Rwanda

Demographic and Health Survey

2005

REPUBLIC OF RWANDA

Rwanda
Demographic and Health Survey
2005

Institut National de la Statistique
Ministère des Finances et de la Planification Économique
Kigali, Rwanda

ORC Macro
Calverton, Maryland, USA

July 2006

The following people participated in data analysis and the preparation of this report:

Jean Philippe Gatarayiha, Apolline Mukanyonga, Dr Eugénie Kayirangwa, Adeline Kabeja, Alphonse Rukundo, Athanasie Kabagwira, Gafishi N. Philippe, Rwabikumba Dévote, Rwakayiro Ignace, Muhoza Ananie, Kalinda Charles, Kayibanda Françoise, Fern Greenwell, Noah Bartlett, Mohamed Ayad, and Monique Barrère.

This report presents the findings of the 2005 Rwanda Demographic and Health Survey (RDHS-III), carried out from February to July 2005 by the *Direction de la Statistique* (renamed *Institut National de la Statistique du Rwanda* in September 2005).

Funding for the RDHS-III was provided by USAID, the *Commission Nationale de Lutte contre le SIDA* (CNLS) through the World Bank's Multi-County AIDS Program (MAP), Unicef, UNFPA, DFID and GTZ. Assistance was also provided by other national organizations, such as the Treatment and Research AIDS Center (TRAC), the *Laboratoire National de Référence* and the *Service National de Recensement* (SNR). Technical assistance was provided by ORC Macro as part of the Demographic and Health Surveys project (MEASURE DHS). The objective of the MEASURE DHS project is to collect, analyze and disseminate demographic data, especially those related to fertility, family planning, maternal and child health, and HIV/AIDS. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID or other cooperating organizations.

Additional information about the survey can be obtained from the *Institut National de la Statistique du Rwanda* (INSR), BP 6139, Kigali, Rwanda (Telephone: (250) 55104164; e-mail: snr@rwanda1.com).

Additional information about the MEASURE DHS project can be obtained from ORC Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, USA. Telephone: 301-572-0200; Fax: 301-572-0999; e-mail: reports@orcmacro.com; Internet: http://www.measuredhs.com).

Recommended citation:

Institut National de la Statistique du Rwanda (INSR) and ORC Macro. 2006. *Rwanda Demographic and Health Survey 2005*. Calverton, Maryland, U.S.A.: INSR and ORC Macro.

CONTENTS

Page

TABLES AND FIGURES ix
FOREWORD xix
ACKNOWLEDGMENTS xxi
ABBREVIATIONS xxiii
SUMMARY OF FINDINGS xxv
MILLENNIUM DEVELOPMENT GOAL INDICATORS xxxi
MAP OF RWANDA xxxii

CHAPTER 1 INTRODUCTION

1.1 Country Profile 1

1.1.1 Geography 1
1.1.2 Economy 2
1.1.3 Population 3
1.1.4 Population Policy 4
1.1.5 Public Health Policy 4

1.2 Objectives and Methodology of the Survey 4

1.2.1 Objectives of the Survey 5
1.2.2 Questionnaires 5
1.2.3 Sample Design 7
1.2.4 Sample Coverage 7
1.2.5 Hemoglobin and HIV Testing 8
1.2.6 Training and Data Collection 9
1.2.7 Data Processing 10

CHAPTER 2 HOUSEHOLD CHARACTERISTICS

2.1 Household Population By Age and Sex 11
2.2 Household Size and Composition 12
2.3 School Attendance and Educational Attainment 13
2.4 Living Conditions 18
2.5 Birth Registration with Civil Authorities 21

CHAPTER 3 CHARACTERISTICS OF SURVEY RESPONDENTS

3.1 Background Characteristics of Respondents 23
3.2 Educational Attainment....25
3.3 Literacy....27
3.4 Exposure to Mass Media 28
3.5 Employment 31

CHAPTER 4 FERTILITY

4.1 Fertility Levels and Differentials 38
4.2 Fertility Trends....41
4.3 Parity and Primary Infertility....44
4.4 Birth Intervals 46
4.5 Age at First Birth 48
4.6 Teenage Fertility 49

CHAPTER 5 FAMILY PLANNING

5.1 Knowledge of Contraception 51
5.2 Use of Contraception....52

5.2.1 Ever Use of Contraception 52
5.2.2 Current Use of Contraception 54

5.3 Number of Children at First Use of Contraception 59
5.4 Knowledge of Fertile Period....59
5.5 Source of Contraception....60
5.6 Future Use of Contraception....61
5.7 Exposure to Family Planning Messages....64
5.8 Contact of Nonusers with Family Planning Providers....51
5.9 Opinions and Attitudes of Couples toward Family Planning 51

5.9.1 Discussion of Family Planning with Husband....51
5.9.2 Attitudes of Couples toward Family Planning....52

CHAPTER 6 OTHER PROXIMATE DETERMINANTS OF FERTILITY

6.1 Marital Status....71
6.2 Polygyny....72
6.3 Age at First Union....73
6.4 Age at First Sexual Intercourse 76
6.4 Recent Sexual Activity....78
6.6 Exposure to the Risk of Pregnancy 81
6.7 Menopause 82

CHAPTER 7 FERTILITY PREFERENCES

7.1 Desire for (More) Children 85
7.2 Need for Family Planning Services 88
7.3 Ideal Number of Children 90
7.4 Fertility Planning Status 92

CHAPTER 8 MOTHER AND CHILD HEALTH

8.1 Antenatal Care 95
8.2 Delivery Care 100
8.3 Postnatal Care 105
8.4 Vaccination of Children 106
8.5 Childhood Illnesses 109

8.5.1 Acute Respiratory Infection (ARI) and Fever 109
8.5.2 Diarrhea 111

8.6 Problems in Accessing Health Care 116
8.7 Tobacco Consumption 117

CHAPTER 9 MALARIA

9.1 Introduction 119
9.2 Malaria Prevention 121

9.2.1 Household Possession of Mosquito Nets 122
9.2.2 Use of Mosquito Nets by Children 123
9.2.3 Use of Mosquito Nets by Women 125
9.2.4 Intermittent Preventive Treatment during Pregnancy 127

9.3 Treatment of Malaria in Children Under the Age of Five 128

CHAPTER 10 BREASTFEEDING AND NUTRITION OF MOTHERS AND CHILDREN

10.1 Breastfeeding and Supplementation 131
10.2 Micronutrient Intake And Anemia Prevalence 137
10.3 Prevalence of Anemia Due to Iron Deficiency 143
10.4 Nutritional Status of Children 147
10.5 Nutritional Status of Women 154

CHAPTER 11 INFANT AND CHILD MORTALITY

11.1 Definition, Methodology, and Data Quality 157
11.2 Levels and Trends 158
11.3 Differentials in Infant and Child Mortality 160
11.4 Perinatal Mortality 163

11.5 High-Risk Fertility Behavior 165

CHAPTER 12 MATERNAL MORTALITY

12.1 Introduction 167
12.2 Data Collection 167
12.3 Data Quality 168
12.4 Direct Estimates of Adult Mortality 170
12.5 Direct Estimates of Maternal Mortality 172

CHAPTER 13 DOMESTIC VIOLENCE

13.1 Methodology 175
13.2 Domestic Violence 177

13.2.1 Physical Violence Since Age 15 177
13.2.2 Violence during Pregnancy 178
13.2.3 Marital Control Exercised by the Husband/Partner 179

13.3 Spousal Violence 181

13.3.1 Prevalence of Spousal Violence 181
13.3.2 Frequency of Recent Spousal Violence 183
13.3.3 Onset of Spousal Violence 184

13.4 Consequences Of Violence And Help Seeking 185
13.5 Violence by Spousal Characteristics and Women's Status Indicators 187

CHAPTER 14 HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOR

14.1 Knowledge, Opinions, And Attitudes 192

14.1.1 Knowledge of HIV Transmission and Prevention Methods 192
14.1.2 Stigmatization 198
14.1.3 Opinions 200

14.2 Higher-Risk Sexual Intercourse and Condom Use 203
14.3 Testing and Counseling for HIV/AIDS 206
14.4 Sexually Transmitted Infections (STIs) 209
14.5 Injections from a Health Worker 211
14.6 Knowledge of HIV/AIDS and Sexual Behavior among Youth 214

CHAPTER 15 HIV PREVALENCE AND ASSOCIATED FACTORS

15.1 HIV Testing Protocol 225
15.2 Coverage of HIV Testing 228
15.3 HIV Prevalence 231

15.3.1 HIV Prevalence Distribution According to Sociodemographic Variables 231
15.3.2 HIV Prevalence by Demographic Variables 233
15.3.3 HIV Prevalence by Sexual Behavior Characteristics 234
15.3.4 HIV Prevalence among Youth 236
15.3.5 HIV Prevalence and Other Risk Factors 238
15.3.6 HIV Prevalence and Male Circumcision 239
15.3.7 HIV Prevalence among Couples 239

15.4 Sentinel Surveillance System and RDHS-III 241

CHAPTER 16 ORPHANED AND VULNERABLE CHILDREN

16.1 Orphanhood and Children's Living Arrangements 243
16.2 Access to Essential Services 246
16.3 Strengthening Family Capacities to Support And Protect Children 247

16.3.1 Malnutrition 247
16.3.2 Early Sexual Intercourse 248
16.3.3 Succession Planning 248

16.4 Protection of Vulnerable Children 249
16.5 Care and Support 250

16.5.1 Care and Support of the Chronically Ill 250
16.5.2 Care and Support of OVC 251

REFERENCES 253

APPENDIX A SAMPLE IMPLEMENTATION

A.1 Introduction 257
A.2 Sample Frame 257
A.3 Sample Selection 258
A.4 Sampling Probability 259
A.5 Survey Results 259

APPENDIX B ESTIMATES OF SAMPLING ERRORS 267

APPENDIX C DATA QUALITY TABLES 279

APPENDIX D RESULTS ACCORDING TO OLD PROVINCES 285

APPENDIX E PERSONS INVOLVED IN THE 2005 RWANDA DEMOGRAPHIC AND HEALTH SURVEY 323

APPENDIX F QUESTIONNAIRES 327

TABLES AND FIGURES

Page

CHAPTER 1 INTRODUCTION

Table 1.1 Results of the household and individual interviews 8

CHAPTER 2 HOUSEHOLD CHARACTERISTICS

Table 2.1 Household population by age, sex, and residence 11
Table 2.2 Household composition 13
Table 2.3.1 Educational attainment of household population: female 14
Table 2.3.2 Educational attainment of household population: male 15
Table 2.4 School attendance ratios 16
Table 2.5 Housing characteristics 19
Table 2.6 Household durable goods 20
Table 2.7 Wealth quintiles 21
Table 2.8 Birth registration of children under age five 22

Figure 2.1 Population pyramid 12
Figure 2.2 Age-specific attendance rates 18

CHAPTER 3 CHARACTERISTICS OF SURVEY RESPONDENTS

Table 3.1 Age of respondents 23
Table 3.2 Background characteristics of respondents 24
Table 3.3.1 Educational attainment by background characteristics: women 25
Table 3.3.2 Educational attainment by background characteristics: men 26
Table 3.4.1 Literacy: women 27
Table 3.4.2 Literacy: men 28
Table 3.5.1 Exposure to mass media: women 29
Table 3.5.2 Exposure to mass media: men 30
Table 3.6 Employment status 32
Table 3.7.1 Occupation: women 33
Table 3.7.2 Occupation: men 34
Table 3.8 Type of employment 35
Table 3.9 Type of employer 36

CHAPTER 4 FERTILITY

Table 4.1 Current fertility 38
Table 4.2 Fertility by background characteristics 40
Table 4.3 Trends in fertility 41

Table 4.4 Trends in age-specific fertility rates ... 42
Table 4.5.1 Children ever born and living : women ... 44
Table 4.5.2 Children ever born and living : men ... 45
Table 4.6 Birth intervals ... 47
Table 4.7 Age at first birth ... 48
Table 4.8 Median age at first birth by background characteristics ... 49
Table 4.9 Teenage pregnancy and motherhood ... 50

Figure 4.1 Age-Specific Fertility Rates, by Residence ... 39
Figure 4.2 Total Fertility Rate and Mean Number of Children Ever Born to Women Age 40-49 ... 40
Figure 4.3 Trends in Age-Specific Fertility Rates, Rwanda 1992, 2000, and 2005 ... 42
Figure 4.4 Age-Specific Fertility Rates for Five-Year Periods Preceding the Survey ... 43
Figure 4.5 Trends in the Total Fertility Rate among Women Age 15-34, Rwanda 1992, 2000, and 2005 ... 43

CHAPTER 5 FAMILY PLANNING

Table 5.1.1 Knowledge of contraceptive methods: women ... 51
Table 5.1.2 Knowledge of contraceptive methods: men ... 52
Table 5.2 Ever use of contraception ... 53
Table 5.3 Current use of contraception ... 55
Table 5.4 Current use of contraception by background characteristics ... 58
Table 5.5 Number of children at first use of contraception ... 59
Table 5.6 Knowledge of the fertile period ... 60
Table 5.7 Source of contraception ... 61
Table 5.8 Future use of contraception ... 62
Table 5.9 Reason for not intending to use contraception ... 63
Table 5.10 Preferred method of contraception for future use ... 64
Table 5.11.1 Exposure to family planning messages: women ... 65
Table 5.11.2 Exposure to family planning messages: men ... 66
Table 5.12 Contact of nonusers with family planning providers ... 67
Table 5.13 Discussion of family planning with husband ... 68
Table 5.14 Attitudes towards family planning ... 69

Figure 5.1 Contraceptive Use among Currently Married Women Age 15-49 ... 56
Figure 5.2 Trends in Use of Modern Methods among Currently Married Women ... 57

CHAPTER 6 OTHER PROXIMATE DETERMINANTS OF FERTILITY

Table 6.1 Current marital status ... 71
Table 6.2 Number of co-wives and wives ... 73
Table 6.3 Age at first marriage ... 74
Table 6.4 Median age at first marriage ... 75
Table 6.5 Age at first sexual intercourse: ... 76
Table 6.6 Median age at first sexual intercourse ... 78
Table 6.7.1 Recent sexual activity: women ... 79

Table 6.7.2 Recent sexual activity: men 80
Table 6.8 Postpartum amenorrhea, abstinence, and insusceptibility 81
Table 6.9 Median duration of postpartum insusceptibility by background characteristics .. 82
Table 6.10 Menopause 83

Figure 6.1 Percentage of Never-Married Women and Men, by Age 72
Figure 6.2 Median Age at First Marriage among Women and Men, by Background Characteristics 75
Figure 6.3 Median Age at First Intercourse and at First Union among Women 25-49, by Background Characteristics 77

CHAPTER 7 FERTILITY PREFERENCES

Table 7.1 Fertility preferences by number of living children 86
Table 7.2 Desire to limit childbearing 88
Table 7.3 Need for family planning among currently married women 89
Table 7.4 Ideal number of children 91
Table 7.5 Mean ideal number of children 92
Table 7.6 Fertility planning status 93
Table 7.7 Wanted fertility rates 94

Figure 7.1 Proportion of Currently Married Women and Men Who Want No More Children, by Number of Living Children 87

CHAPTER 8 MATERNAL AND CHILD HEALTH

Table 8.1 Antenatal care 96
Table 8.2 Number of antenatal care visits and timing of first visit 97
Table 8.3 Components of antenatal care 98
Table 8.4 Tetanus toxoid injections 100
Table 8.5 Place of delivery 101
Table 8.6 Assistance during delivery 102
Table 8.7 Delivery characteristics 104
Table 8.8 Postnatal care 106
Table 8.9 Vaccinations by source of information 107
Table 8.10 Vaccinations by background characteristics 109
Table 8.11 Prevalence and treatment of symptoms of ARI and fever 110
Table 8.12 Prevalence of diarrhea 112
Table 8.13 Knowledge of ORS packets 114
Table 8.14 Diarrhea treatment 115
Table 8.15 Feeding practices during diarrhea 116
Table 8.16 Problems in accessing health care 117
Table 8.17 Use of smoking tobacco 118

Figure 8.1 Trends in Antenatal Care and Delivery, Rwanda 1992, 2000, and 2005 97
Figure 8.2 Children Whose Delivery Was Assisted by Trained Personnel 103

Figure 8.3 Trends in Vaccination Coverage among Children Age 12-23 Months, Rwanda 1992, 2000, and 2005 108
Figure 8.4 Prevalence of ARI, Fever, and Diarrhea, by Age 113

CHAPTER 9 MALARIA

Table 9.1 Household possession of mosquito nets 122
Table 9.2 Use of mosquito nets by children 124
Table 9.3 Use of mosquito nets by women 126
Table 9.4 Use of Intermittent Preventive Treatment by women during pregnancy 127
Table 9.5 Use of SP/Fansidar by women during pregnancy 128
Table 9.6 Prevalence and prompt treatment of children with fever 129
Table 9.7 Type and timing of antimalarial drugs taken by children with fever 130

Figure 9.1 Household Ownership of Mosquito Nets 123
Figure 9.2 Use of Mosquito Nets by Children Under Age 5, According to Province 125
Figure 9.3 Pregnant Women Who Slept Under a Mosquito Net the Night Preceding the Survey 126

CHAPTER 10 BREASTFEEDING AND NUTRITION OF MOTHERS AND CHILDREN

Table 10.1 Initial breastfeeding 132
Table 10.2 Breastfeeding status by age 134
Table 10.3 Median duration and frequency of breastfeeding 136
Table 10.4 Foods consumed by children in the day or night preceding the interview 137
Table 10.5 Iodization of household salt 138
Table 10.6 Micronutrient intake among children 140
Table 10.7 Micronutrient intake among mothers 142
Table 10.8 Prevalence of anemia in children 144
Table 10.9 Prevalence of anemia in women 145
Table 10.10 Prevalence of anemia in children by anemia status of mother 146
Table 10.11 Prevalence of anemia in men 147
Table 10.12 Nutritional status of children 149
Table 10.13 Nutritional status of women 156

Figure 10.1 Breastfeeding Practices Among Children Under Age 3 135
Figure 10.2 Percentage of Children Under Age 5 Who Are Stunted 150
Figure 10.3 Percentage of Children Under Age 5 Who Are Wasted 152
Figure 10.4 Trends in malnutrition among Children under 5 Years), Rwanda 1992, 2000, and 2005 154

CHAPTER 11 INFANT AND CHILD MORTALITY

Table 11.1 Early childhood mortality rates 158
Table 11.2 Early childhood mortality rates by background characteristics 161
Table 11.3 Early childhood mortality rates by demographic characteristics 162
Table 11.4 Perinatal mortality 164

Table 11.5 High-risk fertility behavior 166

Figure 11.1 Trends in Infant and Under-five Mortality, Rwanda 1992, 2000, and 2005 159
Figure 11.2 Trends in Infant and Under-five Mortality from the RDHS-I, RDHS-II, and RDHS-III 160
Figure 11.3 Under-five Mortality by Mother's Background Characteristics 161
Figure 11.4 Infant Mortality by Reproductive Behavior 163

CHAPTER 12 MATERNAL MORTALITY

Table 12.1 Data on siblings 168
Table 12.2 Indicators on data quality 169
Table 12.3 Estimates of age-specific female and male adult mortality 170
Table 12.4 Maternal mortality 173

Figure 12.1 Female Mortality Rates for the Period 2000-2004 and Model Life Table Rates, by Age Group 171
Figure 12.2 Male Mortality Rates for the Period 2000-2004 and Model Life Table Rates, by Age Group 172

CHAPTER 13 DOMESTIC VIOLENCE

Table 13.1 Experience of beatings or physical mistreatment 177
Table 13.2 Perpetrators of violence 178
Table 13.3 Violence during pregnancy 179
Table 13.4 Marital control exercised by husband 180
Table 13.5 Marital violence 182
Table 13.6 Frequency of spousal violence 184
Table 13.7 Onset of spousal violence 185
Table 13.8 Physical consequences of spousal violence 186
Table 13.9 Help seeking 187
Table 13.10 Spousal violence, women's status, and spousal characteristics 188

Figure 13.1 Percentage of Ever-Married Women who Have Ever Experienced Specific Forms of Violence from Their Husbands 183
Figure 13.2 Prevalence of Spousal Violence, by Level of Education of Woman and Her Spouse and Alcohol Consumption of Spouse 189

CHAPTER 14 HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOR

Table 14.1 Knowledge of AIDS 192
Table 14.2 Knowledge of HIV prevention methods 193
Table 14.3.1 Comprehensive knowledge about AIDS : women 195
Table 14.3.2 Comprehensive knowledge about AIDS : men 196
Table 14.4 Knowledge of prevention of mother-to-child transmission of HIV 197
Table 14.5.1 Accepting attitudes toward those living with HIV/AIDS: women 199
Table 14.5.2 Accepting attitudes toward those living with HIV/AIDS: men 200

Table 14.6 Attitudes toward negotiating safer sexual relations with husband 201
Table 14.7 Adult support of education about condom use to prevent AIDS 202
Table 14.8.1 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: women 204
Table 14.8.2 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: men 205
Table 14.9.1 Prior HIV testing and knowledge of results: women 206
Table 14.9.2 Prior HIV testing and knowledge of results: men 207
Table 14.10 Pregnant women counseled and tested for HIV 209
Table 14.11 Self-reported prevalence of sexually-transmitted infections (STIs) and STI symptoms 210
Table 14.12 Prevalence of injections 212
Table 14.13 Comprehensive knowledge about AIDS and of a source of condoms among youth 214
Table 14.14 Age at first sexual intercourse among youth 216
Table 14.15 Condom use at first sexual intercourse among youth 217
Table 14.16 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth 218
Table 14.17 Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months 219
Table 14.18 Age-mixing in sexual relationships among women age 15-19 221
Table 14.19 Drunkenness during sexual intercourse among youth 222
Table 14.20 Recent HIV tests among youth 223

Figure 14.1 Perception and Beliefs about Abstinence and Faithfulness 203
Figure 14.2 Women and Men Seeking Treatment for STIs 211
Figure 14.3 Type of Facility where Received Last Medical Injection 213
Figure 14.4 Percentage whose Last Injection was Given with a Syringe and Needle Taken from a New, Unopened Package 213
Figure 14.5 Trends in Age at First Sex, Rwanda 2000 and 2005 217
Figure 14.6 Abstinence, Being Faithful, and Condom Use (ABC) Among Young Women and Men 220

CHAPTER 15 HIV PREVALENCE AND ASSOCIATED FACTORS

Table 15.1 Coverage of HIV testing by residence and province 228
Table 15.2 Coverage of HIV testing by background characteristics 230
Table 15.3 HIV prevalence by age 231
Table 15.4 HIV prevalence by background characteristics 232
Table 15.5 HIV prevalence and confidence intervals 233
Table 15.6 HIV prevalence by sociodemographic characteristics 234
Table 15.7 HIV prevalence by sexual behavior characteristics 235
Table 15.8 HIV prevalence among young people 237
Table 15.9 HIV prevalence by other characteristics 238
Table 15.10 Prior HIV testing by HIV status 239
Table 15.11 HIV prevalence by male circumcision 239
Table 15.12 HIV prevalence among couples 240

Figure 15.1 HIV Prevalence by Sex and Age 231

CHAPTER 16 ORPHANED AND VULNERABLE CHILDREN

Table 16.1 Children's living arrangements and orphanhood 244
Table 16.2 Orphans and vulnerable children (OVC) 245
Table 16.3 School attendance by survivorship of parents and by OVC status 246
Table 16.4 Underweight orphans and vulnerable children 247
Table 16.5 Sexual intercourse before age 15 among orphans and vulnerable children 248
Table 16.6 Succession planning 249
Table 16.7 Widows dispossessed of property 250
Table 16.8 External support for chronically ill persons 251
Table 16.9 External support for orphans and vulnerable children 252

APPENDIX A SAMPLE IMPLEMENTATION

Table A.1 Distribution of households and enumeration areas (EAs) by old province and according to residence (RGPH, 2002) 257
Table A.2 Sample allocation by old province and according to residence 258
Table A.3 Sample implementation: women 260
Table A.4 Sample implementation: men 261
Table A.5 Coverage of HIV testing among interviewed women by background characteristics 262
Table A.6 Coverage of HIV testing among interviewed men by background characteristics 263
Table A.7 Coverage of HIV testing among women who ever had sex by risk status variables 264
Table A.8 Coverage of HIV testing among men who ever had sex by risk status variables 265

APPENDIX B ESTIMATES OF SAMPLING ERRORS

Table B.1 List of selected variables for sampling errors 270
Table B.2 Sampling errors - National sample 271
Table B.3 Sampling errors - Urban sample 272
Table B.4 Sampling errors - Rural sample 273
Table B.5 Sampling errors – City of Kigali 274
Table B.6 Sampling errors – South Province 275
Table B.7 Sampling errors – West Province 276
Table B.8 Sampling errors – North Province 277
Table B.9 Sampling errors – East Province 278

APPENDIX C DATA QUALITY TABLES

Table C.1 Household age distribution 279
Table C.2.1 Age distribution of eligible and interviewed women 280
Table C.2.2 Age distribution of eligible and interviewed men 280

Table C.3 Completeness of reporting 281
Table C.4 Births by calendar years 281
Table C.5 Reporting of age at death in days 282
Table C.6 Reporting of age at death in months 283

APPENDIX D RESULTS ACCORDING TO OLD PROVINCES

Table D.2.3 Educational attainment of household population 285
Table D.2.4 School attendance ratios 286
Table D.2.7 Wealth quintiles 286
Table D.2.8 Birth registration of children under age five 287
Table D.3.3 Educational attainment 287
Table D.3.4 Literacy 288
Table D.3.5 Exposure to mass media 288
Table D.3.6 Employment status 289
Table D.3.6 Occupation 289
Table D.4.2 Fertility by old province 290
Table D.4.6 Birth Intervals 290
Table D.4.8 Median age at first birth 290
Table D.4.9 Teenage pregnancy and motherhood 291
Table D.5.4 Current use of contraception by background characteristics 291
Table D.5.11 Exposure to family planning messages 292
Table D.6.2 Number of co-wives and wives 292
Table D.6.4 Median age at first marriage 293
Table D.6.6 Median age at first sexual intercourse 293
Table D.6.7 Recent sexual activity 294
Table D.6.9 Median duration of postpartum insusceptibility by background characteristics 294
Table D.7.2 Desire to limit childbearing 295
Table D.7.3 Need for family planning among currently married women 295
Table D.7.5 Mean ideal number of children 295
Table D.7.7 Wanted fertility rates 296
Table D.8.1 Antenatal care 296
Table D.8.3 Components of antenatal care 297
Table D.8.4 Tetanus toxoid injections 297
Table D.8.5 Place of delivery 297
Table D.8.6 Assistance during delivery 298
Table D.8.7 Delivery characteristics 298
Table D.8.8 Postnatal care 299
Table D.8.10 Vaccinations 299
Table D.8.11 Prevalence and treatment of symptoms of ARI and fever 300
Table D.8.12 Prevalence of diarrhea 300
Table D.8.13 Knowledge of ORS packets 300
Table D.8.14 Diarrhea treatment 301
Table D.8.16 Problems in accessing health care 301
Table D.9.1 Household possession of mosquito nets 302
Table D.9.2 Use of mosquito nets by children 302

Table D.9.3 Use of mosquito nets by women 303
Table D.9.4 Use of Intermittent Preventive Treatment by women during pregnancy 303
Table D.9.6 Prevalence and prompt treatment of children with fever 304
Table D.9.7 Type and timing of antimalarial drugs taken by children with fever 304
Table D.10.1 Initial breastfeeding 304
Table D.10.3 Median duration and frequency of breastfeeding 305
Table D.10.5 Iodization of household salt 305
Table D.10.6 Micronutrient intake among children 305
Table D.10.7 Micronutrient intake among mothers 306
Table D.10.8 Prevalence of anemia in children 306
Table D.10.9 Prevalence of anemia in women 307
Table D.10.11 Prevalence of anemia in men 307
Table D.10.12 Nutritional status of children 307
Table D.10.13 Nutritional status of women 308
Table D.11.2 Early childhood mortality rates 308
Table D.11.4 Perinatal mortality 308
Table D.13.1 Experience of beatings or physical mistreatment 309
Table D.13.3 Violence during pregnancy 309
Table D.13.5 Marital violence 309
Table D.13.6 Frequency of spousal violence 310
Table D.14.1 Knowledge of AIDS 310
Table D.14.2 Knowledge of HIV prevention methods 310
Table D.14.3 Comprehensive knowledge about AIDS 311
Table D.14.4 Knowledge of prevention of mother to child transmission of HIV 311
Table D.14.5 Accepting attitudes toward those living with HIV/AIDS 312
Table D.14.6 Attitudes toward negotiating safer sexual relations with husband 312
Table D.14.7 Adult support of education about condom use to prevent AIDS 313
Table D.14.8 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months 313
Table D.14.9 Coverage of prior HIV testing 314
Table D.14.10 Pregnant women counseled and tested for HIV 314
Table D.14.11 Self-reported prevalence of sexually-transmitted infections (STIs) and STI symptoms 315
Table D.14.12 Prevalence of injections 315
Table D.14.13 Comprehensive knowledge about AIDS and of a source of condoms among youth 316
Table D.14.14 Age at first sexual intercourse among youth 316
Table D.14.16 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth 317
Table D.14.17 Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months 317
Table D.14.19 Drunkenness during sexual intercourse among youth 318
Table D.15.4 HIV prevalence 318
Table D.15.8 HIV prevalence among young people 318
Table D.15.12 HIV prevalence among couples 319
Table D.16.1 Children's living arrangements and orphanhood 319
Table D.16.2 Orphans and vulnerable children (OVC) 320

Table D.16.3 School attendance by survivorship of parents and by OVC status 320
Table D.16.4 Underweight orphans and vulnerable children..... 321
Table D.16.6 Succession planning..... 321
Table D.16.7 Widows dispossessed of property..... 321
Table D.16.8 External support for chronically ill persons 322
Table D.16.9 External support for orphans and vulnerable children..... 322

FOREWORD

In the context of its desire to obtain a database designed to provide reliable indicators to monitor and assess the implementation of the country's sector programs and policies, the Poverty Reduction Strategy, Vision 2020 and the commitments it has undertaken at the international level, in particular the Millennium Development Goals, the Government of Rwanda has just completed the Third Demographic and Health Survey (EDSR-III 2005).

EDSR-III follows the surveys that were successfully conducted in 1992 and 2000, and is part of a broad, worldwide program of socio-demographic and health Surveys conducted in developing countries since the mid-1980's. In addition to the indicators on fertility, family planning, and maternal and child health which the Survey normally provides, the main innovation of EDSR-III was the integration of a survey module on the seroprevalence of HIV and anemia as well as a module on domestic violence. As such, for the first time, the survey allowed us to determine the prevalence of HIV at the national level.

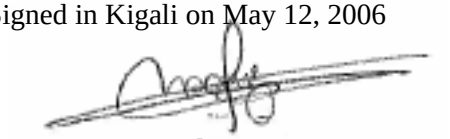
Using this report, the reader will be better able to delineate the socio-demographic challenges the country faces and that it will have to meet, in particular: a maternal and infant mortality rate which remains high despite being in decline, poor utilization of childbirth and post-natal services, a continually high fertility rate, which places pressure on social costs and slows the pace of development, poor utilization of modern contraceptive methods, as well as an alarming nutritional status, above all among children under five years of age and their mothers. The reader could also be alerted to the fact that certain population groups are particularly impacted by a high prevalence of anemia or HIV. Most of these indicators can be improved by increased awareness and heightened responsibility within a couple or among individuals. Without this, the State's investments would have limited impact.

This Survey also draws attention to indicators of an appreciable level that will require strengthening of sustained efforts to maintain, if not to improve, trends. This is particularly the case with regard to the high level of breastfeeding, prenatal visits, vaccination rates of children under five years of age (except for the city of Kigali), and the use of iodized salt.

The results of EDSR-III 2005 are thus extremely important because they allow us to assess the progress made in meeting the challenges mentioned above. The results also make it possible to readjust intermediate objectives, identify areas requiring priority attention, and even make projections of future socio-demographic development. The same results represent a daunting challenge to entities providing development financing and call for integrated financing approaches involving multiple sectors of socio-economic life.

Accordingly, the Government of Rwanda and in particular the Ministry of Finance and Economic Planning is pleased to provide reliable results to policymakers, planners, and other users in both the public and private sector, based on the current context of the country. May this document be a source of valuable and useful information to all those individuals and organizations active in development who will use it to contribute to an improved quality of life for Rwanda's population.

Signed in Kigali on May 12, 2006



Monique Nsanzabaganwa
Minister of State in Charge of Economic Planning
at the Ministry of Finance and Economic Planning

ACKNOWLEDGMENTS

This report would not have materialized without the participation of a large number of individuals and organizations. We would like to express our profound thanks to them.

First, we extend our thanks to the men and women who generously agreed to respond to all of the questions submitted to them. There was a high response rate both from men (99.2%) and women (98.1%).

We would like to express our sincere appreciation to the various Ministries for facilitating the implementation of the Survey. We offer our profound gratitude to the Ministry of Health for its cooperation during the preparation and completion of the survey. We also offer our sincere thanks to the Ministry of Local Government, Good Governance, Community Development and Social Affairs as well as to all of the provincial and district authorities for their assistance and their contribution to the smooth implementation of the Survey. Certainly, without the ongoing support of these various authorities, EDSR-III 2005 could not have been achieved.

We also express our gratitude to the International Organizations for their vital financial assistance. Financial contributions from the United States Agency for International Development (USAID/Rwanda), the World Bank through the Support for the Multisectoral AIDS Project (MAP) and through the National AIDS Control Commission (CNLS), the Department For International Development (DFID), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), and the German Technical Cooperation enterprises (GTZ) to the EDSR-III budget were of immense significance to the effective accomplishment of the survey.

We hereby express our profound gratitude to the team from ORC Macro, in particular Mr. Mohamed Ayad, responsible for drafting the project and technical coordination, Mrs. Fern Greenwell, ORC Macro Technical Advisor to EDSR-III 2005, Mr. Noah Bartlett, technical advisor for drafting the reports, and the other ORC Macro officers who contributed to the success of EDSR-III 2005 for their much appreciated technical assistance. The high quality of the analyses presented in this report is evidence of their support.

We deeply appreciate the specific technical support of the CNLS, the Treatment and Research Aids Center (TRAC), and the National Reference Laboratory (LNR). Their active participation throughout the conduct of the survey demonstrated the effectiveness of the excellent collaboration between the country's various institutions.

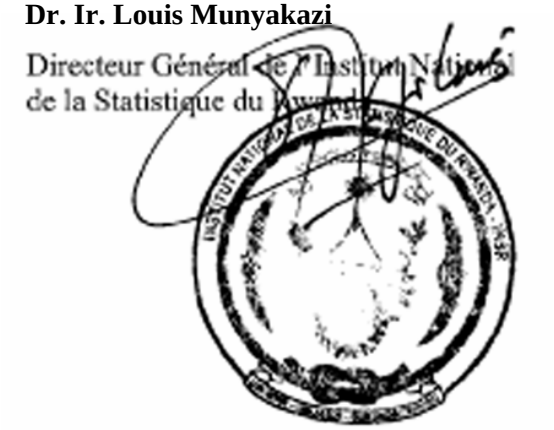
The Third Demographic and Health Survey would not have been accomplished without the unfailing participation of the officers from the National Institute of Statistics who were relentlessly involved, in particular Mr. Philippe Gafishi Ngango, National Director of EDSR-III 2005, Mrs. Apolline Mukanyonga, Technical Director, and Mrs. Athanasie Kabagwira, Associate Technical Director, who, in cooperation with supervisors and administrative support personnel, supplied pertinent technical supervision and contributed to the analysis of the results.

We warmly congratulate the cartographers, team leaders, monitors, and the men and women who conducted the surveys, as well as the drivers who were able to overcome the challenges and fatigue inherent in this type of operation.

We wish to reiterate our sincere thanks to all those, far and wide, who contributed to the completion of this Survey.

Lastly, we offer our profound appreciation to the men and women who will use this document, as they have understood the ultimate aim of the production of this valuable report.

Dr. Ir. Louis Munyakazi



Managing Director of the National Institute of Statistics of Rwanda

ABBREVIATIONS

AD	Age at death
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
AQ	Amodiaquine
ARI	Acute Respiratory Infection
ASFR	Age-specific Fertility Rate
BCG	Bacillus of Calmette and Guérin (vaccine against tuberculosis)
BMI	Body Mass Index
CBR	Crude Birth Rate
CDC	Centers for Disease Control and Prevention
CNLS	Commission Nationale de Lutte contre le Sida
CSPro	Census and Survey Processing
CTS	Conflict Tactics Scale
DFID	Department For International Development
DHS	Demographic and Health Surveys
DPT	Diphtheria-Pertussis-Tetanus vaccine
EA	Enumeration area
EDSC	Cameroon Demographic and Health Survey
EDSBF	Burkina Faso Demographic and Health Survey
ENF	Enquête Nationale sur la Fécondité (National Fertility Survey)
EPI	Expanded Program of Immunization
ESD	Enquête sociodémographique (Sociodemographic Survey)
FP	Family Planning
FRw	Rwandan Franc
GAR	Gross Attendance Ratio
GDP	Gross Domestic Product
GFR	General Fertility Rate
GPI	Gender Parity Index
GTZ	German Technical Cooperation
HIV	Human Immunodeficiency Virus
IEC	Information/Education/Communication
INSR	Institut National de la Statistique du Rwanda
IPT	Intermittent Preventive Treatment
ITN	Insecticide-Treated Mosquito Net
IUD	Intra Uterine Device

LAM	Lactational Amenorrhea Method
LNR	National Reference Laboratory
MAP	Multi-country AIDS Program
MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
NAR	Net Attendance Ratio
NCHS	National Center for Health Statistics
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
OVC	Orphaned and Vulnerable Children
PNILP	Programme National Intégré de Lutte contre le Paludisme (National Malaria Control Program)
PRSP	Poverty Reduction Strategy Papers
PSU	Primary Sampling Units
RBM	Roll Back Malaria
RDHS-I	First Rwanda Demographic and Health Survey, 1992
RDHS-II	Second Rwanda Demographic and Health Survey, 2000
RDHS-III	Third Rwanda Demographic and Health Survey, 2005
RGPH	Recensement Général de la Population et de l'Habitat (General Population and Housing Census)
RHF	Recommended Home Fluids
SDM	Standard Days Method
SP	Sulfadoxine-Pyrimethamine
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate
TRAC	Treatment and Research AIDS Center
TWFR	Total Wanted Fertility Rate
UNFPA	United Nations Population Fund
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	United States Dollars
VCT	Voluntary Counseling and Testing Center
VIP	Ventilation-Improved Pit Latrine
WHO	World Health Organization
YSD	Years since death

SUMMARY OF FINDINGS

A total of 10,644 households were selected in the sample for the third Rwandan Demographic and Health survey (RDHS-III), and 10,307 of these were contacted at the time of the survey. The survey teams were able to interview individuals in 10,272 households, for a response rate of nearly 100 percent. In the 10,272 households surveyed, 11,539 women between 15 and 49 years of age were considered eligible for individual interviews and 11,321 were successfully interviewed. Thus the response rate for women was 98 percent. The male survey was conducted in one out of every two households. A total of 4,959 men between 15 and 59 years of age were identified in the sub-sample of households. Among the 4,959 men slated for individual interviews, 4,820 were successfully interviewed, for a response rate of 97 percent among men.

The survey results show that 44 percent of the women interviewed were between 15 and 24 years at the time of the survey and 43 percent of men were in that age group. Two out of every five women and about one out of two men were never-married. These data indicate that the Rwanda's population is generally young, a fact that needs to be drawn to the attention of policymakers in designing national development programs. The proportion of women with no formal education (23 percent) is higher than that of men (17 percent). Only 10 percent of women and 12 percent of men have at least a secondary level of education. The proportion of men and women who do not know how to read is 22 percent and 29 percent, respectively. Also noteworthy is that on the national level, more than two out of five women (44 percent) and about one out of five men (19 percent) do not have access to any media. Only 8 percent of women and 10 percent of men read a newspaper at least once a week.

Very few Rwandan households have electricity (5 percent). In rural areas less than 2 percent of households have electricity, compared to 25 percent in urban areas. In regards to drinking water, 39 percent of urban households and 71 percent of rural households do not have reliably clean, potable water (tap water, boreholes, or protected wells). Concerning toilets, two out of three households (67 percent) use uncovered latrines. A total of 5 percent have no toilet facilities.

FERTILITY

Analysis of the 2005 RDHS-III data indicates that the fertility rate of Rwandan women remains high. The Total Fertility Rate (TFR) is 6.1 children for all women, 4.9 for urban women, and 6.3 for rural women.

The level of education, urban-rural residence, marital status, and household wealth are the main variables for which differences are seen in the fertility rates of Rwandan women. Among the provinces, North and West provinces show the highest fertility rates and South province the lowest.

Fertility among adolescent women is negligible, accounting for only 3 percent of national fertility. Women older than age 40 account for 12 percent of fertility. The mean number of children ever-born (CEB) among all women between 40-49 is 6.6 children per woman. Among urban residents of this age-group, the mean number of CEB is 5.8; among rural residents of this age group it is 6.7.

As for fertility trends, the youngest and oldest age groups surveyed (15-19 and 40-49 years) show a decline from one survey to the next. It is women from 20 to 39 years old who account for the largest increase in fertility. A comparison of TFR across past and current surveys indicates that the fertility stabilized in 1992 at about 6 children per woman.

FAMILY PLANNING

Knowledge of contraception. Although almost all married women are aware of contraception, and of modern methods, in particular (98 percent in 2005, compared to 97 percent in 2000), relatively few women use them.

Knowledge of contraception among men is also almost universal: 98 percent of male respondents declared they knew of at least one modern contraceptive method and 77 percent said they knew of traditional methods.

Contraceptive prevalence. Contraceptive prevalence among currently-married women is only 17 percent, with 10 percent using modern methods. However, the proportion of married women using contraception has increased in the five years since the RDHS-II, rising from 13 percent in 2000 to 17 percent in 2005 for all methods and from 4 percent in 2000 to 10 percent in 2005 for modern methods. The modern methods most often used are injectables (5 percent) and pills (2 percent). The survey results show that contraceptive use is lowest among the youngest and oldest age groups: 7 percent for women 15-24 years old and 10 percent for women 45-49 years old.

MARRIAGE

Among women age 15-49, 49 percent declared they were in a union at the time of the survey. The proportion of never-married women decreases as age increases and it is rare to find a woman over 45 years old who has never been married (2 percent). Therefore, marriage, which remains practically the sole context of procreation in Rwanda, is very common. In addition, 12 percent of Rwandan women live in polygamous households. Rwandan women tend to marry late: only 19 percent of those between the ages of 25 and 49 had married before they were 18 years old. For women, the median age of first union is 20.7 years; the median age of first sex is 20.3 years.

Men tend to marry at an older age than women. The median age for the first marriage is 25.0 years; the median age of first sex is 20.8 years.

FERTILITY PREFERENCES

In regards to fertility preferences, 42 percent of women declared they did not wish to have any more children, while over half (52 percent) wished for more. Among the latter group, 12 percent wanted to have the next child within two years, 39 percent wanted a child sometime later (after two years), and 2 percent wished for another child without specifying the time. The percentage of men (44 percent) who do not want any more children is similar to that of women. Forty percent declared they wished to wait two or more years for another child.

The average ideal family size for all women, as well as for married women, is about 4 children. This ideal family size is less than the TFR of 6.1, a finding which partially explains the percentage of women not wanting to have more children.

MATERNAL AND CHILD HEALTH

Antenatal Care. The vast majority of expectant mothers receive some antenatal care (94 percent). However, only 13 percent go for at least four visits, as recommended by the WHO and the Rwandan government. The first antenatal care visit tends to be late in the pregnancy: the median time of the first visit is 6.4 months into the pregnancy.

During these consultations, women are rarely informed of any signs of complications that could occur during their pregnancy (6 percent). Most often women were weighed (94 percent) and blood pressure was measured (71 percent). Over half the women (56 percent) said their height was taken. However, routine tests of blood and urine were rare. A small percentage of women took iron supplements (28 percent) or anti-malaria medication (6 percent).

Delivery Care. A high number of Rwandan women give birth at home (70 percent). Six out of ten were not assisted by trained health providers; 43 percent were assisted by untrained traditional birth attendants. Overall, 17 percent of Rwandan women report giving birth without any assistance.

Vaccination Coverage. The objective of Rwanda's Expanded Program on Immunization—to vaccinate all children within their first 12 months of life—has not yet been met. Only 75 percent of children age 12-23 months have been given all recommended vaccinations. Among these children, only 69 percent had received all vaccinations before the age of one year. The drop-out rate between the first and third rounds of DPT was 10 percent and for the polio vaccine it was 13 percent.

Childhood Illness. The RDHS-III showed that, during the two weeks preceding the survey, 17 percent of children under 5 years of age had suf-

fered from an acute respiratory infection (ARI), that 26 percent had had a fever, and that 14 percent had experienced diarrhea.

Medical treatment or advice had been sought for 27 percent of the children with ARI or a fever. For those who had experienced diarrhea, only 14 percent received medical treatment.

The great majority of mothers (87 percent) know about oral rehydration salt (ORS) treatment for diarrhea. However, during the last episode of diarrhea, only 32 percent of children received either ORS, recommended home fluids, or had received an increase in fluids. A similar proportion of children had been treated with traditional remedies. It is, however, disturbing that 33 percent of children with diarrhea had received no treatment at all.

NUTRITION

Breastfeeding Practices. In Rwanda breastfeeding is nearly universal and of relatively long in duration. Results show that virtually all children under six months are breastfed and that 97 percent of those age 10-11 months are still breastfed. The recommendation of exclusive breastfeeding for children up to six months old is followed by nine out of ten mothers (88 percent). The median duration of breastfeeding is 24.9 months.

It is very unusual to see other liquids or complementary food introduced before the age of two months (5 percent). However, the recommended introduction of solid foods at six months is not generally followed: only 69 percent of children age 6-9 months had received complementary foods

Nutritional Status. Overall, more than four out of ten children under age five (45 percent) suffer from chronic malnutrition and nearly one out of five (19 percent) suffer from its most severe form. Levels of stunting rapidly increase with age; the highest proportion is found among children age 12-23 months (55 percent), but remains fairly high (51 to 53 percent) among older children. The rate of stunting is highest in the North province (52 percent). Stunting tends to be lower among children of mothers with more education: 50 percent among those with no education, 44 percent among those with primary education, and 43 percent among those of at least secondary level.

The results show that 4 percent of children are wasted and 1 percent are severely wasted. In other words, these children suffer from acute malnutrition. The highest prevalence of these cases (9 percent) is found among children age 12-23 months. This corresponds to the period during which the child is most likely to be weaned and vulnerable to illnesses (such as those linked to the introduction of contaminated foods or those picked up as the child crawls around and explores the environment). Interestingly, rates of wasting in the City of Kigali (8 percent) are higher than in the other areas surveyed.

Findings show that 22 percent of children in Rwanda are underweight and 4 percent are severely underweight. These figures indicate either chronic or acute malnutrition.

On the national level, 56 percent of children age 6-59 months are anemic: 20 percent are mildly anemic, 27 percent are moderately anemic, and 9 percent are severely anemic. In general, children in urban and rural areas have similar anemia rates, although the prevalence of severe anemia is higher in urban areas than in rural areas (13 percent versus 8 percent). Children in the City of Kigali suffer more from anemia—particularly in its severest form— than elsewhere.

Women in Rwanda are less afflicted with anemia than the children. Nationally, 33 percent of women suffer from anemia: 19 percent have mild cases, 11 percent have moderate cases, and 3 percent have severe cases. Similarly to the children's rates, the cases of anemia occur equally in urban or rural areas; however, women of the City of Kigali have a higher prevalence of moderate and severe anemia than elsewhere.

Vitamin supplements. Survey results showed that 84 percent of last-born children age 0-3 years had received vitamin A supplements. However, only 33 percent of mothers received vitamin A within the two months following delivery of the baby. Also, 71 percent of women did not receive any iron supplements during their pregnancy and 24 percent received supplements for no more than 3 months.

Nearly nine out of ten women and children live in households with sufficiently-iodized salt.

MALARIA

Possession of Mosquito Nets. In Rwanda, 18 percent of households own at least one mosquito net. Urban residents, especially in the City of Kigali, show a higher rate (40 percent) of households with at least one net than do rural residents. The percentage is highest among the wealthier households (45 percent versus 6 percent among the poorest). However, only 6 percent of the total of households own more than one mosquito net.

Overall, almost all households with a least one mosquito net had an ever treated net. However, there is a discrepancy between those possessing at least one net and those using insecticide-treated mosquito nets (ITNs) at the time of the survey (18 percent versus 15 percent). The same gap is observed among the households with more than one net (6 percent) and those with more than one ITN (4 percent).

Mosquito Net Usage: Only 16 percent of children under the age of five slept under a mosquito net the night preceding the survey interview. Among pregnant women, 20 percent declared they had slept under a net the night preceding their interview.

INFANT AND CHILD MORTALITY

Childhood mortality remains high at the national level. In the most recent five-year period before the survey, for every 1,000 live births, 86 die before their first birthday (37 between birth and 1 month and 49 between 1 and 12 months). Currently, out of 1,000 one-year old children, 72 do not reach their fifth birthday. Overall, the mortality risk between birth and five years is 152 per 1,000 children born.

The RDHS-III results indicate a significant decline in infant and child mortality since the 2000 RDHS-II. However, comparison with the RDHS-I shows that the 2005 infant and under-five mortality rates have returned to the same levels as 1992.

MATERNAL MORTALITY

Maternal mortality remains high in Rwanda. According to the RDHS-III, the rate of maternal mortality is about 750 deaths for every 100,000 live births. This total has declined considerably since the 2000 RDHS which found a maternal mortality rate of 1,071 between 1995 and 1999.

DOMESTIC VIOLENCE

About one third of women interviewed (31 percent) declared they had been victims of physical violence at least once since they were 15 years old, and 19 percent were subject to violence during the last twelve months preceding the survey. Most often, it is the husband or partner who is responsible for the violence. Whether physical or sexual, the violence results in serious consequences for the woman: in the past 12 months, in 22 percent of cases the women suffered bruises or wounds, and, in 14 percent, bone fractures. In 7 percent of the cases, women had to be treated by a doctor or at a health care facility.

STI AND HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES AND BEHAVIORS

Almost all respondents declared that had heard of HIV/AIDS, but only 54 percent of women and 58 percent of men had a comprehensive knowledge of the disease.

The level of knowledge regarding the means of HIV/AIDS prevention is insufficient: 73 percent of women and 80 percent of men knew one can reduce the risk of getting the AIDS virus by using condoms and by limiting sex to only one faithful and uninfected partner.

Only 51 percent of men and 46 percent of women expressed positive attitudes towards people living with HIV/AIDS, indicating that the level of stigmatization and discrimination remain high in Rwanda.

The survey also shows that 8 percent of women and 14 percent of men declared having had higher-risk sex (intercourse with a partner who is neither a spouse, nor living with the respondent), but only 20 percent of these women and 41 percent of these men had used condoms during the last higher-risk sex.

Among pregnant women, only 22 percent declared they had received counseling on HIV/AIDS during their antenatal care visits or having tested for HIV and received their results.

The survey data also shows that among youth age 15-24 year olds, 51 percent of women and 54 percent of men had a comprehensive knowledge of HIV/AIDS and that 12 percent of men and 7 percent of women used a condom during their first sexual intercourse.

HIV PREVALENCE

HIV Testing Coverage Rates. Overall, 97 percent of eligible respondents provided blood for HIV testing. The coverage rate was 94 percent in urban areas and 97 percent in rural areas.

HIV Prevalence Rates. Survey results indicate that 3 percent of adults age 15-49 are infected with HIV. The prevalence rate is higher among women than among men; the ratio of women to men is 1.6.

HIV prevalence is significantly higher in urban areas than in rural areas. The City of Kigali shows the highest HIV prevalence in the 15-49 year-old population (6.7 percent). Among 15-24 year-olds, the prevalence in Kigali is 3.4 percent. The North province has the lowest HIV prevalence (2 percent).

According to classification by age and sex, the prevalence is highest among men between 40 and 44 years old (7.1 percent) and among women between 35 to 39 (6.9 percent).

HIV and Associated Factors. HIV prevalence is very high among respondents who declared having contracted a sexually transmitted infection in the 12 months prior to the survey (15.7 percent). Prevalence is also high among widowed women (15.9 percent) and divorced or separated women (10.9 percent).

The survey shows that 56 percent of men and 64 percent of women who tested seropositive at the time of the survey had never undergone an HIV test previously.

CARE AND SUPPORT FOR VULNERABLE PERSONS

Approximately one child out of five under the age of 18 years is an orphan: 4 percent have lost both parents, 13 percent their father, and 3 percent their mother.

Around 11 percent of children in Rwanda are considered to be *vulnerable*. Overall, 29 percent of children under age 18 can be classified as orphans or vulnerable children (OVC). The highest proportion of OVC is in the City of Kigali (35 percent) and the lowest is in the North province (25 percent).

RDHS results have shown that parental survival status influences school attendance of children age 10-14. When both parents are alive and the child lives with at least one parent, 91 percent attend school. In contrast, this proportion drops to 75 percent when both parents are deceased.

In Rwanda, OVC do not seem to suffer more from malnutrition than other children, regardless of age or sex. A ratio of less than 1.0 (0.92) indicates that non-OVC are slightly more likely to be undernourished than OVC.

Early sexual relations seem to be slightly more frequent among OVC (6 percent among girls and 15 percent among boys) than among other children (5 percent among girls and 14 percent among boys).

Very few Rwandan households have received assistance to care for sick family members. Only for 12 percent of sick people did the household receive assistance, whether medical, social, material or emotional. Less than 1 percent of the households received all of these forms of assistance.

In 87 percent of cases, households in Rwanda received no external support in caring for OVC. The external assistance that is provided tends to be toward paying school fees (9 percent of households). Other types of support are virtually non-existent.

Millennium Development Goal Indicators, Rwanda 2005			
Goal	Indicator	Value	
1. Eradicate extreme poverty and hunger	Prevalence of underweight children under five years of age	Male: 22.9 % Female: 22.1 %	Total: 22.5 %
2. Achieve universal primary education	Net enrolment ratio in primary education[1]	Male: 73.8 % Female: 76.6 %	Total: 75.2 %
	Percent of pupils starting grade 1 who reach grade 5[1]	Male: 9.6 % Female: 10.3 %	Total: 10.0 %
	Literacy rate of 15-24 year-olds[2]	Male: 67.8 % Female: 65.2 %	Total: 66.0 %
3. Promote gender equality and empower women	Ratio of girls to boys in primary and secondary education	Primary: 1.03 Secondary: 0.81	
	Ratio of literate women to men, 15-24 years old[2]		0.96
	Share of women in wage employment in the non-agricultural sector[3]		8.8 %
4. Reduce child mortality	Under-five mortality rate (per 1,000 live births)		152 per 1,000
	Infant mortality rate (per 1,000 live births)		86 per 1,000
	Percent of 1 year-old children immunized against measles	Male: 84.9 % Female: 86.4 %	Total: 85.6 %
5. Improve maternal health	Maternal mortality ratio (per 100,000 live births)		750 per 100,000
	Percent of births attended by skilled health personnel		38.6 %
6. Combat HIV/AIDS, malaria and other diseases	Condom use to overall modern contraceptive use among currently married women age 15-49		9.2 %
	Condom use at last higher-risk sex (population age 15-24)[4]	Male: 39.5 % Female: 26.0 %	
	Percentage of population age 15-24 with comprehensive correct knowledge of HIV/AIDS[5]	Male: 53.6 % Female: 50.9 %	
	Contraceptive prevalence rate (any modern method, currently married women age 15-49)		10.3 %
	Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years		0.82
7. Ensure environmental sustainability	Percent of population using solid fuels[6]	Urban: 98.3 % Rural: 99.8 %	Total: 99.6 %
	Percent of population with sustainable access to an improved water source[7], urban and rural	Urban: 55.0 % Rural: 22.4 %	Total: 27.4 %
	Percent of population with access to improved sanitation[8], urban and rural	Urban: 97.2 % Rural: 96.5 %	Total: 96.6 %

[1] Excludes children with parental status missing.
[2] Refers to respondents who attended secondary school or higher and women who can read a whole sentence.
[3] Wage employment includes respondents who receive wages in cash or in cash and kind.
[4] Higher risk refers to sexual intercourse with a partner who neither was a spouse nor who lived with the respondent; time frame is 12 months preceding the survey.
[5] A person is considered to have a comprehensive knowledge about AIDS when they say that use of condoms for every sexual intercourse and having just one uninfected and faithful partner can reduce the chance of getting the AIDS virus, that a healthy-looking person can have the AIDS virus, and when they reject the two most common local misconceptions. The most common misconceptions in Rwanda are that AIDS can be transmitted through mosquito bites and that a person can become infected with the AIDS virus by sharing food with someone who is infected.
[6] Charcoal, firewood, or sawdust.
[7] Improved water sources are: household connection (piped), public standpipe, borehole, or protected dug well.
[8] Improved sanitation technologies are: flush toilet, traditional pit latrine, or ventilated improved pit latrine.

RWANDA


Uganda
Democratic
Republic
of the Congo
North
East
West
City of
Kigali
Lake
Kivu
South
Tanzania
Burundi
0
25
50 Kilometers
N