.6	59.2	67.6	68.5	65.2

Nicaragua

1997 / 98 - 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.)												
<i>Source of contraception - public sector:</i>												
Women	73.4	68.0	62.6	58.8	49.3	67.4	83.5	72.5	62.5	59.6	49.5	58.6
Men	na	na	na	na	na	na	na	na	na	na	na	na
<i>Source of contraception - private sector:</i>												
Women	24.3	30.2	34.6	36.5	49.7	30.2	15.5	25.6	35.7	37.3	47.2	38.7
Men	na	na	na	na	na	na	na	na	na	na	na	na
E. Treatment of adult illnesses												
<i>Treatment of genital discharge, ulcer, sore:</i>												
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
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>												
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
<i>Voluntary counseling and testing for HIV/AIDS:</i>												
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

Nicaragua

1997 / 98 - 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												
<i>Disposal of children's stools:</i>												
Sanitary disposal	na	na	na	na	na	na	na	na	na	na	na	na
<i>Handwashing:</i>												
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												
<i>Bednet ownership:</i>												
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
<i>Bednet use:</i>												
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	41.6	32.8	*	*	*	37.8	*	(27.2)	20.7	28.1	19.4	23.4
Timely complementary feeding	70.6	65.7	(71.6)	*	*	67.4	*	(46.8)	52.0	51.2	61.1	53.4
Bottle-feeding	61.7	72.2	76.4	(86.2)	*	67.7	(71.9)	78.2	70.8	80.1	85.5	78.2
D. Micronutrient consumption												
<i>Iodized salt:</i>												
Availability of iodized salt in household	na	na	na	na	na	na	na	na	na	na	na	na
<i>Vitamin A:</i>												
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												
<i>Tobacco:</i>												
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
<i>Alcohol:</i>												
Women	na	na	na	na	na	na	na	na	na	na	na	na
Men	72.2	71.4	60.4	75.7	(70.9)	70.1	71.6	65.6	68.7	63.2	60.9	64.0
F. Sexual practices												
<i>Non-regular sexual partnerships:</i>												
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
<i>Condom usage with non-regular partner:</i>												
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	26.3	26.5	26.2	22.5	29.4	26.2	42.4	37.3	34.2	30.1	23.5	30.0
Experienced violence in past year	11.1	10.8	10.5	7.7	12.2	10.7	20.5	16.2	16.0	14.8	9.3	13.6

Nicaragua

1997 / 98 - 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												
<i>School completion:</i>												
Women	19.3	36.7	55.1	69.2	81.2	36.6	28.0	48.8	64.7	79.8	89.0	75.6
Men	19.4	32.8	54.9	68.3	86.9	34.9	24.1	50.3	64.6	81.7	90.5	76.0
<i>School participation:</i>												
Girls	51.9	68.7	83.5	89.5	(84.8)	63.8	62.1	74.2	80.1	85.5	89.7	82.3
Boys	46.9	66.1	75.4	86.6	(93.6)	59.9	52.1	68.6	74.7	79.2	89.1	77.7
B. Exposure to mass media												
<i>Newspaper readership:</i>												
Women	20.0	34.3	45.9	57.3	72.1	33.4	23.9	40.7	52.1	64.0	75.4	62.2
Men	23.4	37.2	53.3	63.7	(70.5)	37.2	35.8	47.7	62.5	73.8	79.8	70.1
<i>Radio listenership:</i>												
Women	55.0	73.4	81.1	85.9	76.0	68.1	44.3	66.8	80.4	83.6	84.3	80.5
Men	77.6	84.3	88.2	90.5	(93.9)	83.0	61.4	85.4	88.6	89.3	93.1	89.5
<i>Television viewership:</i>												
Women	8.4	34.4	78.9	92.1	95.6	37.8	25.9	49.0	80.6	90.8	96.5	84.9
Men	19.8	44.2	82.9	80.7	(97.7)	45.1	47.6	63.5	90.2	97.2	97.4	91.4
C. Knowledge and attitudes about HIV/AIDS												
<i>Knowledge about sexual transmission of HIV/AIDS:</i>												
Women	78.4	87.1	92.5	97.4	93.6	85.4	82.5	92.7	96.1	97.5	98.1	96.6
Men	96.5	97.3	100.0	100.0	(100.0)	97.7	92.8	100.0	99.9	99.6	100.0	99.7
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>												
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
<i>Attitudes toward HIV/AIDS:</i>												
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												
<i>Household decisionmaking:</i>												
Can seek own health care	31.1	36.6	40.5	41.3	40.0	35.5	28.0	37.6	40.4	37.9	38.0	38.2
Can seek children's health care	19.5	23.6	30.8	32.3	(30.8)	23.2	25.3	34.7	33.9	30.5	30.0	31.7
Can make daily household purchases	na	na	na	na	na	na	na	na	na	na	na	na
Can make large household purchases	29.9	33.6	35.9	39.6	40.8	33.2	29.5	33.0	35.5	33.8	33.7	33.9
Can make meal-related decisions	33.4	30.3	32.6	28.3	32.2	31.9	22.0	26.8	29.7	24.3	25.9	26.2
<i>Freedom of movement:</i>												
Can travel to visit family, relatives	na	na	na	na	na	na	na	na	na	na	na	na
<i>Other decisionmaking, attitudes:</i>												
Can decide how to spend own money	61.7	74.4	71.0	69.1	72.6	69.0	78.6	82.1	82.9	76.3	73.5	77.2
Can decide whether to have sex	67.4	66.2	61.8	63.0	58.4	65.4	63.5	65.5	63.2	57.1	53.5	58.1
Justifies domestic violence	na	na	na	na	na	na	na	na	na	na	na	na
E. Orphanhood												
Paternal orphan prevalence	3.5	3.2	2.7	3.6	0.0	3.2	5.8	4.5	3.8	3.6	2.3	3.5
Maternal orphan prevalence	1.3	1.2	0.9	1.1	0.9	1.2	0.5	1.0	1.1	0.7	0.7	0.8
Double orphan prevalence	0.2	0.1	0.1	0.2	0.0	0.2	0.3	0.1	0.1	0.1	0.1	0.1

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.

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).

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 Prevalence¹¹

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 children¹³ 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

Tobacco¹⁴

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.

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/AIDS¹⁵

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 standards¹⁷ 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		
		<i>Without parentheses</i>	<i>With parentheses</i>	<i>Replaced by asterisk</i>
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, 2001

- A. SAMPLE SIZES**
- B. STANDARD ERRORS**
- C. ASSET DISTRIBUTION AND WEIGHTS**

Nicaragua
2001 - SAMPLE SIZES

TOTAL SAMPLE

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Number of household members						
All	11,974	11,983	11,995	11,964	11,981	59,898
Urban	583	3,262	7,920	10,452	11,775	33,992
Rural	11,391	8,721	4,075	1,513	206	25,906
Female	5,772	5,851	6,077	6,163	6,530	30,393
Male	6,203	6,132	5,918	5,801	5,451	29,505

Part I: HNP STATUS

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Mortality rates						
All	3,775	3,113	2,645	2,417	2,030	13,980
Urban	156	860	1,808	2,142	1,993	6,960
Rural	3,619	2,253	837	275	37	7,021
Female	1,845	1,504	1,274	1,182	990	6,794
Male	1,931	1,609	1,370	1,236	1,040	7,187
Prevalence of fever, diarrhea, acute respiratory infection						
All	1,713	1,352	1,191	1,087	953	6,295
Urban	61	395	821	945	937	3,159
Rural	1,652	957	370	142	16	3,137
Female	838	680	579	509	468	3,074
Male	875	672	612	578	485	3,222
Total fertility rate						
All	5,573	6,252	7,164	8,211	9,059	36,260
Urban	268	1,757	4,780	7,220	8,925	22,950
Rural	5,305	4,495	2,384	991	134	13,309
Age-specific fertility rate 15-19						
All	1,338	1,582	1,943	2,056	2,061	8,980
Urban	52	426	1,308	1,781	2,028	5,595
Rural	1,286	1,156	635	276	32	3,385
Children's nutritional status						
All	1,456	1,215	1,067	979	800	5,516
Urban	50	360	728	846	791	2,775
Rural	1,406	854	339	133	9	2,741
Female	713	614	521	459	405	2,712
Male	744	601	546	519	394	2,804
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

Nicaragua
2001 - SAMPLE SIZES

Part I: HNP STATUS (Cont.)

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Women's nutritional status						
All	1,695	2,005	2,370	2,736	3,030	11,838
Urban	87	561	1,574	2,404	2,985	7,611
Rural	1,609	1,445	797	332	45	4,228
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	1,694	1,864	2,021	2,212	2,378	10,169
Urban Female	84	534	1,371	1,947	2,345	6,281
Rural Female	1,610	1,330	650	264	33	3,887
Male	na	na	na	na	na	na
Urban Male	na	na	na	na	na	na
Rural Male	na	na	na	na	na	na

Nicaragua

2001 - SAMPLE SIZES

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

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Immunization coverage						
All	391	295	257	225	202	1,370
Urban	19	93	159	191	198	660
Rural	371	202	98	34	3	708
Female	207	153	114	100	95	669
Male	184	142	144	125	107	702
Treatment of fever						
All	448	378	296	243	201	1,567
Urban	14	121	209	217	197	758
Rural	435	257	87	27	4	810
Female	226	175	145	151	108	805
Male	222	204	151	93	92	762
Treatment of acute respiratory infection						
All	591	465	371	292	223	1,942
Urban	18	145	258	257	222	900
Rural	573	320	114	35	1	1,043
Female	278	238	188	123	102	929
Male	313	227	184	168	121	1,013
Treatment of diarrhea						
All	265	190	161	128	78	822
Urban	10	59	115	111	76	371
Rural	255	131	46	17	3	452
Female	135	90	81	52	30	388
Male	130	99	80	77	48	434
Antenatal and delivery care						
All	1,138	1,031	948	908	823	4,848
Urban	48	305	654	794	808	2,609
Rural	1,090	727	293	114	15	2,239
Contraceptive prevalence						
Female	1,402	1,420	1,434	1,577	1,590	7,424
Urban Female	54	354	936	1,368	1,560	4,272
Rural Female	1,347	1,066	498	209	30	3,150
Male	na	na	na	na	na	na
Urban Male	na	na	na	na	na	na
Rural Male	na	na	na	na	na	na
Contraceptive source						
Female	704	934	1,021	1,121	1,129	4,909
Urban Female	33	253	666	963	1,105	3,019
Rural Female	671	681	355	159	24	1,890
Male	na	na	na	na	na	na
Urban Male	na	na	na	na	na	na
Rural Male	na	na	na	na	na	na
Treatment of genital discharge, ulcer, sore						
Female	267	272	324	329	299	1,491
Urban Female	13	72	207	299	297	888
Rural Female	254	200	118	30	2	604
Male	na	na	na	na	na	na
Urban Male	na	na	na	na	na	na
Rural Male	na	na	na	na	na	na

Nicaragua

2001 - SAMPLE SIZES

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

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
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	2,010	2,273	2,611	2,931	3,234	13,059
Urban	96	637	1,747	2,578	3,187	8,245
Rural	1,914	1,636	864	353	47	4,814
Handwashing facilities in household?						
All	1,943	2,105	2,175	2,319	2,488	11,030
Urban	101	595	1,412	2,030	2,438	6,576
Rural	1,842	1,510	763	289	50	4,454
Bednet ownership						
All	1,943	2,105	2,175	2,319	2,488	11,030
Urban	101	595	1,412	2,030	2,438	6,576
Rural	1,842	1,510	763	289	50	4,454
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	164	134	137	113	99	647
Urban	5	39	99	103	97	343
Rural	159	95	39	10	2	305
Exclusive breastfeeding						
All	98	94	65	67	53	377
Urban	6	26	46	54	53	185
Rural	93	68	19	14	0	194
Female	56	52	37	30	28	203
Male	43	42	28	38	25	176
Timely complementary breastfeeding						
All	96	63	64	69	62	354
Urban	4	19	53	58	62	196
Rural	91	45	11	11	0	158
Female	49	35	25	28	24	161
Male	47	29	39	41	38	194
Bottle-feeding						
All	303	234	197	221	186	1,141
Urban	13	67	144	184	185	593
Rural	289	167	53	37	1	547
Female	158	123	96	103	89	569
Male	145	111	101	117	97	571

Nicaragua

2001 - SAMPLE SIZES

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

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
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	1,570	1,229	1,103	982	866	5,750
Urban	53	359	758	859	850	2,879
Rural	1,517	870	345	123	16	2,871
Female	798	608	563	527	446	2,942
Male	772	621	540	455	421	2,809
Tobacco and alcohol use, casual sexual partners, condom use for casual sex						
Female	2,010	2,273	2,611	2,931	3,234	13,059
Urban Female	96	637	1,747	2,578	3,187	8,245
Rural Female	1,914	1,636	864	353	47	4,814
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

Nicaragua

2001 - SAMPLE SIZES

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
School completion (Grade 5)						
Female	2,322	2,620	2,948	3,271	3,756	14,917
Urban female	110	728	1,974	2,852	3,704	9,368
Rural female	2,212	1,892	974	419	52	5,548
Male	2,557	2,757	2,796	2,989	2,956	14,054
Urban male	115	699	1,811	2,579	2,886	8,090
Rural male	2,442	2,058	985	410	69	5,964
School participation						
Female	1,050	952	869	775	591	4,237
Urban female	50	277	567	692	580	2,166
Rural female	1,001	675	303	83	11	2,072
Male	1,115	1,068	878	794	611	4,466
Urban male	68	282	590	701	602	2,243
Rural male	1,047	786	288	93	9	2,223
Mass media exposure						
Female	2,010	2,273	2,611	2,931	3,234	13,060
Urban female	96	637	1,747	2,578	3,187	8,246
Rural female	1,914	1,636	864	353	47	4,814
Male	na	na	na	na	na	na
Urban male	na	na	na	na	na	na
Rural male	na	na	na	na	na	na
Knowledge of HIV/AIDS prevention						
Female	4,884	2,273	2,611	2,931	3,234	15,933
Urban female	96	637	1,747	2,578	3,187	8,245
Rural female	1,914	1,636	864	353	47	4,814
Male	na	na	na	na	na	na
Urban male	na	na	na	na	na	na
Rural male	na	na	na	na	na	na
Household decisionmaking and justification of violence						
All	2,010	2,273	2,611	2,931	3,234	13,060
Urban	96	637	1,747	2,578	3,187	8,246
Rural	1,914	1,636	864	353	47	4,814
Orphanhood						
All	5,824	5,281	4,813	4,299	3,358	23,576
Urban	283	1,477	3,250	3,783	3,303	12,096
Rural	5,541	3,804	1,564	516	56	11,480
Female	2,856	2,562	2,378	2,118	1,660	11,575
Male	2,968	2,719	2,435	2,181	1,698	12,001

Nicaragua

2001 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part I: HNP STATUS

Indicator	Wealth Quintiles					Avg.
	Low	2nd	3rd	4th	High	
A. Childhood illness and mortality						
Infant mortality rate	3.30	3.77	3.74	4.11	4.15	1.79
Under-five mortality rate	4.04	4.36	4.33	4.41	4.28	2.09
Prevalence of fever	1.29	1.47	1.30	1.73	2.12	0.72
Prevalence of diarrhea	1.15	1.07	1.21	1.32	1.13	0.55
Prevalence of acute respiratory infection	1.35	1.69	1.59	1.79	2.32	0.81
B. Fertility						
Total fertility rate	0.19	0.14	0.11	0.12	0.13	0.08
Adolescent fertility rate	12.00	10.00	8.00	8.00	7.00	4.00
C. Nutritional status						
<i>Children:</i>						
Moderate stunting	1.08	1.10	1.04	0.84	0.91	0.58
Severe stunting	1.11	0.94	0.72	0.73	0.19	0.47
Moderate underweight	1.05	0.86	0.99	0.73	0.70	0.47
Severe underweight	0.47	0.38	0.40	0.46	0.36	0.19
Mild anemia	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na
<i>Women:</i>						
Malnutrition	0.42	0.33	0.51	0.47	0.59	0.22
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						
<i>Prevalence of circumcision:</i>						
Girls	na	na	na	na	na	na
Women	na	na	na	na	na	na
<i>Prevalence of occlusion:</i>						
Girls	*	*	*	*	*	*
Women	*	*	*	*	*	*
E. Sexually transmitted disease						
<i>Prevalence of genital discharge:</i>						
Women	0.85	0.83	0.95	0.88	0.94	0.43
Men	na	na	na	na	na	na
<i>Prevalence of genital ulcer:</i>						
Women	0.41	0.36	0.42	0.41	0.30	0.17
Men	na	na	na	na	na	na

Nicaragua

2001 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

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

Indicator	Wealth Quintiles					Avg.
	Low	2nd	3rd	4th	High	
A. Childhood immunization						
BCG coverage	1.56	1.37	1.49	1.34	1.28	0.81
Measles coverage	2.39	1.76	2.57	2.95	2.28	1.19
DPT coverage	2.78	2.14	2.90	3.17	3.91	1.42
Full basic coverage	3.05	2.93	3.03	4.06	4.88	1.64
No basic coverage	1.13	0.85	0.38	0.62	1.28	0.44
Hepatitis B coverage	0.68	0.26	0.65	0.93	2.82	0.52
Yellow fever coverage	na	na	na	na	na	na
B. Treatment of childhood illnesses						
<i>Treatment of fever:</i>						
Medical treatment of fever	3.03	3.08	3.91	4.31	4.98	1.79
Treatment in a public facility	2.96	3.26	4.05	4.17	5.96	1.79
Treatment in a private facility	0.77	1.46	2.67	2.68	5.40	1.12
<i>Treatment of acute respiratory infection (ARI):</i>						
Medical treatment of ARI	2.88	2.83	4.01	3.93	3.54	1.65
Treatment in a public facility	2.86	2.93	3.88	3.94	5.66	1.68
Treatment in a private facility	0.69	1.23	2.77	2.91	5.18	1.00
<i>Treatment of diarrhea:</i>						
Use of oral rehydration therapy	3.10	3.41	4.34	5.74	6.33	2.01
Medical treatment of diarrhea	3.58	3.78	4.33	6.33	7.10	2.08
Treatment in a public facility	3.53	3.64	4.28	5.65	5.93	1.94
Treatment in a private facility	0.46	1.57	3.12	3.40	5.76	1.11
C. Antenatal and delivery care						
<i>Antenatal care (ANC) visits:</i>						
To a medically trained person	2.29	1.48	1.30	1.21	1.12	0.91
To a doctor	1.75	1.66	2.38	2.29	2.12	1.05
To a nurse or trained midwife	2.04	1.66	2.49	2.30	2.28	1.07
Multiple visits to a medically trained person	2.57	1.75	1.44	1.44	1.24	1.12
<i>Antenatal care content:</i>						
Tetanus toxoid	1.70	1.32	1.37	1.38	2.09	0.76
Prophylactic antimalarial treatment	na	na	na	na	na	na
Iron supplementation	2.31	1.58	1.46	1.60	1.23	0.97
<i>Delivery attendance:</i>						
By a medically trained person	1.53	1.18	0.72	0.63	0.32	0.74
By a doctor	2.06	1.91	1.49	1.58	0.92	1.77
By a nurse or trained midwife	1.74	1.83	1.30	1.35	0.87	1.29
In a public facility	2.14	1.95	1.61	1.81	2.38	1.57
In a private facility	0.18	0.32	1.08	1.40	2.45	0.65
At home	2.16	1.94	1.39	1.49	0.81	1.76
D. Contraceptive services						
<i>Contraceptive prevalence:</i>						
Women	1.95	1.45	1.32	1.54	1.63	0.83
Men	na	na	na	na	na	na
<i>Source of contraception - public sector:</i>						
Women	1.59	1.42	1.89	2.11	1.88	1.14
Men	na	na	na	na	na	na

Nicaragua

2001 - 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.)						
<i>Source of contraception - private sector:</i>						
Women	1.54	1.33	1.85	2.15	1.94	1.12
Men	na	na	na	na	na	na
E. Treatment of adult illnesses						
<i>Treatment of genital discharge, ulcer, sore:</i>						
Women	0.86	1.12	1.69	2.15	2.13	0.83
Men	na	na	na	na	na	na
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>						
Women	0.85	0.83	0.95	0.88	0.94	0.43
Men	na	na	na	na	na	na
<i>Voluntary counseling and testing for HIV/AIDS:</i>						
Women	0.22	0.44	0.65	0.78	0.85	0.40
Men	na	na	na	na	na	na

Nicaragua

2001 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

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

Indicator	Wealth Quintiles					Avg.
	Low	2nd	3rd	4th	High	
A. Hygienic practices						
<i>Disposal of children's stools:</i>						
Sanitary disposal	1.62	1.98	1.73	2.12	2.28	1.35
<i>Handwashing:</i>						
Wash hands prior to preparing food	0.27	0.27	0.34	0.40	0.62	0.22
Handwashing facilities in household	0.42	2.10	1.92	1.52	0.30	1.87
B. Bednet ownership and use						
<i>Bednet ownership:</i>						
Bednet ownership	1.95	1.91	2.01	2.31	2.01	1.24
Treated bednet ownership	na	na	na	na	na	na
<i>Bednet use:</i>						
By children	na	na	na	na	na	na
By pregnant women	3.88	5.30	5.43	5.70	4.63	2.57
C. Breastfeeding						
Exclusive breastfeeding	4.54	5.25	5.92	6.99	5.37	2.85
Timely complementary feeding	4.62	4.79	6.62	6.70	9.63	2.96
Bottle-feeding	2.74	3.35	3.73	4.00	4.08	1.77
D. Micronutrient consumption						
<i>Iodized salt:</i>						
Availability of iodized salt in household	na	na	na	na	na	na
<i>Vitamin A:</i>						
Children	2.17	2.12	2.16	2.14	2.66	1.20
Women	1.26	1.54	1.92	1.99	2.23	0.88
E. Tobacco and alcohol use						
<i>Tobacco:</i>						
Women	0.33	0.48	0.55	0.61	0.83	0.32
Men	na	na	na	na	na	na
<i>Alcohol:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
F. Sexual practices						
<i>Non-regular sexual partnerships:</i>						
Women	0.17	0.22	0.26	0.25	0.33	0.12
Men	na	na	na	na	na	na
<i>Condom usage with non-regular partner:</i>						
Women	*	6.10	7.59	5.62	8.65	3.63
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

Nicaragua

2001 - 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						
<i>School completion:</i>						
Women	1.30	1.26	1.17	1.03	0.82	1.23
Men	1.23	1.19	1.24	1.23	0.70	1.32
<i>School participation:</i>						
Girls	2.60	1.61	1.44	1.56	1.41	1.16
Boys	2.45	1.80	1.95	1.79	1.94	1.25
B. Exposure to mass media						
<i>Newspaper readership:</i>						
Women	0.85	1.28	1.41	1.34	1.44	1.13
Men	na	na	na	na	na	na
<i>Radio listenership:</i>						
Women	1.57	1.17	1.01	0.88	0.75	0.56
Men	na	na	na	na	na	na
<i>Television viewership:</i>						
Women	0.91	1.91	1.24	0.74	0.46	1.49
Men	na	na	na	na	na	na
C. Knowledge and attitudes about HIV/AIDS						
<i>Knowledge about sexual transmission of HIV/AIDS:</i>						
Women	1.16	1.27	1.37	1.58	1.23	0.94
Men	na	na	na	na	na	na
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>						
Women	1.85	1.30	1.11	0.87	0.73	0.82
Men	na	na	na	na	na	na
<i>Attitudes toward HIV/AIDS:</i>						
Women	1.09	1.06	1.08	0.94	1.01	0.52
Men	na	na	na	na	na	na
D. Status of women						
<i>Household decisionmaking:</i>						
Can seek own health care	1.36	1.13	1.17	1.41	1.36	0.71
Can seek children's health care	0.92	0.44	0.28	0.33	0.52	0.29
Can make daily household purchases	na	na	na	na	na	na
Can make large household purchases	1.31	1.13	1.14	1.19	1.32	0.63
Can make meal-related decisions	1.36	1.17	1.35	1.33	1.43	0.70
<i>Freedom of movement:</i>						
Can travel to visit family/relatives	1.02	0.92	0.98	1.18	1.05	0.57
<i>Other decisionmaking, attitudes:</i>						
Can decide how to spend own money	2.25	1.50	0.97	0.91	0.97	0.55
Can decide whether to have sex	0.85	0.61	0.64	0.47	0.39	0.33
Justifies domestic violence	1.01	0.94	0.83	0.77	0.61	0.46
E. Orphanhood						
Paternal orphan prevalence	0.38	0.43	0.46	0.59	0.47	0.21
Maternal orphan prevalence	0.18	0.18	0.21	0.38	0.30	0.11
Double orphan prevalence	0.07	0.09	0.06	0.22	0.19	0.06

Nicaragua

2001 - ASSET DISTRIBUTION AND WEIGHTS

(FACTOR SCORE)

Asset Variable	Unweighted		Wealth Quintiles						Factor Score
	Mean	Std. Deviation	Low	2nd	3rd	4th	High	Avg.	
			Percentage of Population						
Has electricity	0.658	0.474	0.8%	50.4%	98.1%	99.8%	100.0%	69.8%	0.07298
Has radio	0.799	0.401	67.5%	74.6%	81.3%	88.3%	95.8%	81.5%	0.02572
Has television	0.523	0.499	1.1%	27.2%	73.8%	89.9%	98.0%	58.0%	0.06982
Has refrigerator	0.210	0.407	0.0%	0.8%	12.5%	33.8%	72.2%	23.9%	0.05900
Has bicycle	0.266	0.442	7.6%	24.2%	34.7%	37.1%	29.2%	26.6%	0.02220
Has motorcycle/scooter	0.021	0.142	0.0%	0.5%	1.5%	3.1%	5.2%	2.1%	0.01487
Has car/truck	0.079	0.270	0.0%	1.6%	2.5%	9.8%	33.4%	9.5%	0.03700
Has telephone	0.093	0.291	0.0%	0.0%	0.7%	6.0%	49.9%	11.3%	0.04934
Works on own or family's agricultural land	0.834	0.373	90.3%	89.8%	90.8%	91.6%	91.3%	90.7%	0.00172
Uses piped drinking water in residence	0.269	0.443	0.0%	3.8%	15.1%	42.2%	82.9%	28.8%	0.06231
Uses piped drinking water outside residence	0.286	0.452	2.0%	30.1%	63.1%	50.9%	12.1%	31.6%	0.01042
Uses water from public piped source outside residence	0.039	0.193	6.2%	7.6%	2.6%	0.5%	0.0%	3.4%	-0.01430
Uses private well drinking water	0.132	0.338	21.3%	25.2%	10.8%	4.1%	0.3%	12.3%	-0.02260
Uses river, canal or surface water for drinking	0.050	0.217	17.8%	3.5%	0.3%	0.0%	0.0%	4.3%	-0.02607
Uses rain for drinking water	0.003	0.052	0.3%	0.3%	0.2%	0.1%	0.2%	0.2%	-0.00220
Uses a public well	0.084	0.278	16.4%	15.0%	3.5%	0.6%	0.1%	7.1%	-0.02359
Uses bottled water	0.012	0.107	0.0%	0.0%	0.1%	0.4%	4.1%	0.9%	0.01598
Uses water from private piped source outside residence	0.035	0.184	3.4%	5.9%	3.2%	1.0%	0.1%	2.7%	-0.00901
Uses other source of drinking water	0.001	0.033	0.0%	0.2%	0.0%	0.1%	0.1%	0.1%	-0.00024
Uses pit latrine	0.524	0.499	34.8%	67.5%	78.2%	61.8%	8.4%	50.2%	-0.01243
Uses VIP latrine	0.110	0.313	8.7%	16.2%	14.7%	11.1%	2.3%	10.6%	-0.00420
Uses pit used to collect manure for latrine	0.005	0.072	0.2%	1.5%	0.6%	0.4%	0.0%	0.6%	-0.00278
Uses bush,field as latrine	0.170	0.375	55.8%	14.1%	3.6%	0.7%	0.0%	14.8%	-0.04658
Uses a hanging latrine	0.001	0.028	0.2%	0.2%	0.0%	0.1%	0.0%	0.1%	-0.00245
Shares toilet with other households	0.066	0.249	2.5%	6.7%	10.3%	9.0%	3.9%	6.5%	0.00191
Has connection to a sewer	0.114	0.318	0.0%	0.0%	0.5%	13.5%	69.4%	16.7%	0.05244
Has connection to a septic system	0.016	0.127	0.0%	0.0%	0.3%	2.9%	3.6%	1.4%	0.01469
Has connection to an open sewer	0.052	0.222	0.0%	0.3%	1.1%	8.5%	15.4%	5.1%	0.02846
Has connection to a river or creek	0.006	0.078	0.0%	0.1%	0.9%	0.7%	0.6%	0.5%	0.00526
Has connection to rainwater (toilet)	0.000	0.013	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.00091
Has earth, dung principal floor in dwelling	0.487	0.500	84.5%	68.2%	53.7%	19.9%	1.2%	45.5%	-0.05908
Has wood, plank principal floor in dwelling	0.056	0.231	13.5%	7.4%	4.7%	1.8%	0.0%	5.5%	-0.01548
Has cement principal floor	0.257	0.437	0.1%	2.5%	12.8%	42.3%	82.9%	28.1%	0.06433
Has tile flooring	0.178	0.383	1.5%	20.5%	26.1%	32.2%	12.3%	18.5%	0.01030
Has floor of mud bricks	0.018	0.132	0.0%	1.1%	2.5%	3.2%	3.2%	2.0%	0.00777
Has other type of flooring	0.000	0.016	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.00111
Has cane, palm, trunks for walls	0.025	0.155	8.4%	1.4%	0.3%	0.1%	0.0%	2.0%	-0.01990
Has stone walls	0.054	0.226	0.5%	2.9%	8.8%	6.6%	4.8%	4.7%	0.01208
Has wood planks for walls	0.275	0.446	59.7%	37.1%	20.3%	7.6%	2.5%	25.4%	-0.04214
Has bricks, cement blocks, concrete walls	0.307	0.461	0.6%	15.1%	32.1%	52.7%	71.4%	34.4%	0.05082
Has other material for walls	0.001	0.035	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.00403
has adobe wall	0.109	0.311	19.2%	14.2%	4.7%	2.1%	2.2%	8.5%	-0.01976
Has earthen bricks or blocks for walls	0.124	0.329	3.4%	14.3%	16.5%	14.1%	8.2%	11.3%	0.00910
Has walls from waste material	0.032	0.177	6.0%	6.6%	3.2%	0.9%	0.0%	3.3%	-0.01469
Has walls from plycem or Nicalit tiles	0.011	0.102	0.3%	2.6%	2.1%	0.9%	0.3%	1.2%	-0.00167
Has roof from palm leaves and similar	0.039	0.194	16.2%	1.2%	0.0%	0.1%	0.0%	3.5%	-0.02742
Has roof from zinc	0.708	0.455	52.2%	69.6%	74.7%	85.4%	81.9%	72.7%	0.02256
Has roof from plycem or Nicalit tiles	0.198	0.399	25.1%	25.8%	19.3%	9.5%	5.8%	17.1%	-0.01485

Nicaragua

2001 - ASSET DISTRIBUTION AND WEIGHTS (Cont.)

(FACTOR SCORE)

Asset Variable	Unweighted		Wealth Quintiles						Factor Score
	Mean	Std. Deviation	Low	2nd	3rd	4th	High	Avg.	
			Percentage of Population						
Has roofing tiles	0.198	0.399	25.1%	25.8%	19.3%	9.5%	5.8%	17.1%	-0.01485
Has other roofing	0.005	0.073	2.5%	0.1%	0.1%	0.0%	0.3%	0.6%	-0.00741
Rents dwelling	0.038	0.192	0.3%	1.4%	2.5%	5.1%	7.8%	3.4%	0.01569
Has other tenancy of dwelling	0.001	0.027	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.00268
Uses wood or straw as cooking fuel	0.681	0.466	99.7%	98.0%	84.1%	39.9%	3.2%	65.0%	-0.07211
Uses kerosene as cooking fuel	0.006	0.076	0.0%	0.3%	1.3%	1.2%	0.7%	0.7%	0.00414
Uses gas as cooking fuel	0.296	0.456	0.0%	0.9%	12.9%	56.3%	94.3%	32.9%	0.07186
Uses electricity as cooking fuel	0.006	0.074	0.0%	0.0%	0.5%	1.4%	1.6%	0.7%	0.00655
Uses other cooking fuel	0.000	0.009	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00074
Does not cook	0.007	0.081	0.1%	0.3%	0.2%	0.4%	0.1%	0.2%	0.00044
Uses charcoal for cooking	0.004	0.066	0.0%	0.4%	1.0%	0.8%	0.0%	0.4%	0.00028
Uses light from generator	0.005	0.074	0.4%	1.4%	0.5%	0.0%	0.0%	0.5%	-0.00406
Uses light from gas or kerosene	0.340	0.474	98.9%	49.4%	1.8%	0.1%	0.0%	30.0%	-0.07283
Uses electricity as lighting fuel	0.653	0.476	0.3%	48.9%	97.6%	99.8%	100.0%	69.3%	0.07333
Uses light from other	0.001	0.030	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.00294
Uses public collection trash disposal	0.302	0.459	0.2%	2.3%	21.1%	57.7%	90.3%	34.3%	0.06800
Burns trash	0.433	0.495	47.5%	65.5%	57.4%	26.3%	3.2%	40.0%	-0.03270
Buries trash	0.052	0.221	5.1%	8.1%	5.2%	3.2%	0.5%	4.4%	-0.00930
Uses street cleaner for trash disposal	0.003	0.059	0.0%	0.0%	0.3%	1.0%	0.8%	0.4%	0.00442
Has private collection for trash	0.016	0.124	0.0%	0.5%	2.1%	3.9%	2.1%	1.7%	0.00778
Uses public container for trash disposal	0.012	0.109	0.1%	1.0%	2.5%	2.9%	2.6%	1.8%	0.00549
Uses yard open land for trash disposal	0.182	0.386	47.1%	22.5%	11.3%	5.1%	0.5%	17.3%	-0.03832
Uses others means of trash disposal	0.000	0.013	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.00057
Owens dwelling with deed	0.581	0.493	40.4%	48.5%	56.6%	65.2%	76.9%	57.5%	0.02828
Owens dwelling without deed	0.288	0.453	44.5%	38.0%	34.7%	25.5%	12.5%	31.0%	-0.02650
Owned dwelling with mortgage, loan, being paid off	0.002	0.046	0.1%	0.1%	0.2%	0.5%	0.5%	0.3%	0.00251
Loans dwelling	0.088	0.283	14.5%	11.8%	5.8%	3.6%	2.0%	7.5%	-0.01768
Lives in a house	0.935	0.247	82.8%	92.4%	97.5%	98.6%	98.6%	94.0%	0.02480
Lives in a farm house	0.005	0.074	0.5%	0.4%	0.8%	0.5%	0.7%	0.6%	-0.00084
Lives in a room	0.006	0.076	0.2%	0.8%	0.3%	0.8%	0.7%	0.6%	0.00107
Lives in a ranch	0.033	0.179	12.2%	2.3%	0.1%	0.0%	0.0%	2.9%	-0.02501
Lives in an improvised home	0.019	0.137	4.2%	3.8%	1.1%	0.0%	0.0%	1.8%	-0.01241
Lives in an apartment or room	0.000	0.019	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.00004
Lives in a store	0.001	0.030	0.0%	0.1%	0.0%	0.1%	0.1%	0.0%	0.00164
Uses water from a spring	0.090	0.286	32.6%	8.5%	1.2%	0.0%	0.0%	8.5%	-0.03363
Uses wash water piped inside residence	0.276	0.447	0.0%	3.7%	14.7%	42.1%	86.1%	29.3%	0.06493
Uses wash water piped outside residence	0.288	0.453	1.8%	30.1%	63.2%	51.2%	13.1%	31.9%	0.01118
Uses wash water from public tap	0.033	0.178	4.6%	6.4%	2.1%	0.9%	0.0%	2.8%	-0.01248
Uses wash water from private tap	0.024	0.153	2.3%	4.3%	1.8%	0.5%	0.1%	1.8%	-0.00789
Uses wash water from covered public well	0.069	0.254	12.0%	12.9%	3.5%	0.6%	0.0%	5.8%	-0.02048
Uses wash water from private covered well	0.132	0.339	18.1%	25.8%	12.7%	4.4%	0.7%	12.3%	-0.01974
Uses wash water from surface (river, stream, pond)	0.098	0.297	33.7%	8.4%	0.8%	0.1%	0.0%	8.6%	-0.03569
Uses wash water from spring	0.076	0.265	27.0%	7.9%	1.0%	0.0%	0.0%	7.2%	-0.03004
Uses wash water from rain	0.002	0.049	0.4%	0.3%	0.1%	0.0%	0.0%	0.2%	-0.00331
Uses tank with lid as water recipient	0.007	0.085	0.0%	0.9%	0.9%	0.8%	0.6%	0.6%	0.00331
Uses tank without lid as water recipient	0.001	0.035	0.1%	0.1%	0.1%	0.2%	0.0%	0.1%	0.00160
Uses jerry can with lid as water recipient	0.266	0.442	31.0%	25.9%	24.9%	21.0%	17.9%	24.1%	-0.00766
Uses jerry can without lid as water recipient	0.016	0.124	3.9%	1.6%	0.8%	0.9%	0.3%	1.5%	-0.00907

Nicaragua
2001 - ASSETS AND FACTOR SCORES (Cont.)
(FACTOR SCORE)

Asset Variable	Unweighted		Wealth Quintiles						Factor Score
	Mean	Std. Deviation	Low	2nd	3rd	4th	High	Avg.	
			Percentage of Population						
Uses bucket or pail with lid as water recipient	0.404	0.491	47.4%	43.8%	41.6%	41.7%	25.6%	40.0%	-0.01221
Uses bucket or pail without lid as water recipient	0.018	0.132	3.7%	2.4%	0.6%	0.7%	0.2%	1.5%	-0.01003
Uses barrel with lid as water recipient	0.061	0.239	2.7%	4.9%	10.5%	7.4%	6.3%	6.3%	0.00418
Uses barrel without lid as water recipient	0.005	0.074	0.4%	0.6%	1.1%	0.3%	0.7%	0.6%	0.00015
Uses cooking pot as water recipient	0.007	0.085	0.0%	0.9%	0.9%	0.8%	0.6%	0.6%	0.00331
Uses other as water recipient	0.002	0.040	0.1%	0.0%	0.1%	0.2%	0.6%	0.2%	0.00410
Does not use water recipient	0.137	0.344	1.1%	5.1%	9.7%	22.3%	46.6%	17.0%	0.03889
Uses public sewer for water disposal	0.132	0.339	0.1%	0.5%	2.0%	18.2%	72.9%	18.7%	0.05380
Uses septic system for water disposal	0.058	0.234	0.0%	0.9%	3.6%	11.8%	12.1%	5.7%	0.02491
Uses yard or patio for water disposal	0.594	0.491	62.1%	77.8%	78.3%	49.0%	7.3%	54.9%	-0.03462
Uses river or gorge for water disposal	0.154	0.361	37.1%	18.2%	8.9%	5.9%	1.6%	14.3%	-0.02925
Uses street for water disposal	0.056	0.231	0.3%	1.8%	7.1%	14.6%	5.8%	5.9%	0.01599
Uses other place for water disposal	0.004	0.062	0.5%	0.4%	0.2%	0.3%	0.1%	0.3%	-0.00318
Number of members per sleeping room	5.376	2.686	7.4	6.9	6.7	6.3	5.7	6.6	-0.01539

PART V. SUPPORTING TABLES, 1997 / 98

- A. SAMPLE SIZES**
- B. STANDARD ERRORS**
- C. ASSET DISTRIBUTION AND WEIGHTS**

Nicaragua
1997 / 98 - SAMPLE SIZES

TOTAL SAMPLE

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Number of household members						
All	12,784	12,666	12,731	12,767	12,723	63,671
Urban	1,177	4,606	8,762	11,115	12,056	37,717
Rural	11,607	8,060	3,969	1,652	667	25,954
Female	6,337	6,244	6,419	6,724	6,901	32,624
Male	6,448	6,422	6,312	6,040	5,822	31,044

Part I: HNP STATUS

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Mortality rates						
All	4,365	3,574	3,267	2,864	2,162	16,231
Urban	438	1,400	2,279	2,493	1,997	8,607
Rural	3,927	2,173	989	370	165	7,624
Female	2,189	1,753	1,633	1,453	1,110	8,137
Male	2,176	1,821	1,634	1,411	1,051	8,093
Prevalence of fever, diarrhea, acute respiratory infection						
All	2,114	1,686	1,532	1,314	997	7,642
Urban	200	651	1,094	1,148	921	4,014
Rural	1,913	1,035	438	166	76	3,628
Female	1,068	821	800	668	510	3,867
Male	1,045	864	732	646	487	3,774
Total fertility rate						
All	6,088	6,416	7,461	8,391	9,318	37,674
Urban	620	2,417	5,195	7,421	8,859	24,512
Rural	5,468	3,999	2,266	969	458	13,160
Age-specific fertility rate 15-19						
All	1,509	1,603	1,884	2,008	2,101	9,106
Urban	154	528	1,338	1,772	1,999	5,791
Rural	1,355	1,075	546	237	102	3,315
Children's nutritional status						
All	1,776	1,469	1,313	1,137	801	6,497
Urban	169	570	946	991	750	3,426
Rural	1,607	899	367	146	51	3,070
Female	912	719	690	584	409	3,314
Male	864	751	623	553	392	3,183
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

Nicaragua
1997 / 98 - SAMPLE SIZES

Part I: HNP STATUS (Cont.)

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Women's nutritional status						
All	1,870	2,066	2,399	2,753	3,047	12,136
Urban	188	785	1,646	2,445	2,900	7,964
Rural	1,683	1,281	753	308	147	4,172
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	1,890	1,911	2,165	2,273	2,354	10,593
Urban Female	201	739	1,536	2,006	2,224	6,706
Rural Female	1,690	1,172	630	266	130	3,888
Male	430	482	537	521	625	2,595
Urban Male	38	141	374	457	590	1,600
Rural Male	392	341	163	64	35	995

Nicaragua

1997 / 98 - SAMPLE SIZES

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

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
Immunization coverage						
All	431	310	293	270	182	1,486
Urban	40	121	211	237	173	782
Rural	391	189	82	33	9	704
Female	219	135	159	140	99	752
Male	212	174	134	131	82	733
Treatment of fever						
All	551	389	370	294	166	1,770
Urban	59	170	275	250	143	897
Rural	492	220	95	44	23	874
Female	265	207	184	145	88	889
Male	286	182	186	149	78	881
Treatment of acute respiratory infection						
All	615	461	377	356	207	2,016
Urban	55	176	286	307	189	1,013
Rural	560	286	91	48	18	1,003
Female	307	222	204	169	95	997
Male	308	239	173	187	112	1,019
Treatment of diarrhea						
All	340	236	218	190	87	1,070
Urban	29	110	168	169	78	554
Rural	311	126	50	20	8	515
Female	178	109	106	96	39	528
Male	162	127	112	94	48	543
Antenatal and delivery care						
All	1,354	1,207	1,138	1,042	851	5,593
Urban	132	470	805	914	789	3,110
Rural	1,223	736	334	128	63	2,484
Contraceptive prevalence						
Female	1,563	1,472	1,658	1,647	1,704	8,045
Urban Female	130	520	1,146	1,435	1,599	4,830
Rural Female	1,433	952	512	213	105	3,215
Male	323	342	349	338	372	1,724
Urban Male	28	98	244	296	350	1,016
Rural Male	294	243	105	42	22	706
Contraceptive source						
Female	629	817	999	1,077	1,095	4,617
Urban Female	60	314	680	940	1,037	3,031
Rural Female	568	503	320	136	58	1,585
Male	323	342	349	338	372	1,724
Urban Male	28	98	244	296	350	1,016
Rural Male	294	243	105	42	22	706
Treatment of genital discharge, ulcer, sore						
Female	281	254	327	319	375	1,556
Urban Female	32	103	234	287	363	1,019
Rural Female	248	151	93	32	12	536
Male	18	22	32	28	19	119
Urban Male	1	6	26	28	19	80
Rural Male	17	16	6	0	1	40

Nicaragua

1997 / 98 - SAMPLE SIZES

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

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
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	124	93	104	66	72	459
Urban	12	37	86	61	68	264
Rural	113	55	18	5	5	196
Female	62	50	55	35	31	233
Male	62	43	49	31	41	226
Timely complementary breastfeeding						
All	142	117	81	95	69	504
Urban	13	49	53	85	64	264
Rural	129	67	28	10	4	238
Female	73	65	39	40	28	245
Male	69	52	42	55	41	259
Bottle-feeding						
All	405	337	278	249	204	1,473
Urban	40	141	206	221	188	796
Rural	365	196	73	28	16	678
Female	207	182	137	116	96	738
Male	198	154	142	133	108	735

Nicaragua

1997 / 98 - SAMPLE SIZES

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

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
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	2,199	2,336	2,712	3,041	3,347	13,635
Urban Female	226	876	1,879	2,691	3,181	8,853
Rural Female	1,972	1,460	832	351	165	4,780
Male	489	542	599	598	683	2,911
Urban Male	44	162	407	528	647	1,788
Rural Male	445	380	192	71	36	1,124
Domestic violence						
All	2,199	2,336	2,712	3,041	3,347	13,634
Urban	226	876	1,879	2,691	3,181	8,853
Rural	1,972	1,460	832	351	165	4,781

Nicaragua

1997 / 98 - SAMPLE SIZES

Part IV: UNDERLYING DETERMINANTS OF HNP STATUS

Indicator	Wealth Quintiles					Pop. Total
	Low	2nd	3rd	4th	High	
School completion (Grade 5)						
Female	2,463	2,619	3,014	3,384	3,794	15,274
Urban female	256	980	2,090	2,998	3,611	9,935
Rural female	2,207	1,639	924	386	183	5,339
Male	2,487	2,688	2,946	2,984	3,094	14,198
Urban male	204	906	2,027	2,610	2,930	8,677
Rural male	2,283	1,782	919	374	164	5,522
School participation						
Female	1,156	970	892	829	667	4,514
Urban female	109	402	598	713	622	2,444
Rural female	1,046	568	294	116	45	2,070
Male	1,100	1,025	909	864	630	4,528
Urban male	98	384	625	735	595	2,437
Rural male	1,002	641	285	129	35	2,091
Mass media exposure						
Female	2,199	2,336	2,712	3,041	3,347	13,634
Urban female	226	876	1,879	2,691	3,181	8,853
Rural female	1,972	1,460	832	351	165	4,781
Male	489	542	599	598	683	2,912
Urban male	44	162	407	528	647	1,788
Rural male	445	380	192	71	36	1,124
Knowledge of HIV/AIDS prevention						
Female	5,048	2,336	2,712	3,041	3,347	16,484
Urban female	226	876	1,879	2,691	3,181	8,853
Rural female	1,972	1,460	832	351	165	4,780
Male	489	542	599	598	683	2,912
Urban male	44	162	407	528	647	1,788
Rural male	445	380	192	71	36	1,124
Household decisionmaking and justification of violence						
All	2,199	2,336	2,712	3,041	3,347	13,634
Urban	226	876	1,879	2,691	3,181	8,853
Rural	1,972	1,460	832	351	165	4,781
Orphanhood						
All	6,664	5,864	5,491	4,924	3,936	26,879
Urban	618	2,235	3,798	4,242	3,691	14,583
Rural	6,047	3,629	1,693	681	245	12,295
Female	3,317	2,701	2,920	2,560	2,043	13,541
Male	3,344	3,163	2,571	2,361	1,893	13,332

Nicaragua

1997 / 98 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

Part I: HNP STATUS

Indicator	Wealth Quintiles					Avg.
	Low	2nd	3rd	4th	High	
A. Childhood illness and mortality						
Infant mortality rate	3.36	4.57	4.76	5.20	4.28	2.04
Under-five mortality rate	4.20	5.08	5.10	5.55	4.42	2.36
Prevalence of fever	1.28	1.19	1.56	1.52	1.91	0.67
Prevalence of diarrhea	0.99	1.00	1.33	1.18	1.15	0.52
Prevalence of acute respiratory infection	1.30	1.42	1.69	1.75	2.07	0.73
B. Fertility						
Total fertility rate	0.18	0.16	0.14	0.11	0.10	0.09
Adolescent fertility rate	9.00	11.00	11.00	7.00	7.00	5.00
C. Nutritional status						
<i>Children:</i>						
Moderate stunting	0.87	1.11	0.89	0.96	0.98	0.53
Severe stunting	1.10	0.88	1.05	0.73	0.65	0.50
Moderate underweight	0.88	1.00	1.13	0.85	0.91	0.48
Severe underweight	0.17	0.24	0.23	0.20	0.00	0.09
Mild anemia	na	na	na	na	na	na
Moderate anemia	na	na	na	na	na	na
Severe anemia	na	na	na	na	na	na
<i>Women:</i>						
Malnutrition	0.44	0.47	0.45	0.51	0.51	0.23
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						
<i>Prevalence of circumcision:</i>						
Girls	na	na	na	na	na	na
Women	na	na	na	na	na	na
<i>Prevalence of occlusion:</i>						
Girls	na	na	na	na	na	na
Women	na	na	na	na	na	na
E. Sexually transmitted disease						
<i>Prevalence of genital discharge:</i>						
Women	0.78	0.82	0.93	0.80	0.81	0.42
Men	0.58	0.68	0.87	0.66	0.73	0.33
<i>Prevalence of genital ulcer:</i>						
Women	0.32	0.34	0.28	0.45	0.27	0.15
Men	0.70	0.32	0.42	0.20	0.44	0.19

Nicaragua

1997 / 98 - STANDARD ERRORS OF QUINTILE ESTIMATES FOR TOTAL POPULATION

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

Indicator	Wealth Quintiles					Avg.
	Low	2nd	3rd	4th	High	
A. Childhood immunization						
BCG coverage	1.25	1.11	1.78	0.32	2.31	0.67
Measles coverage	2.05	2.08	2.40	2.18	3.00	1.08
DPT coverage	2.57	2.42	3.25	2.41	3.85	1.33
Full basic coverage	2.38	2.53	3.92	2.75	3.86	1.37
No basic coverage	1.05	0.84	0.29	0.00	1.72	0.41
Hepatitis B coverage	na	na	na	na	na	na
Yellow fever coverage	na	na	na	na	na	na
B. Treatment of childhood illnesses						
<i>Treatment of fever:</i>						
Medical treatment of fever	2.40	2.92	3.72	3.67	4.63	1.49
Treatment in a public facility	2.27	2.87	3.42	3.42	4.35	1.39
Treatment in a private facility	0.79	1.03	2.21	2.80	4.82	0.92
<i>Treatment of acute respiratory infection (ARI):</i>						
Medical treatment of ARI	2.28	2.66	3.04	3.43	3.55	1.44
Treatment in a public facility	2.12	2.67	3.23	3.86	4.34	1.48
Treatment in a private facility	0.77	1.24	1.82	2.80	3.83	0.86
<i>Treatment of diarrhea:</i>						
Use of oral rehydration therapy	2.80	3.16	3.49	4.41	6.97	1.53
Medical treatment of diarrhea	2.88	3.81	4.29	5.35	6.38	1.79
Treatment in a public facility	2.90	3.91	4.06	4.32	5.64	1.70
Treatment in a private facility	0.56	1.49	2.68	3.33	6.75	1.17
C. Antenatal and delivery care						
<i>Antenatal care (ANC) visits:</i>						
To a medically trained person	2.01	1.17	1.21	0.97	0.92	0.82
To a doctor	1.38	1.67	1.89	1.77	2.09	0.91
To a nurse or trained midwife	1.55	1.64	1.80	1.86	2.07	0.91
Multiple visits to a medically trained person	1.81	1.47	1.39	1.33	1.34	0.78
<i>Antenatal care content:</i>						
Tetanus toxoid	1.42	1.01	1.03	1.16	1.26	0.61
Prophylactic antimalarial treatment	na	na	na	na	na	na
Iron supplementation	na	na	na	na	na	na
<i>Delivery attendance:</i>						
By a medically trained person	1.66	1.69	1.40	1.55	1.07	1.03
By a doctor	1.30	1.60	1.82	1.94	2.16	0.88
By a nurse or trained midwife	0.87	1.32	1.62	1.94	2.19	0.79
In a public facility	1.69	1.69	1.45	1.64	1.73	1.03
In a private facility	0.13	0.17	0.62	0.78	1.40	0.28
At home	1.76	1.74	1.48	1.38	1.17	1.04
D. Contraceptive services						
<i>Contraceptive prevalence:</i>						
Women	1.54	1.44	1.20	1.35	1.42	0.75
Men	2.55	2.54	3.37	3.14	2.99	1.27
<i>Source of contraception - public sector:</i>						
Women	1.85	1.67	1.82	1.75	1.91	0.89
Men	na	na	na	na	na	na

Nicaragua

1997 / 98 - 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.)						
<i>Source of contraception - private sector:</i>						
Women	1.86	1.67	1.83	1.76	1.79	0.89
Men	na	na	na	na	na	na
E. Treatment of adult illnesses						
<i>Treatment of genital discharge, ulcer, sore:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
<i>Treatment of genital discharge, ulcer, sore in public facilities:</i>						
Women	0.78	0.82	0.93	0.80	0.81	0.42
Men	0.92	1.01	1.25	1.49	0.95	0.55
<i>Voluntary counseling and testing for HIV/AIDS:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na

Nicaragua

1997 / 98 - 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						
<i>Disposal of children's stools:</i>						
Sanitary disposal	na	na	na	na	na	na
<i>Handwashing:</i>						
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						
<i>Bednet ownership:</i>						
Bednet ownership	na	na	na	na	na	na
Treated bednet ownership	na	na	na	na	na	na
<i>Bednet use:</i>						
By children	na	na	na	na	na	na
By pregnant women	na	na	na	na	na	na
C. Breastfeeding						
Exclusive breastfeeding	4.11	5.10	5.14	6.23	5.50	2.40
Timely complementary feeding	3.71	5.04	5.73	5.61	7.67	2.37
Bottle-feeding	2.17	2.43	2.72	2.87	3.35	1.23
D. Micronutrient consumption						
<i>Iodized salt:</i>						
Availability of iodized salt in household	na	na	na	na	na	na
<i>Vitamin A:</i>						
Children	na	na	na	na	na	na
Women	na	na	na	na	na	na
E. Tobacco and alcohol use						
<i>Tobacco:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
<i>Alcohol:</i>						
Women	na	na	na	na	na	na
Men	2.03	1.89	2.43	2.14	2.16	1.03
F. Sexual practices						
<i>Non-regular sexual partnerships:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
<i>Condom usage with non-regular partner:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
G. Domestic violence						
Ever experienced violence	0.85	0.80	0.80	0.83	0.54	0.39
Experienced violence in past year	0.54	0.58	0.60	0.67	0.42	0.28

Nicaragua

1997 / 98 - 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						
<i>School completion:</i>						
Women	0.87	1.14	1.26	0.96	0.78	0.79
Men	1.16	1.21	1.33	1.03	0.81	0.80
<i>School participation:</i>						
Girls	1.90	1.79	1.56	1.71	1.45	0.91
Boys	1.92	1.81	1.88	2.04	1.74	0.95
B. Exposure to mass media						
<i>Newspaper readership:</i>						
Women	1.02	1.27	1.31	1.26	1.16	1.08
Men	2.23	2.35	2.47	2.14	2.01	1.23
<i>Radio listenership:</i>						
Women	1.59	1.18	1.04	0.88	0.88	0.67
Men	2.33	1.76	1.58	1.83	1.22	0.82
<i>Television viewership:</i>						
Women	0.86	1.52	1.12	0.66	0.48	1.41
Men	2.46	2.74	1.48	1.02	0.90	1.08
C. Knowledge and attitudes about HIV/AIDS						
<i>Knowledge about sexual transmission of HIV/AIDS:</i>						
Women	1.42	0.67	0.52	0.32	0.35	0.35
Men	0.94	0.78	0.11	0.36	0.00	0.22
<i>Knowledge about mother-to-child transmission of HIV/AIDS:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
<i>Attitudes toward HIV/AIDS:</i>						
Women	na	na	na	na	na	na
Men	na	na	na	na	na	na
D. Status of women						
<i>Household decisionmaking:</i>						
Can seek own health care	0.98	0.94	1.14	1.08	1.11	0.53
Can seek children's health care	1.06	1.37	1.58	1.68	2.17	0.73
Can make daily household purchases	na	na	na	na	na	na
Can make large household purchases	0.94	0.97	1.10	1.09	1.12	0.53
Can make meal-related decisions	1.01	0.97	1.14	0.91	1.13	0.53
<i>Freedom of movement:</i>						
Can travel to visit family/relatives	na	na	na	na	na	na
<i>Other decisionmaking, attitudes:</i>						
Can decide how to spend own money	2.35	1.48	1.49	1.51	1.75	0.78
Can decide whether to have sex	0.95	1.04	1.20	1.07	0.91	0.54
Justifies domestic violence	0.98	0.90	0.87	0.79	0.78	0.44
E. Orphanhood						
Paternal orphan prevalence	0.34	0.38	0.45	0.50	0.37	0.19
Maternal orphan prevalence	0.19	0.20	0.23	0.17	0.19	0.09
Double orphan prevalence	0.08	0.05	0.05	0.07	0.08	0.03

Nicaragua

1997 / 98 - ASSET DISTRIBUTION AND WEIGHTS

(FACTOR SCORE)

Asset Variable	Unweighted		Wealth Quintiles						Factor Score
	Mean	Std. Deviation	Low	2nd	3rd	4th	High	Avg.	
			Percentage of Population						
Has electricity	0.639	0.480	2.4%	48.7%	92.4%	98.5%	98.6%	68.1%	0.13893
Has radio	0.764	0.424	50.1%	70.5%	84.2%	90.9%	98.6%	78.9%	0.07844
Has television	0.493	0.500	0.2%	15.0%	68.2%	89.8%	98.6%	54.4%	0.14713
Has refrigerator	0.197	0.398	0.0%	0.2%	5.2%	26.6%	77.2%	21.8%	0.12805
Has bicycle	0.188	0.391	3.4%	14.7%	24.5%	25.8%	28.0%	19.2%	0.04653
Has motorcycle	0.019	0.137	0.0%	0.1%	1.0%	2.6%	6.9%	2.1%	0.03387
Has car	0.075	0.264	0.1%	0.8%	2.1%	6.6%	35.8%	9.1%	0.08452
Has telephone	0.083	0.276	0.0%	0.0%	0.3%	2.9%	46.6%	10.0%	0.10109
Works on own or family's agricultural land	0.190	0.392	53.0%	22.8%	11.1%	5.4%	4.0%	19.3%	-0.07338
Uses piped drinking water in residence	0.425	0.494	0.2%	13.8%	48.2%	76.9%	94.7%	46.7%	0.13764
Uses piped drinking water outside residence	0.145	0.352	3.3%	21.7%	28.7%	16.3%	4.0%	14.8%	-0.00432
Uses private well drinking water	0.140	0.347	23.3%	25.0%	12.1%	4.4%	1.0%	13.2%	-0.04644
Uses river, canal or surface water for drinking	0.120	0.325	40.5%	11.0%	1.5%	0.4%	0.0%	10.7%	-0.07831
Uses rain for drinking water	0.000	0.013	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.00047
Uses a public well	0.101	0.302	22.4%	15.9%	5.2%	1.2%	0.0%	9.0%	-0.05292
Uses piped water public/private	0.041	0.198	7.2%	7.6%	2.0%	0.3%	0.1%	3.4%	-0.02963
Uses bottled water	0.009	0.097	0.9%	1.6%	0.8%	0.1%	0.1%	0.7%	-0.01101
Uses other source of drinking water	0.017	0.130	2.0%	2.9%	1.3%	0.3%	0.0%	1.3%	-0.01550
Uses pit latrine	0.596	0.491	39.9%	79.9%	88.0%	61.6%	12.2%	56.3%	-0.03249
Uses VIP latrine	0.028	0.166	1.7%	4.1%	5.0%	3.5%	1.2%	3.1%	-0.00190
Uses pit used to collect manure for latrine	0.005	0.070	0.4%	0.9%	0.8%	0.6%	0.0%	0.5%	-0.00452
Uses a hanging latrine	0.005	0.070	1.3%	0.6%	0.1%	0.1%	0.0%	0.4%	-0.01214
Uses bush,field as latrine	0.163	0.369	56.6%	13.0%	2.2%	0.5%	0.0%	14.5%	-0.09431
Has connection to a sewer	0.168	0.374	0.0%	0.7%	2.3%	29.6%	76.3%	21.8%	0.11997
Has connection to a septic system	0.012	0.108	0.0%	0.1%	0.2%	1.2%	3.9%	1.1%	0.02733
Has connection to an open sewer	0.017	0.131	0.0%	0.0%	0.6%	2.5%	5.9%	1.8%	0.03325
Has connection to a river or creek	0.002	0.041	0.0%	0.2%	0.3%	0.2%	0.0%	0.2%	0.00217
Has connection to rainwater (toilet)	0.000	0.013	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00303
Has earth, dung principal floor in dwelling	0.489	0.500	85.4%	74.4%	59.0%	11.2%	0.9%	46.2%	-0.12621
Has wood, plank principal floor in dwelling	0.066	0.249	13.0%	8.8%	5.5%	3.8%	0.9%	6.4%	-0.03150
Has cement principal floor	0.263	0.440	0.0%	2.4%	10.9%	48.5%	81.7%	28.7%	0.12931
Has tile flooring	0.135	0.341	1.2%	12.5%	20.9%	27.2%	8.9%	14.1%	0.01947
Has floor of mud bricks	0.047	0.211	0.3%	1.6%	3.6%	9.2%	7.7%	4.5%	0.03565
Has other type of flooring	0.001	0.023	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.00392
Number of members per sleeping room	3.875	2.614	6.9	5.4	4.4	3.6	2.2	4.5	-0.09320

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.

Nicaragua
2001 - ASSET QUESTIONNAIRE

Question	Score if "Yes"	Score if "No"	Item Score
<i>1. In your household, is/are there?</i>			
Electricity	0.05256	-0.10132	_____
One or more radios	0.01290	-0.05127	_____
One or more televisions	0.06669	-0.07309	_____
One or more refrigerators	0.11439	-0.03043	_____
One or more bicycles	0.03688	-0.01336	_____
One or more motorcycles, scooters	0.10235	-0.00216	_____
One or more cars, trucks	0.12618	-0.01085	_____
One or more telephones	0.15389	-0.01582	_____
<i>2. Do the members of your household work their own or family's agricultural land?</i>			
	0.00077	-0.00384	_____
<i>3. What is the principal source of drinking water for your household?</i>			
Piped drinking water in residence	0.10279	-0.03777	_____
Piped drinking water outside residence	0.01647	-0.00659	_____
Private piped source outside residence	-0.04728	0.00172	_____
Public piped water outside residence	-0.07104	0.00288	_____
Private well	-0.05796	0.00881	_____
Public well	-0.07774	0.00716	_____
River, canal, surface water	-0.11399	0.00596	_____
Rainwater	-0.04192	0.00012	_____
Spring	-0.10697	0.01057	_____
Bottled water	0.14774	-0.00173	_____
Other	-0.00741	0.00001	_____
<i>4. What is the principal source of washing water for your household?</i>			
Piped water in residence	0.10503	-0.04014	_____
Piped water outside residence	0.01759	-0.00710	_____
Public tap	-0.06763	0.00230	_____
Private tap	-0.05052	0.00123	_____
Covered public well	-0.07512	0.00559	_____
Private covered well	-0.05052	0.00771	_____
Surface (river, stream, pond)	-0.10845	0.01175	_____
Spring	-0.10467	0.00862	_____
Rain	-0.06777	0.00016	_____
<i>5. What is the main water receptacle in your household?</i>			
Tank with lid	0.03848	-0.00028	_____
Tank without lid	0.04555	-0.00006	_____
Jerry can with lid	-0.01272	0.00461	_____
Jerry can without lid	-0.07196	0.00114	_____
Bucket or pail with lid	-0.01484	0.01005	_____
Bucket or pail without lid	-0.07462	0.00135	_____
Barrel with lid	0.01644	-0.00106	_____
Barrel without lid	0.00198	-0.00001	_____
Cooking pot	0.03848	-0.00028	_____
Other	0.10287	-0.00016	_____
Does not use water recipient	0.09747	-0.01552	_____

Nicaragua
2001 - ASSET QUESTIONNAIRE (Cont.)

Question	Score if "Yes"	Score if "No"	Item Score
<i>6. What is the principal means of water disposal in your household? (Cont.)</i>			
Public sewer	0.13776	-0.02101	_____
Septic system	0.10040	-0.00618	_____
Yard or patio	-0.02864	0.04185	_____
River or gorge	-0.06848	0.01249	_____
Street	0.06543	-0.00391	_____
Other	-0.05086	0.00020	_____
<i>7. What is the principal type of fuel for cooking used by your household?</i>			
Wood or straw	-0.04939	0.10529	_____
Kerosene	0.05414	-0.00032	_____
Gas	0.11084	-0.04658	_____
Electricity	0.08762	-0.00049	_____
Charcoal	0.00414	-0.00002	_____
Other	0.07845	-0.00001	_____
Does not cook	0.00542	-0.00004	_____
<i>8. What is the principal type of toilet facility used by your household?</i>			
VIP latrine	-0.01194	0.00148	_____
Pit latrine	-0.01184	0.01304	_____
Pit used to collect manure for latrine	-0.03844	0.00020	_____
Hanging latrine	-0.08693	0.00007	_____
Bush, field as latrine	-0.10301	0.02106	_____
<i>9. Does your household share a toilet with other households?</i>			
	0.00719	-0.00051	_____
<i>10. What is the principal type of sewer connection of your household?</i>			
Connection to a sewer	0.14629	-0.01880	_____
Connection to a septic system	0.11369	-0.00190	_____
Connection to an open sewer	0.12164	-0.00666	_____
Connection to a river or creek	0.06723	-0.00041	_____
Connection to rainwater (toilet)	0.06829	-0.00001	_____
<i>11. What is the principal material used for the floors in your household?</i>			
Earth, dung	-0.06062	0.05757	_____
Wood, plank	-0.06328	0.00379	_____
Has cement principal floor	0.10935	-0.03784	_____
Tile	0.02210	-0.00480	_____
Mud bricks	0.05794	-0.00104	_____
Other	-0.06814	0.00002	_____
<i>12. What is the principal material used for the walls of your household?</i>			
Cane, palm, trunks	-0.12546	0.00316	_____
Stone	0.05067	-0.00288	_____
Wood planks	-0.06846	0.02593	_____
Bricks, cement blocks, concrete	0.07628	-0.03385	_____
Adobe	-0.05655	0.00690	_____
Earthen bricks or blocks	0.02421	-0.00342	_____
Waste material	-0.08037	0.00268	_____
Plycem or Nicalit tiles	-0.01619	0.00017	_____
Other	-0.11462	0.00014	_____

Nicaragua

2001 - ASSET QUESTIONNAIRE (Cont.)

Question	Score if "Yes"	Score if "No"	Item Score
<i>13. What is the principal material used for the roof of your household?</i>			
Palm leaves and similar	-0.13543	0.00555	_____
Zinc	0.01448	-0.03515	_____
Plycem or Nicalit tiles	-0.02988	0.00738	_____
Tiles	-0.02988	0.00738	_____
Other	-0.10153	0.00054	_____
<i>14. What is the principal source of lighting in your household?</i>			
Generator	-0.05474	0.00030	_____
Gas or kerosene	-0.10152	0.05225	_____
Electricity	0.05345	-0.10059	_____
Other	-0.09877	0.00009	_____
<i>15. What is the principal means of trash disposal in your household?</i>			
Public collection trash disposal	0.10332	-0.04476	_____
Burns trash	-0.03743	0.02857	_____
Buries trash	-0.03987	0.00217	_____
Street cleaner	0.07517	-0.00026	_____
Private collection	0.06175	-0.00098	_____
Public container	0.04996	-0.00060	_____
Yard open land	-0.08128	0.01807	_____
Others	-0.04297	0.00001	_____
<i>16. What type of tenant is your household?</i>			
Owns dwelling with deed	0.02401	-0.03332	_____
Owns dwelling without deed	-0.04168	0.01684	_____
Owns dwelling with mortgage or loan being paid off	0.05457	-0.00012	_____
Loans dwelling	-0.05693	0.00549	_____
Rents dwelling	0.07841	-0.00314	_____
Other	-0.10086	0.00007	_____
<i>17. In what type of dwelling does your household reside?</i>			
House	0.00655	-0.09393	_____
Farmhouse	-0.01127	0.00006	_____
Room	0.01412	-0.00008	_____
Ranch	-0.13533	0.00462	_____
Improvised home	-0.08904	0.00173	_____
Apartment or room	0.00192	0.00000	_____
Store	0.05510	-0.00005	_____
<i>18. How many people are there for each sleeping room in your household?</i>	$\left(\frac{\# \text{ people} - 5.38}{2.69}\right) \times -0.015$		_____
Total Household Asset Score (sum of individual item scores)			_____

Nicaragua

2001 - QUINTILE CUT-OFF POINTS

Wealth Quintile	Asset Index Value	
	Bottom Cut-Off	Top Cut-Off
Low	Low	-0.99732
Second	-0.99732	-0.24161
Third	-0.24161	0.38187
Fourth	0.38187	1.16478
High	1.16478	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.